

Application for EU exemption for a new interconnector between France and Great Britain

ElecLink Limited

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Whilst every effort has been made by ElecLink, its officers, directors, employees, representatives, shareholders and advisers (the "**Relevant Parties**") to ensure the accuracy of the information contained in this exemption application as at 1 August 2013, none of the Relevant Parties makes any representation or warranty regarding (i) the accuracy, adequacy or completeness of the information contained in this exemption application; or (ii) the reasonableness or otherwise of any estimate, forecast, assumption or expression of opinion contained in this exemption application. No Relevant Party assumes any duty of care to any recipient of this exemption application. The Relevant Parties reserve the right and will use reasonable endeavours at any time and from time to time to correct any aspect of this exemption application that is found to be inaccurate, inadequate or incomplete or any estimate, forecast, assumption or expressions of opinion that are found to be unreasonable.

I Executive summary

ElecLink, a joint venture between STAR Capital and Groupe Eurotunnel, is developing an innovative project to build, own and operate a new 1000 MW merchant¹ interconnector passing through the Tunnel of the Channel Tunnel to link the 400kV grids in France and Great Britain (the “Project”).

This document sets out our application for exemption from (i) Article 16(6) of the Cross Border Regulation (allocation of revenues) and (ii) provisions under French and UK law implementing the Third Package Electricity Directive, specifically Articles 9 (Unbundling), Article 32 (Third Party Access) and Articles 37 (6) and 37(10) (Approval of Tariffs).

The Project will bring considerable benefits in terms of security of supply, competitiveness and sustainability of the electricity markets in both France and GB, including:

- **Greater security of supply** – through the pooling of energy, reserve and other balancing services between the two markets.
- **Cross border integration and single market development** – by adding new interconnector capacity and putting in place capacity allocation and congestion management arrangements which promote the efficient use of that capacity. ElecLink will contribute to the development of a European single market in electricity.
- **6.1 million ton reduction in carbon** – by enabling demand across the region to be met with the most efficient plant reflecting the volume and cost of carbon produced in doing so.
- **Fast track new interconnection capacity** – by utilising existing Channel Tunnel infrastructure, we are able to fast track the Project to be operational from Q4 2016 and respond to a period of generation capacity tightening as power plants are retired from 2015 in line with LCPD, IED and planned nuclear plant retirements.
- **Greater diversity of supply** – by combining GB’s flexible, thermal dominated generation capacity with France’s nuclear dominated baseload capacity. These are highly complementary capacity mixes and enable increased diversity of supply to be achieved, reducing the reliance of both countries on any single technology.
- **Over €640m of net social benefit** – by increasing the utilisation of the most efficient plant across the connected markets and driving savings in total cost of generation.
- **No capital risk to end consumer** – ElecLink will be financed independently of RTE and National Grid. If the Project fails to achieve its forecast revenues, the resulting loss will be suffered by ElecLink’s shareholders and lenders. There is no mechanism to socialise Project losses through a regulated tariff.
- **Very low environmental impact** – by leveraging the Channel Tunnel’s existing infrastructure we have developed an innovative way of connecting the GB and French electricity systems. Use of the Tunnel avoids interference with marine life and the requirement to make landfall. ElecLink will utilise existing AC cable routes from the Channel Tunnel concession to RTE and National Grid sub-stations. ElecLink will have very limited impact on its immediate surrounding environment.

¹ Ofgem defines merchant as follows – “By “merchant” approach, we mean that the project developed has gone ahead on a voluntary basis rather than due to a legal obligation and that the revenues of the project are those earned from the sale of capacity and ancillary services – they are not capped or collared or linked to transmission tariffs or required to be held back for another use.” This is in contrast to a “regulated interconnector” where the developer could rely and indeed may seek financial support from a regulated stream of revenues to reimburse investment costs.

- **Creation of 300 jobs in France and England** – ElecLink expects to create 300 new jobs during the 30 month period for the construction of the convertor stations in Folkestone and Coquelles, the installation of the cable in the Tunnel and the cable connections to the RTE and National Grid substations. In addition the Project will secure a further 200 jobs in the manufacturing of the cables and convertor station equipment much of which will be sourced within the European Union. Long-term we expect to create a further 20 permanent jobs for the operation and maintenance of the interconnector over its 40 year life.

ElecLink is being developed at a time when there is a substantial and growing need for new interconnection in Europe. The European Commission has legislated to promote greater levels of interconnection between member states through various directives including, most recently, the Third Package² in which the Cross Border Regulation affirms “*investments in major new infrastructure should be promoted strongly while ensuring the proper functioning of the internal market in electricity.*”³ However, despite such initiatives, no new interconnection capacity has been built between France and GB since IFA in 1986 and only 3 GW of capacity have been constructed between GB and continental Europe to date. The capital required to achieve policy objectives is considered to be beyond the balance sheet capacity of many European TSOs⁴, particularly given the forecast economic climate of the next few years and the capital demands on TSOs to upgrade existing infrastructure and connect new renewable sources. We believe there is a clear need to attract new capital to the sector through the appropriate development of merchant interconnectors that will co-exist with regulated interconnectors.

We are seeking the exemptions outlined above to manage risks associated with the specific nature of the Project and to ensure ElecLink can be project financed.

- **We have no recourse to regulated revenues or assets.** Neither Shareholder has any existing investments in the energy industry or recourse to a regulated transmission asset base. ElecLink is a single transmission asset and will operate in a competitive market where other existing interconnectors provide transmission capacity between the UK and North West Europe. The Shareholders intend to provide equity and raise project debt to fund the investment, all of which will represent new sources of investment in the EU energy industry. If the Project fails to achieve its forecast revenues, the resulting loss will be suffered by ElecLink’s shareholders and lenders. There is no mechanism to socialise Project losses amongst consumers through a regulated tariff. This means the Project could suffer 100% downside risk (if demand does not eventuate) but with capped regulated returns as a best case outcome. As such, it will not be possible to raise the required debt, or secure the equity investment from the Shareholders, to build the Project without an exemption.
- **We face unique construction and operating risks specific to the Tunnel** which make our Project challenging to develop and operate. Construction and operations will be in strict compliance with the Channel Tunnel Safety Case⁵ to ensure the continuing operations of Eurotunnel’s 24 hour a day traffic services.
- **Our grid connections are subject to unplanned interruptions in the initial years** until such time National Grid and RTE reinforce their respective networks. The duration and frequency of these interruptions cannot be predicted with certainty and are subject to factors outside of our control, including weather conditions. Given the potentially large negative impact

² Described in the Preamble Clauses 59 and 60, Article 3(10), Article 21(8b), Article 38(2a) and Article 46 (4).

³ Recital 23, Cross Border Regulation

⁴ DG Energy, European Commission, European Autumn Gas Conference, Paris, 15 November 2011.

⁵ Safety Case: the rules and procedures adopted by the Channel Tunnel Safety Authority pursuant to Article 11 of the Treaty of Canterbury.

that such interruptions will have on Project returns, we need to have comfort that periods of low returns can be offset by periods of higher returns.

- **We face exceptional market and energy policy risks.** The Project is being developed against a background of a generation mix in Europe which is forecast to profoundly change over the next decade as policies designed to achieve renewables and decarbonisation targets progressively impact electricity supply. Capacity mechanisms, which would be designed to encourage investment in new flexible generation capacity that would compete with ElecLink, are being considered by several EU countries, including GB and France. We face specific risks from new competing interconnection. We cannot mitigate these risks except through exemption, which will enable us to put in place long-term contracts and will also enable periods of lower returns to be offset by periods of higher returns.
- **We need to raise non-recourse project finance debt.** We can only proceed if we are able to project finance ElecLink. We will sell long-term interconnector capacity contracts to generate a stream of predictable cashflows on which lenders will issue a finite amount of debt on inception. An exemption will allow us to demonstrate to lenders the stability of such cashflows despite a changing regulatory environment over the course of the exemption period. As a single asset, we would not be able to demonstrate such predictability under a regulated tariff regime.
- **We require an exemption under French regulation to operate 400kV transmission infrastructure.** Currently RTE is the only eligible entity that that can operate regulated 400kV electricity transmission infrastructure in France. The Project can only proceed if the CRE provides ElecLink an exemption as foreseen in its *Délibération* of 30 September 2010⁶.

Access to ElecLink capacity will be provided in an open, transparent and non-discriminatory manner. Long and short-term capacity contracts will be available together with appropriate arrangements to prevent hoarding of capacity. Secondary market trading arrangements that allow the resale of capacity will be put in place, and the short-term market arrangements for the allocation of capacity will be in line with those prevailing in the market. We will also implement restrictions on the volume of capacity that might be held by a dominant⁷ party along with suitable monitoring arrangements to support these measures.

Receipt of the exemptions requested in this document is on the critical path to developing the Project and is a condition of the Project's financial close. We are seeking an exemption period of 25 years.

⁶ Deliberation of the French Energy Regulatory Commission dated 30 September 2010 on the application of article 7 of Regulation (EC) No. 1228/2003 dated 26 June 2003 and on conditions for access to the French electricity transmission grid for new exempt interconnectors (30 September 2010).

⁷ A dominant party in this context is used to denote a party with a greater than 25% share of the generation or supply market in either GB or France.

2 Project rationale and description

2.1 Introduction

We set out below the background to the Project by describing the rationale for ElecLink and a description of its key physical and structural elements:

- Part A: Project Rationale, covering:
 - why we believe that there is a clear need for new interconnection between GB and Continental Europe,
 - why we have decided to invest in the development of this Project, *and*
 - how our Project would help to meet the need for new interconnection between France and GB, and the benefits we expect our Project to deliver.
- Part B: Project Description, covering:
 - the key technical and organisational features of the Project,
 - the principles we propose to adopt for third party access and related regulatory arrangements, *and*
 - our timetable for developing ElecLink.

2.2 Part A: Project rationale

2.2.1 A clear need for new interconnection

The European Commission is working towards the establishment of Trans-European Networks – Energy (TEN-E)⁸ with the objective of promoting effective operation of the internal energy market, security and diversification of supply, “territorial cohesion” in the EU and sustainable development. As part of this work the EC identified a need for €1 trillion of investment in the energy system between 2010 and 2020 of which €70 billion is required for an additional 35GW of electricity interconnectors⁹. The EU has agreed that electricity interconnection levels should be at least 10% of each member state’s total installed generation capacity¹⁰. While the current level of interconnection into some member states exceeds the 10% target, the overall picture is mixed, with Southern Europe, GB and Ireland continuing to experience significant bottlenecks and falling short of the target. Total interconnection between GB and Continental Europe represents less than 4% of total installed generation capacity in GB.

In this context, greater electricity interconnection can:

- **Ensure the successful implementation of the Third Package** - the EC’s Third Package¹¹ is designed to complete the internal market in electricity by facilitating cross

⁸ Decision no 1364/2006/EC

⁹ “The Energy Infrastructure Package – how to deliver investment in energy infrastructure in Europe” – presentation by Sylvia Elisabeth Beyer at the European Autumn Gas Conference, Paris, 15 November 2011

¹⁰ Paragraph 37, Presidency Conclusions, Barcelona European Council, 15 and 16 March 2002 - <http://ec.europa.eu/research/era/docs/en/council-eu-30.pdf>

¹¹ The Third Package consists of REGULATION (EC) No 714/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, of 13 July 2009, on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC)

border trading. Interconnection is the key to enabling the success of this initiative as explicitly recognised in the *Recitals* of the Third Package Electricity Directive¹².

- **Improve security of supply** - greater interconnection enables the pooling of energy, reserve and other balancing services between markets and allows supply shocks to be offset by output in the neighbouring interconnected market, improving security of supply.
- **Enable higher levels of renewables and meet the challenge of intermittency** – the Renewable Energy Directive¹³ highlights that “*Interconnection among countries facilitates integration of electricity from renewable energy sources. Besides smoothing out variability, interconnection can reduce balancing costs, encourage true competition bringing about lower prices, and support the development of networks. Also, the sharing and optimal use of transmission capacity could help avoid excessive need for newly built capacity*”¹⁴. Furthermore, the European Environment Agency commissioned review of the National Renewable Energy Action Plans¹⁵ identified lack of grid access and interconnection as a key barrier to meeting the 2020 renewables energy target.
- **Avoid significant costs of building new peaking capacity** - without more interconnectors, the burden associated with building new peaking/flexible capacity to manage intermittency of renewables generation could be significant, with some estimates putting the volume required as high as 60 GW¹⁶. The European Climate Foundation, World Wildlife Fund and others have estimated that a 30-40% reduction in new peaking capacity could be achieved through greater interconnection, equivalent to over €34 billion in savings¹⁷.
- **Contribute to decarbonisation** - cross border trade in electricity enables the least polluting generation sources to be utilised where it is economic to do so. Greater interconnection could be expected to contribute to the EU carbon emissions targets by enabling high renewables penetration scenarios (up to 100%¹⁸) ultimately leading to a total decarbonisation of the electricity system.

The EU has legislated to promote greater levels of electricity interconnection between member states through various directives including, most recently, the Third Package¹⁹ in which the Cross Border Regulation states “*investments in major new infrastructure should be promoted strongly while ensuring the proper functioning of the internal market in electricity.*”²⁰

No 1228/2003 and DIRECTIVE 2009/72/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC. In addition to this, the package is completed by 1 gas directive, 1 gas regulation and a regulation establishing ACER.

¹² Recital 5, Third Package Electricity Directive

¹³ DIRECTIVE 2009/28/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, of 23 April 2009, on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC

¹⁴ Recital 59, Renewable Energy Directive

¹⁵ <http://www.ecn.nl/units/ps/themes/renewable-energy/projects/nreap/>

¹⁶ 7th Report – A European Supergrid: - Volume I, HC 1040 | Published 22 September 2011 - (<http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenergy/1040/1040.pdf>).

¹⁷ Paragraph 54, 7th Report - A European Supergrid. This is a direct source for both the capacity reduction and monetary savings figures quoted.

¹⁸ <http://www.roadmap2050.eu/>

¹⁹ Described in the Preamble Clauses 59 and 60, Article 3(10), Article 21(8b), Article 38(2a) and Article 46 (4).

²⁰ Recital 23, Cross- Border Regulation

In 2009, following the publication of *Programmation Pluriannuelle des Investissements d'électricité (PPI)*²¹, a working group was created by Jean Louis Borloo, the French Energy Secretary, to offer solutions to the growing challenge of meeting peak demand in France. The final report acknowledged that developing interconnections with neighbouring countries will increase French security of supply²² and the CRE has further noted that over the medium term, the construction of new interconnection infrastructure to reinforce integration of European power markets should benefit end consumers overall despite the increasing costs of network access²³.

Similarly, Ofgem has recognised the benefits of greater interconnection in its policy document in 2010²⁴ and the Energy and Climate Change Committee of the UK House of Commons concluded in 2011²⁵ that “the UK is far behind the EU's targets on interconnection. The Government should agree to meet European targets for interconnection by 2020 and we recommend that in its Response to this Report that it sets out its own expectations for interconnection up to 2050.”

However, despite member state and EC energy initiatives, no new interconnection capacity has been built between France and GB since IFA in 1986 and only 3 GW of capacity constructed between GB and continental Europe to date. The capital required to achieve policy objectives remains beyond the balance sheet capacity of many European TSOs, particularly given the forecast economic climate of the next few years and the capital demands on TSOs to upgrade existing infrastructure and connect new renewable sources.²⁶ We believe there is a clear need to attract new capital to the sector through the co-existence of both merchant and regulated interconnector models.

Exemption from regulation is specifically envisaged for direct current merchant interconnectors in the Third Package. The Cross Border Regulation foresees the need for merchant projects alongside regulated interconnectors thereby allowing merchant interconnection to respond to the needs of EU electricity markets.

ElecLink is encouraged and supported by both the UK and French Governments:

- On 17 February 2012 the French and UK Governments issued a joint communique addressing common energy projects and including a reference to ElecLink. “We acknowledge the importance of developing new electricity lines between our two countries in order to strengthen further the linking of our grids, improve the security of our energy supplies and facilitate the integration of intermittent energy sources. We encourage further studies to be undertaken on the interconnector projects currently under consideration, namely the IFA2 led by the Réseau de Transport d'Electricité and the National Grid, and ElecLink led by Star Capital and Eurotunnel”.
- The Project was identified in the UK Government's National Infrastructure Plan as part of the Chancellor's Autumn 2012 Statement in regard to how taking advantage of

²¹ *Programmation Pluriannuelle des Investissements d'électricité* – multi-year scheduling of electricity (generation) investments. Document published by the French department of energy detailing the government's vision of long-term evolution of French electricity generation stack.

²² See page 9, Rapport Poignant-Sido “*Groupe de travail sur la maîtrise de la pointe électrique*”, April 2010 – http://www.developpement-durable.gouv.fr/IMG/pdf/Rapport_Poignant-Sido.pdf

²³ See pages 1-2, CRE's Proposition as to tariff for use of electricity public transport and distribution networks (TURPE-3) dated February 26th, 2009 (<http://www.cre.fr/documents/deliberations/proposition/tarifs-d-utilisation-des-reseaux-publics-de-transport-et-de-distribution-d-electricite/consulter-la-proposition>).

²⁴ Paragraph 3.2, Electricity Interconnector Policy Consultation: Electricity interconnector policy, consultation, Office of Gas and Electricity Markets - <http://www.ofgem.gov.uk/europe/Documents/Interconnector%20policy%20consultation.pdf>

²⁵ Paragraph 46, 7th Report - A European Supergrid.

²⁶ DG Energy, European Commission, European Autumn Gas Conference, Paris, 15 November 2011.

interdependency between transport and energy infrastructure creates the opportunity to achieve these benefits at lower capital investment costs. "Using the 4.8 metre wide service tunnel to carry the link, while ensuring safety and operational design requirements are fully implemented, allows energy capacity to be enhanced at a lower cost than laying a cable on the seabed".

- ElecLink was approved by the Member States at the European Commission to be included in the list of Projects of Common Interest (PCI) within the North Sea Offshore Grid group. PCI is a Union-wide list of projects which contribute the most to the implementation of the strategic energy infrastructure priority corridors and areas²⁷.

2.2.2 Project background, overview and benefits

Background and overview

ElecLink is developing a project to build, own and operate a new 1000 MW merchant interconnector passing through the Tunnel of the Channel Tunnel to link the 400kV grids in England and France. The Project has the following key features:

- converter stations to be located within the perimeter fence of the Channel Tunnel terminals at Folkestone and Coquelles and linked to the substations of Sellindge (National Grid, England) and Les Mandarins (RTE, France),
- a pair of HVDC cables located in the Tunnel,
- the total cost of the Project is estimated at €400m to be partially financed through a project finance structure,
- a planned commissioning date in Q4 2016,
- access to ElecLink capacity to be provided in an open, transparent and non-discriminatory manner, *and*
- long and short-term capacity contracts will be available together with appropriate arrangements to prevent hoarding of capacity.

This is an innovative project that will be technically, financially and operationally challenging. A brief history of the Project is set out below.

- The Concession Agreement refers to the possible transmission of electricity in the Channel Tunnel (subject to the consent of the Intergovernmental Commission "IGC")²⁸ and the idea of an interconnector was contemplated during the Channel Tunnel's construction phase between 1988 and 1994. However, interconnector technology in the 1980s relied on oil impregnated paper insulation for DC transmission cables, and presented a fire risk that was beyond the thresholds of the Safety Case. As a result the Project was not progressed.
- In 2003, Groupe Eurotunnel revisited the Project and undertook detailed engineering studies to assess the feasibility of placing interconnector cables in the Service Tunnel. These studies raised numerous issues, including the interruption to train services during the construction period and the temperature impact in the Service Tunnel of a 1 GW cable. After taking into

²⁷ Proposal for A Regulation Of The European Parliament And Of The Council on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC

²⁸ Clause 17.2, Concession Agreement

consideration these difficulties and the group's strained capital structure, Groupe Eurotunnel decided not to advance the Project.

- In 2008, STAR Capital approached Groupe Eurotunnel with a new interconnector project. Over the next two years the Shareholders worked on solutions to overcome issues identified previously as well as developing a suitable financial structure.

Two important elements provided the catalyst to bring the current Project to fruition; (i) the recent advances of HVDC technology provide the basis of a project that can meet the Safety Case and (ii) the publication of new regulation by the CRE providing a structure for merchant interconnectors in France.²⁹

The benefits of ElecLink

The construction of our Project will have considerable benefits in terms of security of supply, competitiveness and sustainability of the electricity markets in both France and GB, specifically:

- **Greater security of supply** – through the pooling of energy, reserve and other balancing services between the two markets. ElecLink's 1000 MW interconnector would increase in 2017 the net de-rated³⁰ peak capacity margin in France by 5.9% and in GB by 6.4%³¹. ElecLink will enable France and GB to pool reserve capacity, reducing the future peaking plant requirement. In addition, we will enhance security of supply by enabling system balancing arrangements to respond to different weather conditions between GB and NWE against the background of high intermittent wind generation. For example, during particularly windy days, surplus power from GB could be exported to Continental Europe. Conversely low wind in GB allows ElecLink to import power from Continental Europe.
- **Cross border integration and single market development** – by adding new interconnector capacity and putting in place capacity allocation and congestion management arrangements which enable the efficient use of that capacity. ElecLink will contribute to the development of a single European market in electricity and reinforce interconnection in the region identified by the European Commission as one of the Priority corridors for electricity interconnection³².
- **Contribution to decarbonisation** – by enabling demand across the region to be met with the most efficient plant reflecting the volume and cost of carbon produced in doing so. We estimate that between Q4 2016 and 2030, the Project will enable the EU to save 6.1 million tonnes in carbon, with a benefit of €197m in carbon costs³³.
- **Introduction of new investors** - the Shareholders are providing private financing to the European energy infrastructure and contributing to the €1 trillion of required investment

²⁹ CRE, *Délibération du 30 septembre 2010 portant communication sur l'application de l'article 7 du règlement (CE) n° 1228/2003 du 26 juin 2003 et les modalités d'accès au réseau public de transport d'électricité français de nouvelles interconnexions exemptées*, (30 September 2010)

³⁰ For a conventional plant, the de-rating factor reflects the probability of experiencing a forced outage. For a wind plant whose availability is strongly correlated to other wind plant, its statistical contribution to security of supply diminishes with increasing penetration of intermittent renewables.

³¹ This calculation assumes a 50% de-rating factor for ElecLink with respect to both GB and France. This implies that half of ElecLink capacity is expected to flow to each country at the times of their respective peaks, which in turn implies some correlation in the timing of peaks in GB and France but that this correlation is far from perfect. It also assumes peak demand of 101.6 GW in France and 63.9 GW in GB and peak de-rated 2017 capacity margins in France and GB (before accounting for ElecLink capacity) of 8.4% and 12.3% respectively.

³² http://ec.europa.eu/energy/publications/doc/2011_energy_infrastructure_en.pdf

³³ Priced at forecast European Union Allowances prices.

estimated by the EU against a background where TSOs have only limited access to the funds necessary to undertake investment.

- **Increased competition** – by providing a direct route for French generation to be sold into GB and vice versa. We will also facilitate an increase in competition between interconnectors for cross border trade.
- **Over €640m of net social benefit** – by increasing the utilisation of the most efficient plant across the connected markets and driving savings in total cost of generation.
- **Fast track new interconnection capacity** – by utilising existing infrastructure, we are able to fast track the Project to be operational in Q4 January 2016. Sub-sea systems typically require long lead time marine and seabed surveys, resulting in lengthy development periods. Our analysis demonstrates that by advancing operations to Q4 2016 rather than 2020, we are able to contribute an additional €343m in net welfare to France and GB.
- **No capital risk to end consumer** – ElecLink will be financed independently of RTE and National Grid. If the Project fails to achieve its forecast revenues, the resulting loss will be suffered by ElecLink's shareholders and lenders. There is no mechanism to socialise Project losses through a regulated tariff.
- **Greater diversity of supply** – by combining GB's flexible, thermal dominated generation capacity with France's nuclear dominated baseload capacity. These are highly complementary capacity mixes and enable increased diversity of supply to be achieved, reducing the reliance of both countries on any single technology.
- **Very low environmental impact** – by leveraging the Channel Tunnel's existing infrastructure we have developed an innovative way of connecting the GB and French electricity systems. Use of the Tunnel avoids interference with marine life and the requirement to make landfall. ElecLink will utilise existing AC cable routes from the Channel Tunnel concession to RTE and National Grid sub-stations. ElecLink will have very limited impact on its immediate surrounding environment.
- **Strong performance incentives** – since ElecLink will be built on a merchant basis, the Shareholders will have a direct financial incentive to ensure that any construction delays are kept to a minimum and that it performs up to its full potential and any outages are resolved as quickly as possible. The location of the cables in the Tunnel provides a favourable environment to maintain the HVDC system and significantly reduced the time to repair faults in comparison with a marine based system.

2.3 Part B: Project description

2.3.1 Project description

Technical description

HVDC Cable

A pair of extruded cross linked polyethylene insulated (XLPE) cables will be laid in the 51 km Tunnel. Extruded cables are solid-type cables and do not contain any liquids or gases that might evaporate in a mechanical failure or propagate fire. The capacity of ElecLink has been sized at 1000 MW based on initial technical advice to ensure compliance with temperature and space constraints within the Tunnel and available grid capacity in Q4 2016.

The Tunnel facilitates access to cables and jointing boxes as compared to subsea systems. Unplanned maintenance costs and outage times are expected to be lower than for an equivalent subsea interconnector.

Converter Stations

The HVDC converter stations are based on voltage-source converter (VSC) technology that can provide significant additional services to TSOs, including reactive power, black start and frequency control capability.

The converter stations are to be enclosed in a building, making the impact of the Project on the environment very low. The HVDC cables will be buried from the tunnel portal to the DC part of each converter building.

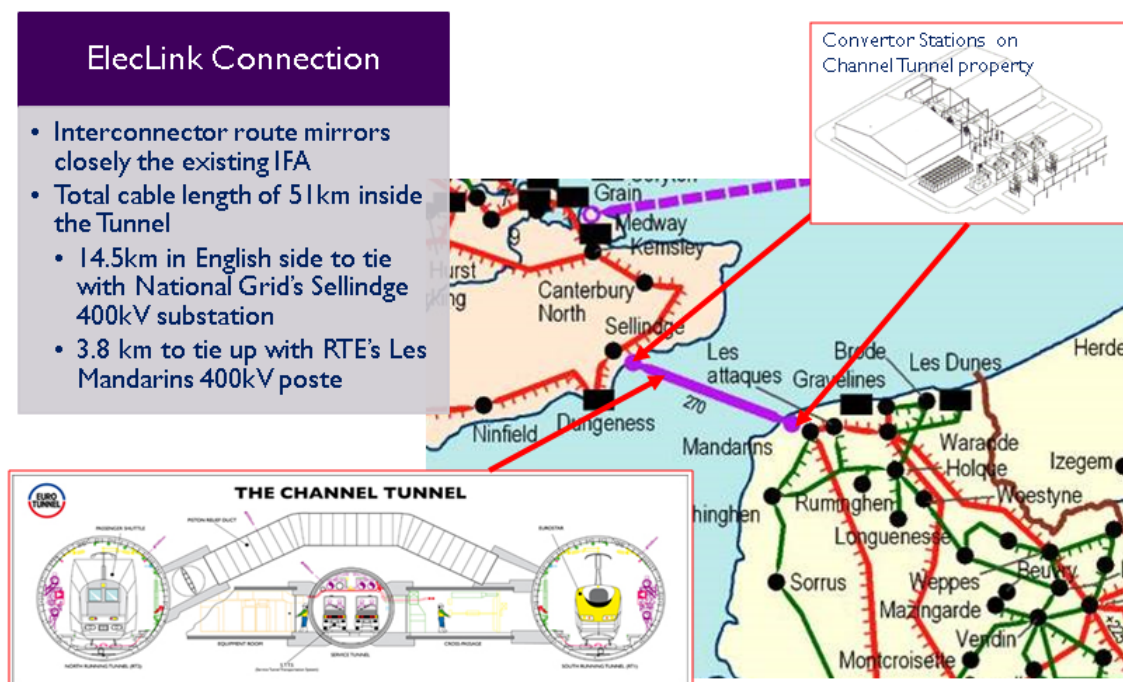
TSO Sub-station Connections

HVDC converter stations are to be connected to the AC power grids in France and England through cables to the respective TSO substations that provide existing power for Channel Tunnel operations. The Project expects to install AC cables to follow the existing easements between Sellindge – Folkestone (14.5km) and Les Mandarins – Coquelles (3.2km). These cables will be laid underground. ElecLink will not require the construction of overhead power lines or towers in France or GB.

TSO Grid Connections

ElecLink has entered into agreements with RTE and National Grid for the withdrawal and injection of 1000MW at Les Mandarins and Sellindge 400kV substations respectively. Both connection agreements are forecast to be operational from 4Q 2016 to meet ElecLink’s own construction schedule. Due to the fast track nature of the Project neither connection will be firm and will be subject to constraints³⁴ in the initial years of operations and until the TSO carry out planned reinforcements of the their respective grids.

A summary of the ElecLink project is shown in the map below. Exhibit A to this exemption application presents further details from our technical studies.



³⁴ The constraints are discussed more fully at Exhibit E

Ownership and shareholding structure

ElecLink is owned 51% by STAR Capital and 49% by Groupe Eurotunnel (together the “Shareholders”).

- STAR Capital is a private equity fund focussed on investing in strategic and capital intensive businesses in Europe. A full list of STAR Capital’s investments can be found at its website www.star-capital.com. STAR Capital has in excess of €1bn of funds managed and/or advised by STAR Capital Partners Limited, a company incorporated in England (registered number 03862379) whose registered office is at 6th Floor, 33 Cavendish Square, London W1G 0PW, United Kingdom.
- Groupe Eurotunnel manages and operates the Channel Tunnel through the Concession Agreement which lasts until 2086. The company has four businesses: (i) Infrastructure manager for operators of rail services (e.g. Eurostar); (ii) Transport operator through its own shuttles that carry cars, coaches and trucks; (iii) Rail freight services provider since November 2007 and (iv) cross-Channel ferry services, My Ferry Link, since 2012. Further details on Groupe Eurotunnel’s activities and businesses are described in the 2012 Reference Document filed with the AMF³⁵.
- Both STAR Capital and Groupe Eurotunnel are independent and neither is owned directly or indirectly by either the French or British governments. Groupe Eurotunnel is listed on the Paris stock exchange; its ordinary shares are fully distributed between individuals, custodians and institutions. STAR Capital’s investors are broad mix of pension funds, insurance companies, fund of funds and family offices.
- Both Shareholders have significant complementary experience in developing large capital intensive projects in the civil engineering and energy sectors. The Shareholders have created a joint team to develop the Project and to coordinate the various human and technical resources available within each Shareholder’s organisation. ElecLink has hired a broad group of specialist advisers to assist ElecLink’s management team including, consultant engineers, economists, bankers and lawyers in France and GB. ElecLink’s CEO comes with a background of large tunnel projects including the construction of the Channel Tunnel and significant experience in the transmission of electricity gained within a major European power producer.

Neither STAR Capital nor Groupe Eurotunnel has any direct or indirect links to energy producers or suppliers, except in their capacity as consumers of electricity and gas where each Shareholder procures its supplies on an open and transparent basis. A full list of entities operating in the EU electricity market that have links to STAR Capital or Groupe Eurotunnel is provided in Section 5 of Exhibit F.

Neither Shareholder is a producer, supplier or transporter of energy³⁶.

2.3.2 Financing structure

We estimate total project costs of c.€400m to be financed through a non-recourse project finance structure. The management of Groupe Eurotunnel and STAR Capital consider ElecLink to be outside

³⁵ <http://www.eurotunnelgroup.com/uk/shareholders-and-investors/publications/registration-documents/>

³⁶ Further details of each Shareholder’s energy investment strategy is provided in Exhibit F

of the scope and risk profile of their existing core businesses and are seeking a financing structure commensurate with such risk. Equity capital will be provided by the Shareholders and debt financing will be underpinned by the sale of long-term capacity rights through an open season process in advance of interconnector operations. Long-term contracts will provide ElecLink with stable cashflow to underpin the required debt service.

The uncertainty of the pricing of short-term contracts does not provide adequate security for lenders and cannot be used to raise debt. Historically the GB/French border has seen significant volatility of both short-term pricing (a year or less)³⁷ and capacity volume demand.

Without exemption from the Articles requested in this document, this Project will not be capable of attracting non-recourse debt finance or equity. If conditions that lenders regard as onerous are imposed on the exemption, the lenders' margin, and therefore the cost of the Project will increase. Neither Shareholder alone or together is in a position to finance the Project "on balance sheet". ElecLink's proposed financing structure implicitly requires adequate long-term market demand at financial close for its products to support debt and consequently avoids the construction of uneconomic incremental interconnection capacity. If there is inadequate demand for pluriannual contracts, ElecLink shareholders will need to assess their appetite for further risk by injecting a greater proportion of equity into the financing structure or abandon the Project.

ElecLink, with its advisors, has prepared a financial model to simulate the expected cashflows based on a set of economic assumptions outlined in Exhibit E. The project finance structure will include debt covering the greater proportion of total Project cost to be amortised over a period of 20 years (i.e. term of the exemption period minus 5 years of headroom usually requested by the debt providers). The final terms of the financing structure will be dependent on the long-term contracts negotiated post-receipt of the exemptions requested in this application.

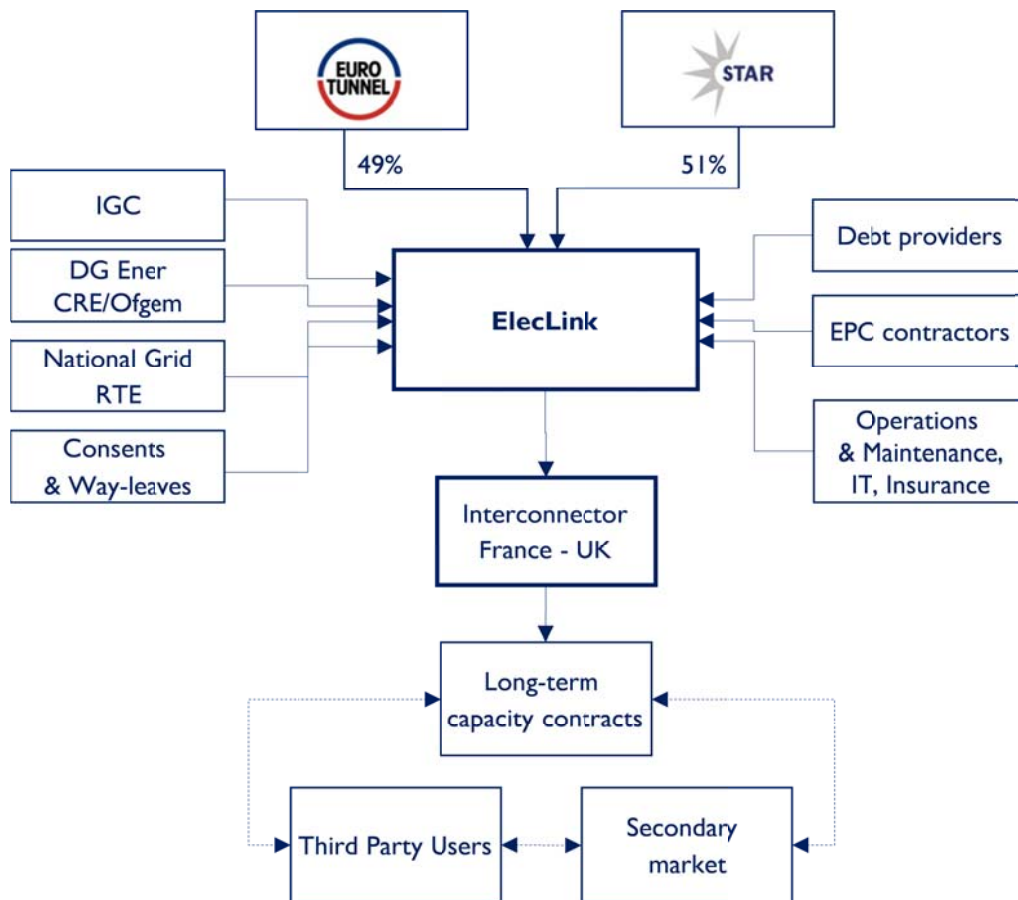
2.3.3 Commercial structure and operation

ElecLink will subcontract the construction of the Project through one or more construction contracts that it will enter into with suitably qualified contractors following a competitive tendering process. ElecLink has agreed a framework for access to the Channel Tunnel with Groupe Eurotunnel for the construction period which will be developed as part of these discussions. ElecLink will undertake all activities associated with the operation including its physical operation, maintenance, capacity allocation, client relations, balancing management in conjunction with TSOs, accounting and information systems. Where it is cost effective to do so, we will subcontract selected services to third parties via an open selection process. ElecLink will ensure that those parties are independent and have no conflicts of interest that could interfere with the efficient performance of their duties and the requirements of its UK and French interconnector licence through inclusion of appropriate award criteria. Appropriate arrangements will also be put in place to protect commercially sensitive information.

Further details of the types of parties that could be charged with operating activities relating to ElecLink are given in Section 4 of Exhibit F.

³⁷ Page 37 CRE publication Echanges d'Electricite aux Frontières - Utilisation et gestion des interconnexions en 2012

A diagram setting out ElecLink's key commercial and regulatory interfaces are set out below.



2.3.4 Capacity allocation and related regulatory arrangements

Capacity allocation and congestion management

ElecLink's capacity management rules are designed to allow us to sell long-term capacity contracts. In doing so, we will forsake some of the short-term market value of the capacity to the purchasers of that capacity, but this is a necessary feature of a project finance structure. We note that the draft framework guidelines on capacity allocation and congestion management (CACM)³⁸ allow for long-term physical contracts combined with arrangements that ensure capacity is not withheld from the market. We require the certainty that our capacity allocation arrangements will not be subject to change imposed by future changes in regulation.

In order to put in place acceptable long-term capacity contracts, ElecLink will require an exemption from regulated Third Party Access and the Approval of Tariffs³⁹. Unless an exemption is granted, prior capacity allocations would be at risk of future regulatory changes, reducing the amount that buyers would be willing to pay for the long-term capacity contracts and thus severely diminishing

³⁸http://www.acer.europa.eu/portal/page/portal/ACER_HOME/Stakeholder_involvement/Public_consultations/Closed_Public_Consultations/PC-03_FG_Electricity_CAM_and_CM/Consultation_document/DFGC_2011E002%20FG%20Elec%20CACM%20Final.pdf

³⁹ Articles 32 and 37 (6) Third Package Electricity Directive respectively.

our ability to raise debt finance to fund the Project. Without this source of finance, the Project will not be viable.

The recitals to the Cross Border Regulation⁴⁰ refer to the need to test market interest during the project planning phase. To ensure that our proposed arrangements are tested with the market, we expect to consult further with potential customers on form and duration of long-term contracts, as well as how short-term congestion management arrangements might work, founded on the following principles:

- the primary allocation of capacity over the long-term will be on an open, non-discriminatory and transparent basis,
- secondary market trading arrangements will be put in place that allow the resale of capacity,
- the short-term market arrangements for the allocation of capacity will be in line with those prevailing in the market,
- there will be restrictions on the volume of capacity that might be held by a dominant⁴¹ party,
- anti-hoarding measures will ensure that no player can withhold capacity from the market, *and*
- suitable monitoring arrangements will be put in place to support these measures.

We expect to offer both long-term and short-term capacity products to the market, with approximately 80% of capacity expected to be allocated on long-term contracts⁴². The final allocation will depend on the market interest for different types of products in the process of consultation with potential customers. This process would run up to Q1 2014 and would involve direct engagement with a representative cross-section of likely potential customers to determine their preferred product types.

We set out below our proposed capacity allocation and congestion management mechanism in more detail.

Long-term capacity allocation

We have undertaken an initial market testing exercise that has involved discussions with potential customers and selected industry stakeholders. Our market testing indicates that potential customers are seeking to buy physical or financial rights. However consistency in arrangements across a single border (GB-France) was seen as important from both a regulatory and commercial perspectives. There was a tendency for utilities to express a preference for physical rights and for financial players to express a preference for financial rights. For this reason, our intention is to structure our capacity contracts with the following key features:

- we will offer capacity contracts which give the buyer the right to utilise the purchased capacity in return for payments to ElecLink,
- long-term contracts will be of varying type, structure and duration. The contracts may include physical and/or financial rights, firmness, nomination rights and mechanisms for secondary market recycling of capacity. We are targeting a portfolio of contracts of up to

⁴⁰ Recital 23, Cross Border Regulation

⁴¹ A dominant party in this context is used to denote a party with a greater than 25% share of the generation or supply market in either GB or France.

⁴² "Short-term" denotes day-ahead and intra-day products.

20 years in duration, with an average duration expected to be less than 15 years. The portfolio will be structured to ensure that we can recover debt service, operating costs and a return to equity,

- the contracts would be sold in an open, transparent and non-discriminatory manner. We will engage a third party to run the capacity allocation process, which is likely to take the form of a public tender that specifies clear and transparent selection criteria. As is typical with such processes, we would include some minimum criteria for participation, including credit worthiness/credit support. Further details of the form that such a process is likely to take are given in Section 6 of Exhibit F.
- we will put in place arrangements for secondary market trading to enable long-term capacity right holders to sell on their rights to other market participants. We envisage that this would occur through some form of bulletin board/exchange operated by a third party,
- UIOSI arrangements will be put in place for long-term physical capacity contracts. This would ensure that any capacity that is not nominated for use by the holder of that capacity at the day-ahead stage will be made available to the market and is in line with the current draft framework CACM and Forward Capacity guidelines,
- long-term contracts may or may not be physically firm. Our grid connection offers are subject to both planned and unplanned outages that are beyond the full control of ElecLink. Where prudent, ElecLink may structure long-term interruptible contracts to pass on the risk of TSO interruption to its customers on similar terms to current market practice on the GB/French border.
- open and transparent reporting will be put in place in line with arrangements in place for competing interconnectors, and
- a dominant party may not own more than 50% of total ElecLink import capacity rights from GB to France.

Short-term capacity allocation and congestion management

With respect to short-term capacity allocation, given the thrust of discussions on the Target Model⁴³, it is our expectation that by 2016, the arrangements for the sale of day-ahead capacity will involve some form of implicit auction. We welcome developments in this area as we believe that implicit day-ahead auction arrangements will enhance the value of interconnection by ensuring that our capacity is used by those that value it most highly. As such, it is our intention to allocate short-term capacity to market participants in a manner that is consistent with the capacity arrangements that are prevailing in the market at the time⁴⁵ on the understanding that such arrangements will not adversely discriminate against ElecLink and other interconnectors (both merchant and regulated) and will be consistent with the terms of any exemption granted to ElecLink.

⁴³ The Target Model for market integration as set out in the draft framework guidelines on CACM, which was issued by the European regulators in September 2010.

⁴⁴ Looking at the different timeframes, the arrangements which are under consideration:

- Forward Market: explicit longer-term auctions of capacity for physical or financial transmission rights (possibly through a single platform), with secondary market arrangements and UIOSI mechanism for physical transmission rights.
- Day-ahead Market: implicit allocation of all (remaining) capacity through price coupling between power exchanges, growing from the initial regional models to a single price coupling with one matching algorithm encompassing the entire EU.
- Intra-day Market: implicit continuous trading with reliable pricing of intraday transmission capacity reflecting congestion (i.e. in case of scarce capacity) through a pan-European intraday platform. This should include automatic matching and appropriate block bids and sophisticated products where needed.

⁴⁵ See Exhibit G for more details.

Recent drafts of CACM and the Forward Capacity Allocation Network Codes propose that all interconnector capacity not allocated on a long-term basis (i.e. day ahead and intraday capacity) should be physically firm and the failure to provide firm capacity and any consequential loss will be borne by the provider of interconnector infrastructure⁴⁶. ElecLink welcomes the opportunity to participate in the day-ahead and intraday markets where it sees value. However, the potential uncapped liability arising from physical firmness will need to be carefully managed. ElecLink proposes to provide firm day-ahead and intraday capacity but subject to a capped maximum loss or similar structure appropriate for a single-asset transmission business, i.e. a consequential loss from a failure to provide firmness should not endanger the financial solvency of the Project⁴⁷. Lenders will require clarity on this issue before providing debt finance to the Project. The exact terms of firmness will be subject to discussions with the NRAs and final versions of the CACM and Forward Capacity Allocation Network Codes.

Application of network codes

Since the network codes implementing the EU Third Package have yet to be finalised, we cannot at this stage commit to implementing all articles contained in the draft network codes as well as any future regulations relating to electricity interconnectors that may be contemplated. However, we intend to abide by and indeed welcome the bulk of the provisions contained in the draft framework CACM guidelines given appropriate guarantees of equal treatment of ElecLink relative to other interconnectors (both merchant and regulated) on the same border zone and provided compliance would not have an adverse impact on ElecLink's long-term capacity contracts and would be consistent with the terms of any exemption granted to ElecLink.

Exhibit G considers the current draft framework CACM guidelines and, for each of the provisions contained within those guidelines, sets out our intentions with respect to aligning ElecLink to those provisions.

Treatment of losses on ElecLink

The IFA's user guide⁴⁸ defines a Mid-Channel nomination point so that losses are the responsibility of the users and shared equally between buyer and seller at the Mid Channel point. ElecLink intends to put in place a similar treatment for losses, specifically:

- we will define a similar Mid-Channel nomination point for users,
- the local TSO will make an adjustment for losses between mid-Channel and the relevant market boundaries at either side of the interconnector, and
- users will need to make their own arrangements for network transmission losses (on the National Grid and RTE systems) between the relevant market boundaries and nomination points.

⁴⁶ We note that part 4 of Article 73 of Forward Capacity Allocation Network Codes specifies that "Cumulated compensation payments shall not exceed the congestion income derived from the allocation of long-term transmission rights." However, we note further that the time-frames over which congestion income is calculated are not specified and the potential cumulated compensation payments could in theory be sufficiently large to threaten the financial solvency of the Project.

⁴⁷ The directors of ElecLink have a fiduciary duty not to take actions that could reasonably be assumed to endanger the Company. During periods where capacity prices spike significantly above the normal trading range, ElecLink's capital at risk, linked to firm contracts, may rise to levels the Company cannot manage following an unplanned outage of the system. In the event that there is no alternative mechanism to cap ElecLink's total exposure, ElecLink will reduce its capital at risk by withdrawing capacity available for firm intraday contracts.

⁴⁸ Section 2.7 of http://www.nationalgrid.com/NR/rdonlyres/ICB08CE6-3883-4E82-B340-4B93470D5A7C/5178/IFAUserGuidelssue5_final.pdf

Monitoring, transparency and network security

ElecLink will broadly match the arrangements in place for other competing interconnectors, taking into account our regulatory and market obligations, as follows:

- **Reporting and publication requirements** – we will match the arrangements which are in place for other interconnectors. The precise type, format and frequency of information to be provided to the CRE and Ofgem will be defined in due course.
- **Transparency requirements of Annex I of the Cross Border Regulation (EC)** – we will discuss with the CRE and Ofgem their detailed requirements and we are committed to meeting the regulatory requirements which are relevant to the provision of capacity transaction data.
- **EREG advice and EC consultation on Comitology Guidelines on Fundamental Electricity Data Transparency** – we will agree with the CRE and Ofgem their requirements to be met as per section 4.2 of the ERGEG Advice on Comitology Guidelines on Fundamental Electricity Data Transparency.

Section 3 of Exhibit F sets out our initial information provision approach for discussion with the CRE and Ofgem. This takes into account the high level information available in the current and foreseeable regulatory and market obligations.

Ancillary Services

ElecLink design employs VSC technology that can be configured to provide additional services, including reactive power, black start and frequency control capability. ElecLink is in discussions with TSOs to understand the demand for ancillary services and the TSO's commercial interest to purchase such services. At the next stage of our discussions with the TSOs, we will also address the mutual need for cross-border balancing and emergency contracts. We expect the revenues arising from the provision of ancillary services to be small in relation to ElecLink's overall revenues.

Coordination with TSOs

ElecLink is in the process of applying to the NRAs for an Interconnector Licence from the NRAs. Receipt of an Interconnector License will afford ElecLink certain rights and obligations as a TSO that in turn will facilitate certain aspects of the Project including permitting and consenting. Under EC 714/2009, TSOs acting on similar bidding zones and borders are required to cooperate with each other to ensure that capacity allocation shall be coordinated and implemented using common allocation procedures by the TSOs involved. As part of our grid connection agreements with RTE and NGET, we have referenced and acknowledged regulation 714/2009.⁴⁹ We have discussed coordination of planned maintenance periods of the convertor stations to coincide with maintenance periods of other corresponding convertor stations and a sequenced approach to maintenance of other interconnection on the same border.

Non-objection from the IGC

The IGC carries out its duties in accordance with Article 10 of the Treaty of Canterbury. For matters concerning safety it benefits from the advice of the Channel Tunnel Safety Authority (Article 11 of the Treaty) and in the field of security it works in co-ordination with the Joint Security Committee. ElecLink has kept the IGC and Channel Tunnel Safety Authority informed of the Project with regular meetings and presentations. ElecLink has agreed the scope technical studies and detailed risk analyses required (and subject to the IGC's satisfactory review) to obtain a non-

⁴⁹ Annex I Coordination 3.1 of regulation (EC) No 714/2009 Of The European Parliament And Of The Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003

objection from the IGC to install the Project on the Eurotunnel concession property before the end of December 2013.

2.3.5 Project timeline and plan

A key objective of the Shareholders is to bring ElecLink into operation to respond to France and Great Britain's forecast tightening demand/supply balance from 2016. We are targeting a 12 month period (to 2Q 2014) to bring the Project to financial close. Financial close is conditional upon, amongst other things, the granting of the requested regulatory exemptions. We have developed a detailed project plan to which we are working and the major milestones are:

- Agreed TSO grid connections – Q2 2013
- Submission of regulatory exemption documentation – Ofgem: Q3 2013 and CRE: Q3 2013
- Procure and negotiate EPC – Q4 2013 – Q1 2014
- Completion of environmental and planning studies and relevant applications – Q1 2014
- Regulatory and EU decisions – Q2 2014
- Capacity allocation process – Q4 2013 - Q1 2014
- Appoint EPC contractor – Q1 2014
- Further environmental, planning and consent processes – 2014
- Financial close – Q2 2014
- Construction – 2014 to 2016
- Commissioning – Q4 2016

Overall, receiving the exemptions requested in this document is on the critical path to developing this Project and is a condition precedent to financial close. Without these exemptions, we cannot proceed. Section 8 of Exhibit F provides further details of the Project timetable.

In Exhibit B, we set out further information on:

- the status of our grid connection agreements, and
- the status of other permits and consents (environment, security, planning etc.)

3 Exemption request and rationale

3.1 Introduction

ElecLink has carefully considered the exemptions it requires, taking into account relevant issues emerging from ACER, ENTSO-E and the national regulatory authorities in relation to:

- the Third Package,
- capacity allocation and congestion management guidelines,
- the development of network codes,
- previous exemption applications in both electricity and gas infrastructure, *and*
- the work, under ACER⁵⁰, to develop the framework for cross border interconnection for the France-UK-Ireland region (FUI).

We set out below our exemption request and the rationale behind it. We explain and describe, in turn:

- the exemptions we require in order to proceed with the Project,
- why we require these exemptions and the specific characteristics of the Project that justify these exemptions being granted,
- the requested duration of our exemption, *and*
- how we will maintain commercial confidentiality.

Unless an exemption is obtained, ElecLink would be required to provide third party access, use revenues and set tariffs on a regulated basis. It would also be required to comply with unbundling obligations.

3.2 Exemption request

We are seeking exemption from the following articles of the EC directives and regulations:

- Article 16(6) of the Cross Border Regulation - Allocation of Revenues
- Provisions under UK and French law implementing the Third Package Electricity Directive, as follows:
 - Article 9 of the Third Package Electricity Directive – Unbundling
 - Article 32 of the Third Package Electricity Directive – Third Party Access
 - Article 37(6) and 37(10) of the Third Package Electricity Directive – Approval of Tariffs

⁵⁰ “France-UK-Ireland Electricity Regional Initiative Work Plan 2011-2014”, 13 July 2011. On the 4 February 2011 the European Council concluded that “The internal market should be completed by 2014 so as to allow gas and electricity to flow freely.” As a result, both ACER and the European Commission have asked regulators, to contribute to elaborate a “European Energy Workplan 2011-2014” on a regional basis.

Exemption is specifically envisaged for direct current interconnectors in the Third Package⁵¹ where “the specific nature of the interconnector concerned justifies an exemption”. Ofgem, in its recent public consultation on the NEMO interconnector⁵², stated that “these exemptions can only be granted in exceptional cases”. The Third Package provides guidance on the process by which an exemption may be granted:

- on a case by case basis by the concerned national energy regulators,
- for a defined period of time,
- for all or part of the capacity of the new interconnector, and
- after national energy regulators consider the proposed congestion management and capacity allocation rules to be compliant with EU guidelines.

In addition, exemption may only be granted if the interconnector fulfils the conditions listed in Article 17(1) of the Cross Border Regulation, which are as follows:

- (a) *the investment must enhance competition in electricity supply,*
- (b) *the level of the risk attached to the investment is such that the investment would not take place unless the exemption is granted,*
- (c) *the interconnector must be owned by a natural or legal person which is separate at least in terms of its legal form from the system operators in whose systems that interconnector will be built,*
- (d) *charges must be levied on users of that interconnector,*
- (e) *since the partial market opening referred to in Article 19 of Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity, no part of the capital or operating costs of the interconnector has been recovered from any component of charges made for the use of transmission or distribution systems linked by the interconnector, and*
- (f) *the exemption must not be to the detriment of competition or the effective functioning of the internal electricity market, or the efficient functioning of the regulated systems to which the interconnector is linked.*

We consider the exemption rationale and evidence for our Project in two parts.

- First, we demonstrate in Sections 3.3 and 3.4 below that the **specific nature** of the Project justifies an exemption that the Project is an exceptional case and the arrangements and activities required to be undertaken for the purposes of the Project would not be permitted unless an exemption were granted.
- Second, we demonstrate that ElecLink **satisfies the exemption conditions** listed above and provide the relevant evidence in support in Section 4.

⁵¹ Article 17(1) of the Cross Border Regulation:
Cap and floor regime for regulation of project NEMO and future subsea interconnectors 28 June 2011 Art 3.2

⁵² Cap and floor regime for regulation of project NEMO and future subsea interconnectors 28 June 2011 Art 3.2

<http://www.ofgem.gov.uk/Europe/Documents/1/Cap%20and%20floor%20regime%20for%20regulation%20of%20new%20subsea%20interconnector%20investment5.pdf>

3.3 Exemption rationale and evidence

We have demonstrated the considerable benefit that ElecLink will provide. We expect to proceed with our Project, for delivery in Q4 2016, but require the exemptions set out above in order to put in place arrangements and undertake activities to address the unique challenges associated with the Project. We set out below a summary of the exceptional nature of such challenges and the rationale for our exemption request:

- **No recourse to regulated revenues or assets.** We need to have the comfort that periods of low returns can be offset by periods of higher returns, This level of comfort would be compromised if the provisions of Article 16(6) of the Cross Border Regulation apply;
- **Need to use project finance** which must be underpinned by long-term contracts and stable revenue returns; such arrangements would be compromised if the provisions of Articles 32 and Articles 37(6) and 37(10) of the Third Package Electricity Directive apply to the Project.
- **Our grid connections are subject to unplanned interruptions in the initial years** until such time National Grid and RTE reinforce their respective networks. The risks arising from such unplanned interruptions cannot be mitigated or managed if the provisions of Article 16(6) of the Cross Border Regulation and Articles 32 and 37(6) and (10) of the Third Package Electricity Directive apply;
- **Unique construction and operating risks** specific to the Tunnel which make our Project challenging to develop and operate; Again such risks cannot be mitigated or managed if the provisions of Article 16(6) Cross Border Regulation and Articles 32 and 37(6) and (10) Third Package Electricity Directive apply; *and*
- **Exceptional market and policy risks** given the timing of our Project, which makes our returns highly uncertain. The application of Articles 32 and Articles 37(6) and 37 (10) of the Third Package Electricity Directive and Article 16(6) of the Cross Border Regulation potentially limit ElecLink's ability to mitigate and manage such risk.
- **Independent and Unique Project Shareholders** in the form of STAR Capital and Groupe Eurotunnel with no recourse to a regulated energy transmission base, the inability to socialise the costs of the interconnector and the prospect of future investment in other energy projects. An exemption from Articles 16(6) of the Cross Border Regulation, Articles 9, 32, 37(6) and 37(10) of the Third Package Electricity Directive is needed to accommodate the nature of the Shareholders, the financing requirements of the Project and potential future investment activities of the Shareholders. This issue is discussed in further detail in Section 3.4.
- **We require an exemption under French regulation** to operate 400kV transmission infrastructure. French legislation entrusts the electricity transmission system operator with the development, construction and operation of regulated interconnectors. Private investors can thus only construct and operate an interconnector within the context of an exemption, as provided for in article 7 of EC Regulation 1228/2003. Currently RTE is the only eligible entity that that can operate regulated 400kV electricity transmission infrastructure in France. The Project can only proceed if the CRE provides ElecLink an exemption as foreseen in its *Délibération* of 30 September 2010⁵³.

⁵³ Deliberation of the French Energy Regulatory Commission dated 30 September 2010 on the application of article 7 of Regulation (EC) No. 1228/2003 dated 26 June 2003 and on conditions for access to the French electricity transmission grid for new exempt interconnectors (30 September 2010).

The evidence we provide to support each of these unique challenges demonstrates the “**specific nature**” of our Project and constitutes a compelling case for ElecLink being treated as an exceptional case and being granted an exemption as provided in the regulations.

3.3.1 No recourse to regulated revenues or assets

Groupe Eurotunnel and STAR Capital are non-traditional investors in energy infrastructure who would not normally undertake power transmission investments. ElecLink is a material investment for the Shareholders outside their core businesses, representing some €400m in Project cost which will make an important contribution to the overall investment required for new interconnection in Europe. Neither Shareholder has any existing investments in the energy industry or recourse to a regulated energy transmission asset base.

As non-TSO investors, the Shareholders offer its investors higher returns than those typically associated with regulated infrastructure, equally Groupe Eurotunnel and STAR Capital engage in projects with greater risk commensurate with such returns. Indeed we are supportive of the risk/reward profile of a merchant interconnector project providing the Project obtains the exemptions requested.

If this Project fails to achieve its forecast revenues, the resulting loss will be suffered by ElecLink’s shareholders and lenders. There is no mechanism to socialise Project losses through a regulated tariff. Rather than smearing the risks of the Project across electricity customers (as would be the case under a regulated approach), our Shareholders will manage the entirety of the risks of the Project.

Article 16(6) of the Cross Border Regulation provides:

“Any revenues resulting from the allocation of interconnection shall be used for the following purposes:

- a. Guaranteeing the actual availability of the allocated capacity and/or
- b. Maintaining or increasing interconnection capacities through network investments in particular in new interconnectors.”

If the revenues cannot be used for such purposes such income can be taken into account when approving the regulated tariffs. The rest of the revenues are to be placed in separate internal accounts.

The effect of Article 16(6) of the Cross Border Regulation is to potentially cap any upside for the Shareholders to the Project whilst they remain exposed to the downside risk. Such a position is not commensurate with the risks being taken by the Project and the inability of the Project to socialise its costs.

Article 32 of the Third Package Electricity Directive requires the implementation of a system of third party access based on published tariffs that have received the prior approval of the regulatory authorities. Article 37 (6) goes on to provide that the regulatory authorities are to be responsible for fixing or approving the terms and conditions of *inter alia* the access to cross-border infrastructures including procedures for the allocation of capacity and congestion management and the regulatory authorities may require TSOs to modify the terms and conditions of access (including tariffs) pursuant to Article 37(10).

In contrast to unregulated assets; regulated assets benefit from a regime that assumes (i) 100% economic demand for each asset and (ii) any revenue shortfalls one part of the network can be made up from other parts of the regulated network.

Unless ElecLink is exempt, there is a risk that the regulatory authorities could determine that the access conditions and tariffs differ from year to year. The effect is such that there is a risk that future revenues may be derived on an entirely different basis from those anticipated at the start of the Project and be less than the revenues anticipated for the purposes of debt service and equity returns, resulting in unacceptable losses for ElecLink's shareholders and lenders.

3.3.2 Need to use project finance

The Shareholders have evaluated the Project on the basis that ElecLink is funded through a non-recourse project finance structure, i.e. ElecLink will be underpinned by a group of agreements and contracts between lenders, Shareholders, EPC contractors and other interested parties. This creates a business organisation that will issue a finite amount of debt on inception; will operate ElecLink as its sole business; and will ask that lenders look only to the Project to generate cash flow as the sole source of principal, interest payments and collateral.

Regulated returns implicitly assume regulated assets are subject to 100% demand. This is not the case for unregulated assets whose demand is subject to market conditions including interconnector capacity across neighbouring borders. ElecLink faces significant demand risk over the long-term and cannot assume the asset will be subject to 100% demand. Project lenders will require certainty that the revenue value of capacity volume contracted at financial close cannot be changed through a change in regulatory tariff.

We will sell long-term interconnector capacity contracts to generate a stream of predictable cashflows. An exemption from the provisions of Articles 32 and 37(6) and (10) of the Third Package Electricity Directive (as explained in detail at 3.3.1 above) removes the risk of tariffs and terms and conditions for access being set by and potentially changed year on year (which could have an adverse impact on the long-term and short term capacity arrangements) and will allow us to demonstrate to lenders the stability of such cashflows despite a changing regulatory environment over the course of the exemption period.

3.3.3 Unique construction and operating risks specific to the Tunnel

There are significant complexities to building an interconnector through the existing Channel Tunnel infrastructure while maintaining the Channel Tunnel's 24 hour a day traffic service. The Service Tunnel's diameter is 4.8 meters providing enough space for two small cars to pass. Channel Tunnel maintenance teams are permanently operating in the Service Tunnel to ensure safety and maintain operations in the parallel railway tunnels. In the event of a train evacuation, passengers are directed from the Running Tunnel through the Service Tunnel, which is considered to be an absolute refuge. During the construction phase, the contractor installing the cables will operate under the constraint of maintaining one of the Service Tunnel's lanes (i.e. equivalent to half of the Service Tunnel cross-section) permanently available and free from any activity or equipment of the contractor. Access to quadrants of the Running Tunnels can only be made on the basis of agreed track possessions with Eurotunnel. Each possession is for short period of time (normally 8 hours over the weekend) requiring complex logistical planning during the Project's construction phase.

In addition, given the innovative nature of ElecLink, we can have less certainty as to its expected availability after it goes live, especially in the first few years of its operation. Specific issues relating to heat levels in the Service Tunnel may push the outage rate considerably above its expected level.

Also, during operation, ElecLink faces the unique outage risk arising from potential emergencies occurring in the Running Tunnel⁵⁴.

As explained at 3.3.1 above, an exemption from Article 16(6) of the Cross Border Regulation and Articles 32 and 37(6) and (10) of the Third Package Electricity Directive would remove any potential cap on revenue upside providing a revenue profile commensurate with the risks being taken by the Project. The Shareholders and lenders will not invest in the Project if an exemption is not obtained since this would result in an unacceptable risk/reward profile.

3.3.4 Risk of unplanned interruptions

The connection of ElecLink into the onshore networks of GB and France will not be firm until such time National Grid and RTE complete existing planned reinforcement work and potentially further new works. Consequently our grid connections are subject to unplanned interruptions in the first few years of ElecLink operation. The duration, frequency and volume of these interruptions cannot be predicted with certainty and are subject to factors such as weather conditions that are outside of our control.

In addition, potential teething problems in the early stages of the project, which could relate to heat issues in the Tunnel, mean that the outage risk is likely to be particularly high at the beginning of ElecLink's operating life. Given the potentially large negative impact that unplanned interruptions will have on Project returns, we need to have comfort that periods of low returns can be offset by periods of higher returns.

Section 6.6 of Exhibit C calculates that an increase in the outage rate between Q4 2016 and 2030 of 10 percentage points would reduce projected net revenues of ElecLink by €123m (11%). In terms of the Project rate of return, changes in the outage rate can be expected to have a much greater effect. One reason for this is that the capex and operating costs of the interconnector would not decrease if the interconnector outage rate increases⁵⁵. Another reason is that the outage rate is likely to be highest at the beginning of the useful life of the interconnector when any impact on profits is not dampened by the effect of discounting.

An exemption from Article 16(6) of the Cross Border Regulation would remove any potential cap on revenue upside providing a revenue profile commensurate with the risks being taken by the Project. An exemption from Articles 32 and 37(6) and (10) would ensure that the risk/reward profile (including the ability to service debt and to ensure an appropriate return on equity) is appropriate to justify the investment by the Shareholders and the lenders.

3.3.5 Exceptional market and policy risks

Competing projects risk

In addition to the existing IFA and BritNed interconnectors, ElecLink expects to compete directly with IFA 2 from 2019 and the NEMO interconnector between GB and Belgium from 2018, together equal to 2000 MW of incremental interconnector capacity. Other early stage projects are expected to add yet more interconnection capacity between GB and Continental Europe around 2020,

⁵⁴ Since the Channel Tunnel's opening there have been three fires (1994, 2006 and 2008).

⁵⁵ In fact, maintenance costs are likely to be higher for a higher outage rate.

including the Alderney project with 2000 MW of import capacity into GB. ElecLink will also compete with future new interconnectors from GB to Norway and Ireland⁵⁶.

Additional interconnector capacity is expected to have a negative impact on ElecLink revenues since it would likely supply electricity to GB when the electricity price in GB is high and export electricity from GB when the electricity price in GB is low. The resulting price convergence will reduce the benefit of arbitrage opportunities available to the capacity holders of ElecLink.

A large number of new interconnector projects are due to be built within the next ten years in response to the need for more interconnection and a concerted policy drive at EU level to increase the level of interconnection between member states. In this respect, the Project is expected to be developed during a unique period in terms of changes to the competitive landscape in interconnection.

Table 1 Expected North West European interconnector capacity additions

Border	Capacity	Operational from
GB – France (ElecLink)	1000 MW	2016
GB – France (IFA 2)	1000 MW	2020
GB – France (FABLink)	1800 MW	2021
GB – Belgium (NEMO)	1000 MW	2018
GB – Ireland (EWIC2)	500 MW	After 2025
GB – Norway (NSN)	1400 MW	2018
GB – Norway (Statnett)	1400 MW	2020
Germany – Netherlands	1500 MW	2015
Netherlands – Denmark	700 MW	2018
France – Spain	1400 MW	2019
France – Belgium	1800 MW	2020
Belgium – Luxembourg	500 MW	2015-2020
Germany – Denmark	1000 MW	2015-2020
Belgium – Germany	1400 MW	2012-2015
Denmark – Norway	700 MW	2012-2015
Germany – Norway	1400 MW	2015-2019
Germany – Sweden	210 MW	2012-2015

Source: Ofgem, CRE, DECC, National Grid

⁵⁶ Since interconnectors trade on price differences, an interconnector between two markets can reduce price peaks in both of the connected markets if those peaks are not perfectly correlated. This in turn can reduce the scope for price arbitrage by other interconnectors into either of those markets.

The majority of the expected new interconnectors listed in Table I are expected to be built by regulated TSOs. However, if ElecLink proves to be commercially successful, this may well encourage more merchant interconnector investments in NWE, including interconnectors between GB and Continental Europe. This would increase the level of competition faced by ElecLink even further, reducing the congestion rent accrued on ElecLink capacity and acting as an automatic brake on congestion rent earned. By investing in an interconnector between GB and France, we expect to enter a competitive marketplace where the future level of competition is highly uncertain.

Section 6.5 of Exhibit C calculates that a modest increase in EU interconnection results in a €113m (10%) decrease in total estimated ElecLink net revenue between Q4 2016 and 2030. For the purposes of this sensitivity, the assumptions on interconnection capacities between the different markets are based on the ENTSO-E Ten Year Network Development Plan subject to three modifications: (i) addition of 1000 MW of capacity between GB and France attributable to ElecLink from Q4 2016; (ii) addition of 1,400 MW of capacity between GB and Norway in 2018 attributable to the Statnett project; and (iii) additional 2 GW interconnection capacity between GB and France from 2020 as a result of the Alderney interconnector project.

Policy risk

The Project is being developed against a background of a generation mix in Europe which is forecast to profoundly change over the next decade as policies designed to achieve renewables and decarbonisation targets progressively impact electricity supply (generation plant retirements and new build) and demand (energy efficiency and demand response). In addition, the policies of individual member states with regard to the role of nuclear power are subject to sudden and fundamental change.

The economics of the Project would be highly sensitive to the changes in the generation mix and capacity margins that would result from policy-driven changes. These risks are not under our control and we are investing in a market and policy landscape which is characterised by an unprecedented level of uncertainty. The key risks to the financial returns from the Project are highlighted below.

Carbon price support (CPS) – In its 2011 budget, the UK Government confirmed its plans to levy a tax on fuels used for electricity generation in proportion to their associated carbon dioxide emission. By 2016, we expect that this scheme will create a significant differential between the price of carbon associated with generation in GB and France. This is expected to create a difference in average electricity prices between GB and France, driving a part of ElecLink revenues.

There is a considerable amount of uncertainty about how long CPS would remain in place and what form it would take in the future. A policy implemented through the tax regime can be retracted at any time and is subject to changes in the UK political landscape. Some of the potential reasons why CPS may be retracted are the extra cost that it imposes on consumers of electricity and a perception that it could make UK industry uncompetitive relative to its EU counterparts.

Section 6.4 of Exhibit C analyses the potential impact on ElecLink revenues of CPS being retracted before ElecLink comes online in Q4 January 2016. It is estimated that the resulting total ElecLink revenues between 2016 and 2030 would be €337m (30%) lower than under the Reference (2011) scenario⁵⁷.

⁵⁷ The Redpoint Reference scenario is a forward looking projection of the development of electricity systems in North West Europe to 2030 carried out by Redpoint Energy. It is intended to reflect a steady-state evolution of the market based on consensus and referenceable assumptions where possible. Key outputs include generation mix, generation costs, market prices and emissions in each market covered by the model. A full description of the Reference scenario and the underlying modelling assumptions is provided in Section 3 of Exhibit C.

Capacity payments – Capacity payment regimes are currently being consulted on in both France and GB. The aim of implementing such a regime is to promote security of supply. In the case of both France and GB, the chosen capacity mechanism is likely to increase the economic incentives for the market to provide more flexible generation capacity.

Since the form of any capacity payments is still under discussion in both countries, it is too early to attempt to quantify the financial risk to the Project associated with any such scheme. However, to the extent that capacity payments encourage investors to build more flexible generation capacity, we would expect future electricity prices to be less volatile with a corresponding detrimental impact on ElecLink revenues.

Generation capacity mix – There is much uncertainty on the extent to which the renewables and decarbonisation targets signed up to by each of the EU governments will be met. In addition, the renewable support and decarbonisation policies themselves are uncertain and may be subject to significant change. The recent decision of the German government to phase out all of the country's nuclear capacity by 2022 demonstrates the direct influence of government policy on the generation capacity mix. These factors create a large amount of uncertainty which is unique to the time in which the Project is being developed.

To demonstrate the revenue risk associated with potential changes in the generation capacity mix that could be brought about by changes in government policy, Section 6.3 of Exhibit C sets out the results of a sensitivity which sees more nuclear and renewable new build in GB than under the Reference scenario, with the UK meeting its 2020 renewable energy target, and significant nuclear retirements in France that see 41 GW of total nuclear capacity in that market by 2030. This is substantially lower than the total nuclear capacity in France in 2030 under the Reference scenario. It is estimated that the resulting total ElecLink revenues between Q4 2016 and 2030 would be €492m (43%) lower than under the Reference scenario.

As noted previously, an exemption from Articles 32 and 37(6) and (10) of the Third Package Electricity Directive would remove the risk of the regulatory authorities determining that different access conditions and tariffs should apply year on year thereby enabling ElecLink to better manage and mitigate the risks summarised above. An exemption from Article 16(6) of the Cross Border Regulation would remove any potential cap on revenue upside and provide a revenue profile commensurate with the risks being taken by the Project.

3.4 Retain flexibility and reduce regulatory burden

The application of the Third Package Electricity Directive's unbundling requirements to the Project would impose restrictions on potential future investment in energy infrastructure by the Shareholders. By way of example, Article 9(1)(b)(ii) prevents the same person from directly or indirectly exercising control over a TSO or a transmission system and exercising control or any right over an undertaking performing any functions of generation or supply. The provisions of Article 9(1) (b), (c) and (d) restrict board appointments and the exercise of voting rights. Such restrictions would prove problematic and unnecessarily limiting for the Shareholders.

As noted previously, energy infrastructure projects do not comprise the core business of the Shareholders. However, there may be opportunities in the future for the Shareholders to invest in other energy projects. Such projects would be separate from ElecLink and would not result in discrimination in respect of the operation or a conflict of interest given the likely value and nature of the participation in such activities and the likely size and market share of any such generation and/or supply activities. Further details of the Shareholders' respective investment strategies are provided at Section 7 Exhibit F.

Article 9(1) (a) of the Third Package Electricity Directive and the legislation implementing the provisions of the Third Package Electricity Directive in the UK is drafted such that ElecLink would be categorised as a TSO with the associated obligations.⁵⁸ These obligations are inappropriate and potentially onerous for an operator with a single transmission asset such as ElecLink. We are seeking to limit the administrative and regulatory burden of operating ElecLink, particularly as neither of the Shareholders are TSOs and therefore do not have the resources to fulfil all of the administrative obligations implied by the unbundling regulations.

The obligations imposed by Article 12(a) with respect to the long-term ability of a system to meet reasonable demands for the transmission of electricity and operating secure, reliable and efficient transmission systems is inappropriate for a single interconnector transmission asset such as ElecLink whose capacity is to some extent physically limited by the environment in which it is constructed.

Articles 12 (b) and (c) of the Third Package Electricity Directive refers to the concept of adequacy which must be interpreted in light of the nature of the ElecLink asset. Article 12(d) and the references contained therein to ancillary services (including demand response) may be inappropriate for ElecLink. Article 12(h) is also not appropriate given the nature of the Shareholders, the nature of the assets, the proposed financing arrangements and the unique risk profile of the Project.

We also note that the current application of unbundling requirements to financial and institutional investors has been the subject of much debate and we understand that work is underway in both the European Commission and national governments to determine policy in this area.

The European Commission's recent staff working document on Unbundling⁵⁹ recognises the role of financial investors in the energy sector and the potential for a financial investor to own both infrastructure and generation providing it is impossible to use the infrastructure activities in a manner to favour the generation assets.

In summary, as a private investor, the Shareholders require exemption from unbundling regulations in order to retain the flexibility to invest in future independent projects and to ensure that the obligations imposed on us in respect of our operation of the ElecLink interconnector are appropriate and proportionate. We recognise the concerns that exemption from the Third Package Electricity Directive's unbundling requirements may create in terms of independence of decision making at the level of the company that would carry out the operation of ElecLink and we would be willing to discuss measures on company structure and governance and reporting requirements that would allay these concerns. We would be pleased to consider options which ensure operational independence whilst allowing us an investor in infrastructure projects to provide some of the much needed finance required by the EU energy sector over the next decade.

3.5 Duration of exemption

Based on previous decisions by National Regulatory Authorities (NRAs) and the EC, we believe that the requested duration of the exemption should take into account the length of the contracts and financing required for the Project to proceed.

⁵⁸ Article 12 of the Third Package Electricity Directive sets out the "Tasks of Transmission System Operators".

⁵⁹ European Commission, Brussels, 8.5.2013, SWD(2013) 177 final: Commission Staff Working Document - Ownership Unbundling The Commission's Practice In Assessing The Presence Of A Conflict Of Interest Including In Case Of Financial Investors - http://ec.europa.eu/energy/gas_electricity/interpretative_notes/doc/implementation_notes/swd_2013_0177_en.pdf

ElecLink's forecast financial information is presented in Exhibit E. Under the Reference scenario, the leverage level is optimised based on the capacity sold under long-term contracts. The Project debt is paid down fully while allowing for some returns to be accrued to the equity holders.

We request that the duration of the exemption is 25 years from the start of full commercial operation post commissioning, which is expected to be in October 2016. We consider 25 years to be the minimum sufficient period which would allow a return for both debt and equity providers to the Project.

The Project will create a long-lived asset that is expected to generate cashflows for 40 years. This is offset by the capital intensive nature of HVDC interconnectors requiring significant investment in advance of first cashflows. As discussed above, the optimal financing structure would be composed primarily of debt to finance the €400 million capital cost. ElecLink is confident that it will contract long-term capacity sales (up to 20 years) with its customers to underpin project debt. A 25 year exemption is required to provide lenders confidence that they will be repaid with some margin for downside scenarios i.e. where forecast cashflows are lower than expected due to unplanned outages, lower than expected arbitrage at borders, materially higher operating and financing costs or higher construction costs.

The 25 year exemption period is not wholly linked to the debt structure but it is also required to give equity providers confidence that a return can be expected over the period of exemption. In the case of this Project, equity providers will remain subordinate to debt until all debt is repaid. We therefore anticipate that the return to equity will be weighted towards the end of the exemption period. If the exemption period is less than 25 years, equity will be prejudiced disproportionately to debt. It is important to note that under French regulation⁶⁰, an exempt interconnector may be required, at the end of its exemption period, to be sold to the incumbent TSOs or shut down, thereby further limiting the potential to create cashflow and provide a return to both equity and debt providers.

In conclusion, since the period over which Project debt and equity would have to be repaid is impacted by the duration of the exemption, a shorter exemption period will prejudice the possibility of obtaining the necessary financing in order to proceed with the Project as envisaged and may result in the Project no longer being viable.

3.6 Commercial confidentiality

ElecLink recognises the need to protect commercially sensitive information whilst ensuring that appropriate information is published with respect to available capacity to ensure that any secondary market operates effectively. ElecLink is currently implementing appropriate measures to ensure commercially sensitive information is protected within its own organisation. ElecLink will require similar protection mechanisms to be put in place by any sub-contractors or third parties with whom ElecLink contracts during the construction and operating phases of the Project.

⁶⁰ Délibération de la Commission de régulation de l'énergie du 30 septembre 2010 portant communication sur l'application de l'article 7 du règlement (CE) n° 1228/2003 du 26 juin 2003 et les modalités d'accès au réseau public de transport d'électricité français de nouvelles interconnexions exemptées envisagées three scenarios at the end of the exemption period including a forced shut-down of the system.

It should be noted that ElecLink is not a vertically integrated undertaking and therefore the risk of commercially sensitive information held by ElecLink being transferred to undertakings performing any of the functions of generation and supply is limited.⁶¹

3.7 Limiting the Potential Negative Effects of the Requested Exemptions

With respect to the exemption from the provisions of Article 9 of Third Package Electricity Directive, as noted at clause 3.4 and section 7 Exhibit F, any investment by the Shareholders in any generation or supply activities would be of a value and nature, size and market share as to not give rise to any conflict of interest. Appropriate confidentiality measures would also be put in place to protect commercially sensitive information.

Tariffs and access criteria would be published, transparent and applied in a non-discriminatory manner.

ElecLink is proposing to the extent set out in Exhibit G to align with ACERs Framework Guidelines on Capacity Allocation and Congestion Management for Electricity dated 29 July 2011 and to adhere to the application of network codes.

Appropriate capacity auction mechanisms will be developed and put in place.

The anti-hoarding measures proposed and as described more fully at 2.3.4 and Section 4.5 of Exhibit D will prevent a potentially dominant player from withholding capacity on the interconnector. ElecLink will also put in place restrictions on the percentage of long-term capacity rights a potentially dominant player could acquire and, to the extent it is within ElecLink's control, prevent such a dominant player from acquiring additional capacity on the secondary market.

Whilst ElecLink can make no firm commitment to implement future legislative and regulatory changes that are unknown and unquantifiable, ElecLink would of course abide by any legal obligations applicable to it and would implement such other changes to the extent such changes would not adversely impact its long-term capacity contracts and provided the equal treatment of ElecLink as compared to other interconnectors (both merchant and regulated) on the same zone border is appropriately guaranteed.

The Shareholders would be open to discuss measures to mitigate other potential negative effects of the requested exemption to allay particular concerns in this regard.

⁶¹ Article 9(7) of the Third Package Electricity Directive provides that "Member States shall ensure that neither commercially sensitive information referred to in Article 16 held by a transmission system operator which was part of a vertically integrated undertaking, nor the staff of such a transmission system operator, is transferred to undertakings performing any of the functions of generation and supply."

4 Demonstration of fulfilment of exemption criteria

We set out below the key arguments for granting the requested exemption from regulation to ElecLink. It draws on the detailed evidence and arguments contained in Exhibits C and D as well as the other sections of this document. It is structured around the criteria for granting exemption from regulation as set out in Article 17 of the Cross Border Regulation.

4.1 Criterion A

The investment must enhance competition in electricity supply

ElecLink is expected to enhance competition in the EU electricity market in a number of ways. We summarise these below, with further detailed evidence provided in Section 4 of Exhibit D.

Enhance competition by creating opportunities for economic trade between electricity markets

A 50% increase in interconnection between the French and GB electricity markets creates opportunities for French generators to sell electricity in the GB market and vice versa. It therefore has the potential to increase competition in both markets by increasing the number of generators competing for customers. ElecLink would therefore be expected to enhance competition in both markets in this regard.

We expect that the commissioning of ElecLink will result in an increase in the number of sellers in the electricity market and lower market concentration. The benefits of this increased competition are likely to be reflected in a lower mark-up of electricity price over the marginal cost of producing electricity, resulting in lower prices for consumers. This is a standard result in economic models of competition where sellers compete in quantities⁶².

In addition, ElecLink can be expected to increase liquidity in both the French and GB electricity markets by increasing the volume of electricity traded in those markets. This can be expected to lead to better price formation. There are several benefits associated with this, including greater price transparency for market participants, better reference prices for transactions in the forward market leading to improved hedging and reduced risk of price distortion and market manipulation.

Enhance competition by reducing the ability of dominant players to exercise market power

Section 4 of Exhibit D analyses the expected impact of ElecLink on competition in the French and GB electricity markets in detail. It does so in light of the prevailing market structure in both countries. Explicit recognition is made of the fact that the electricity generation sector in France is not perfectly competitive and is characterised by a relatively high degree of market concentration with EDF being a dominant player in that market⁶³. Academic literature⁶⁴ on this subject sets out the

⁶² The Cournot model of competition, where sellers compete in quantities, is used widely in economic analysis of electricity markets. In the Cournot model with N players, the equilibrium market price p is given by $p=(a+Nc)/(N+1)$, where a is the fixed component of demand that does not depend on the market price and c is the marginal cost of production, which is the same for all players. As N goes to infinity and the market converges to perfect competition, the price p goes to the marginal cost of production c .

⁶³ Our analysis, which is set out in Section 4 of Exhibit D, suggests that the market share of EDF in electricity generation in France would be around 91% by 2017 before taking into account the effect of market power remedies under NOME law and 74% after taking those measures into account.

conditions under which dominant parties may use rights over interconnector capacity in order to enhance their existing market position. The ability of a market player to influence the market price of electricity by changing its output decision is a key condition in this regard. This is taken into account in the analysis set out in Exhibit D, particularly with respect to the existing position of EDF in the French electricity market.

ElecLink has no interest in helping dominant parties enhance their existing market position. To make sure that ElecLink has a positive impact on competition in the electricity market; Exhibit D derives a market power remedy that takes the form of a limit on the proportion of ElecLink transmission capacity from GB to France that EDF is permitted to acquire. It is shown that under the Reference scenario assumptions, a limit of 70% on the proportion of ElecLink transmission capacity from GB to France that EDF would be permitted to contract would ensure that market concentration in electricity generation in France is reduced in all years between 2017 and 2030 regardless of how the remainder of ElecLink capacity is allocated. In the interest of promoting competition, the Shareholders propose to impose a limit of 50% on the proportion of ElecLink transmission capacity from GB to France that a dominant party would be permitted to acquire. This is significantly lower than the 70% threshold limit derived in Exhibit D and would ensure that the effect of ElecLink on market concentration of French generation is positive under a wide range of outcomes that differ from the Reference scenario assumptions.

Enhance competition by creating choice and competition in cross border transactions

Another significant benefit of ElecLink is in enhancing competition in interconnection. Currently, interconnection between GB and France is dominated by IFA, which is jointly owned and operated by National Grid and RTE. Without ElecLink, this would not change as IFA 2 comes online since it would be owned and operated by the same parties. In the wider context of interconnection between GB and Continental Europe, the BritNed and NEMO interconnectors would also be expected to be operational by 2020. However, National Grid is also a co-owner of both of these interconnectors, the other owners being Tennet and Elia respectively. Hence, ElecLink is a unique independent player in the market and would be expected to enhance competition significantly in this space⁶⁵.

Competition in interconnection will drive down the cost of products associated with rights to transmit electricity between the two markets as well as increasing the range of available products. Thus the benefits of greater competition in interconnection would be expected to enhance competition in electricity supply indirectly by providing more avenues for parties wishing to sell electricity into either GB or France as well as lowering the associated cost.

Enhance competition through appropriate capacity allocation and congestion management mechanisms

The Shareholders are proposing to put in place capacity allocation and congestion management mechanisms for ElecLink that would ensure that ElecLink has a positive impact on competition. ElecLink intends to be consistent with arrangements that are prevailing in the market at the time. This would ensure a level playing field between ElecLink and IFA as well as comparability of capacity products for potential buyers of capacity rights, thus enhancing competition.

⁶⁴ See for example Joskow, P. and J. Tirole (2000). Transmission rights and market power on electric power networks. *RAND Journal of Economics* 29 (4), pp. 726-749.

⁶⁵ By 2020, the total interconnection capacity between GB and Continental Europe is expected to be 4 GW excluding ElecLink. Half of that capacity would belong to National Grid, with a further 1 GW belonging to RTE and 500 MW belonging to each of Tennet and Elia. Given this ownership structure, the HHI market concentration index for interconnection between GB and Continental Europe without ElecLink would be given by $0.5^2 + 0.25^2 + 2 \cdot 0.125^2 = 0.34$. With ElecLink, this would be $0.4^2 + 2 \cdot 0.2^2 + 2 \cdot 0.1^2 = 0.26$.

The only aspect of the capacity allocation regime in which ElecLink may differ from the prevailing market arrangements is in seeking to sell longer term capacity rights in order to underpin the project finance required to allow the Project to proceed. In order to improve market liquidity of capacity rights, the Shareholders propose to put in place a secondary market in which the holders of long-term capacity rights can sell a part or all of their holding in a variety of product denominations. To ensure that market concentration in electricity generation is reduced after rights over ElecLink capacity are accounted for, any market power remedies that apply when capacity rights are allocated in the first instance would also apply to any transactions in the secondary capacity market. Arrangements to manage this will need to be put in place in cooperation with the NRAs.

Finally, if any physical rights over ElecLink capacity are made available, strong anti-hoarding measures would be put in place to ensure that their impact on competition is positive. These would take the form of UIOSI provisions, which have been shown to make physical rights equivalent to financial rights with respect to their impact on competition.

4.2 Criterion B

The level of risk attached to the investment is such that the investment would not take place unless an exemption is granted

We are seeking the exemptions outlined in Section 3 because we believe that there are a number of risk factors capable of significantly eroding returns on our investment. As requested by the CRE and Ofgem, a full and independent evaluation of the expected revenue of ElecLink and some of the associated risks has been conducted on behalf of ElecLink by Redpoint Energy. We have carried out both scenario and sensitivity analysis to demonstrate quantitatively some of the risks associated with the Project. These risks, together with those for which the potential impact on financial returns for the Project has not been quantified, are set out below.

Since this is a single project, none of the risks listed in this section can be diversified by the Shareholders, and hence they require the assurance that they would be able to benefit from any upside to the returns on the Project as well as having to bear the costs in cases where one or more of the risks materialise. As a result, the Shareholders judge that they require an exemption from regulation on the use of revenues resulting from allocation of interconnection capacity to ensure adequate returns for the risks associated with the Project and therefore to maintain its financial viability. The Shareholders also judge that they require an exemption from regulations relating to TPA arrangements in order to manage the risks that relate to an uncertain regulatory environment and the possibility of unforeseen changes to regulation that affects ElecLink. If a full exemption is not granted, the balance of risks and reward would be such as to make the Project commercially unviable.

It is possible that some, though not all, of these risks can be partly managed by selling long-term capacity rights over a proportion of ElecLink capacity. However, given that these risks would be passed on to the buyers of long-term capacity rights, it is fair to assume that buyers of those rights would demand a discount to the expected value of the congestion revenues⁶⁶ associated with those rights as compensation for taking on those risks. A sufficiently large discount would leave the Shareholders unable to make a reasonable return on their investment.

⁶⁶ These congestion revenues are estimated in Exhibit C on the basis of the Redpoint Reference scenario and a number of sensitivities.

Policy risk

Government policy is a significant driver of change in the EU electricity industry. The influence of policy on developments in the electricity market takes place through support for renewable generation, emission targets and standards, carbon pricing and carbon emission reduction targets and measures to improve or maintain security of electricity supply. Policy developments can be a significant driver of changes in electricity prices across the EU and can thus have a significant effect on interconnector revenues. Since government policy is often uncertain, it represents a significant risk to the financial returns associated with the Project. Here, we discuss three specific policy risks that can significantly affect the financial returns from the Project.

- 1) **Carbon price support (CPS)** – The CPS scheme is structured so as to provide a minimum level for the price of carbon dioxide emissions associated with electricity generation in the UK after accounting for the expected price of EU emission Allowances (EUAs). By 2016, we expect that this scheme will create a significant differential between the prices of carbon associated with generation in GB and France. Given that carbon dioxide emitting thermal plant frequently set the marginal system cost of electricity generation in both markets, this difference is expected to create a difference in average electricity prices between GB and France, driving a part of ElecLink revenues.

Given the investment horizon of the Project and the duration of the exemption from regulation requested, it is by no means certain that the policy will still be in place in its currently intended form for the duration of the requested exemption, or indeed by the time that ElecLink becomes operational. Unlike a contract, which is protected by law, a policy can be retracted at any time. Some of the potential reasons why CPS may be retracted are the extra cost that it imposes on consumers of electricity and a perception that it could make UK industry uncompetitive relative to its EU counterparts.

Section 6.4 of Exhibit C analyses the potential impact on ElecLink revenues of CPS being retracted before ElecLink comes online in Q4 2016. It is estimated that the resulting total ElecLink revenues between Q4 2016 and 2030 would be €337m (30%) lower than under the Reference scenario.

- 2) **Capacity payments** – Capacity payment regimes are currently being consulted on in both France and GB. The aim of implementing such a regime is to ensure security of supply. In the case of both France and GB, the chosen capacity mechanism is likely to increase the economic incentives for the market to provide more flexible generation capacity.

Since the form of any capacity payments is still under discussion in both countries, it is not possible to quantify the financial risk to the Project associated with any such scheme. However, to the extent that capacity payments encourage investors to build more flexible generation capacity, which is then allowed to participate in the market, this is likely to make electricity prices less variable and thus have a very detrimental impact on ElecLink revenues.

- 3) **Renewables generation and decarbonisation policies** – The rapid changes to the generation capacity that are expected to take place in the next decade and beyond would to a large extent be driven by government support for renewable generation and the drive to meet decarbonisation targets, as well as other aspects of government policy. However, the extent to which support for renewables achieves its stated goals and the extent to which decarbonisation targets are met are highly uncertain. In addition, the renewable support and decarbonisation policies themselves are uncertain and may be subject to significant change. This is exemplified by recent cuts to support for renewable generation in Spain. Lastly, the decision of the German government to phase out all of the country's nuclear capacity by 2022 demonstrates the influence of government policy on the generation capacity mix.

Significant changes in the generation capacity mix can affect electricity prices and thus interconnector revenues. Hence government policy can have a significant influence on the financial returns from our Project. ElecLink is being developed against the background of significant uncertainty on future government policy.

To demonstrate the revenue risk associated with potential changes in the generation capacity mix that could be brought about by changes in government policy, Section 6.3 of Exhibit C sets out the results of a sensitivity which sees more nuclear and renewable new build in GB than under the Reference scenario, with the UK meeting its 2020 renewable energy target, and significant nuclear retirements in France that see 41 GW of total nuclear capacity in that market by 2030. It is estimated that the resulting total ElecLink revenues between Q4 2016 and 2030 would be €492m (43%) lower than under the Reference scenario.

Competing projects risk

ElecLink would be in direct competition with the existing IFA interconnector between GB and France and with the planned IFA 2 interconnector in the future. It would also be in indirect competition with the existing BritNed interconnector between GB and the Netherlands, the planned NEMO interconnector between GB and Belgium as well as planned interconnection between GB and Norway. Since interconnectors drive price convergence between the connected regions, there is a significant risk that competing interconnectors will erode the congestion revenues on ElecLink to such an extent that the Shareholders are not able to make a reasonable return on their investment.

The risk of greater competition from other interconnector projects is evaluated in the high interconnection sensitivity as described in Section 6.5 of Exhibit C. The assumptions on interconnection capacities between the different markets represented in the Model are based on the ENTSO-E Ten Year Network Development Plan subject to some modifications based on publically available information. One modification relates to ElecLink, which is not part of the ENTSO-E Plan. The second modification relates to additional interconnection capacity between GB and Norway. Finally, it also includes additional interconnection capacity between GB and France as a result of the Alderney interconnector project. It is estimated that the resulting total ElecLink revenues between Q4 2016 and 2030 would be €113m (10%) lower than under the Reference scenario. This is a conservative sensitivity in respect of new interconnection between GB and the continent and the development of further new interconnection over the next 20 years could erode our revenues further.

The Project would also be substantially affected by the generation investment decisions in GB and France and the wider interaction between European markets. This accounts for another part of the revenue risk of the Project. During a period of substantial change in the European energy industry and given the scale of investment in the power sector identified by the EU, these risks are real and material.

Market risk

The owners of ElecLink face a number of risks that could have a negative impact on congestion revenues arising from price differences between GB and France. We categorise these as market risks. All of them would drive changes in ElecLink revenue through changes in either the level or volatility of electricity prices in France and GB. Some of the key underlying drivers of market risk are given below.

- 1) **Fuel price risk** – One of the fundamental drivers of electricity prices is the price of fossil fuels used for electricity generation. Much of the time, price-setting marginal plant runs on fossil fuels (coal, gas). As a result, fuel prices drive costs of the highest marginal cost plant

that is asked to generate in any given period. Hence fossil fuel prices indirectly drive spot electricity prices. Since the generation mix in France contains a large number of low marginal cost nuclear plant, the average price of electricity in France can be expected to be lower than in GB. This is shown to be the case in Exhibit C for all years between 2016 and 2030 on the basis of the Redpoint Reference scenario assumptions. Hence low fossil fuel prices, and particularly a low price of gas, are a key market risk for ElecLink since this would be expected to diminish the average price difference between France and GB.

Section 6.2 of Exhibit C analyses the potential impact of a lower gas price on ElecLink revenues. It is estimated that the resulting total ElecLink revenues between Q4 2016 and 2030 would be €75m (6.6%) lower than under the Reference scenario.

- 2) **Macroeconomic risk** – Given the positive correlation between GDP growth and growth in electricity demand observed in historic data, a slowdown in economic growth can be expected to reduce demand for electricity. This would be expected to lead to a fall in the level and volatility of electricity prices as the difference between total available electricity supply and total demand increases. Since both of these factors are key drivers of interconnector revenue, a fall in demand in both France and GB relative to its expected level, but particularly in GB given the higher electricity prices prevalent in that market, can be expected to negatively impact ElecLink revenues.
- 3) **Capacity margin risk** – As alluded to in point (2) above, an increase in the margin of total available supply over total demand can be expected to lead to a fall in both the average level and volatility of electricity prices. Point (2) refers specifically to the risk that a fall in this margin is caused by a fall in electricity demand relative to its expected level. However, the margin could also fall due to overinvestment in generation capacity. This would represent a downside risk to ElecLink revenues, particularly with respect to potential overinvestment in generation capacity in GB.

Operational risk

Another factor that can have a large impact on the financial returns from the Project is the outage rate on ElecLink. We are advised by a leading industrial contractor that the unforced outage rate on a new HVDC interconnector is less than 2%, meaning that it would be expected to be available more than 98% of the time after accounting for any unforced outages. However, forced outages can significantly erode interconnector availability and thus its revenues. As an example, the NorNed interconnector was available in less than 80% of all hours in the first three years of its operation.

While NorNed is perhaps the worst recent example of interconnector reliability, it is based on the commonly rolled-out sub-sea interconnector model. Given the innovative nature of ElecLink related to the intention to put it in the Tunnel, we can have less certainty as to the expected availability of ElecLink, especially in the first few years of its operation.

The connection of ElecLink into the onshore networks of GB and France will not be firm until such time National Grid and RTE complete existing planned reinforcement work and potentially further new works. Consequently, our grid connections are subject to unplanned interruptions in the first few years of ElecLink operation. The duration and frequency of these interruptions cannot be predicted with certainty and are subject to factors such as weather conditions that are outside of our control. Section 6.6 of Exhibit C calculates that an increase in the outage rate between Q4 2016 and 2030 of 10 percentage points would reduce projected net revenues of ElecLink by €123m (11%). In terms of the project rate of return, changes in the outage rate can be expected to have a much greater effect.

ElecLink will seek to cover unplanned outages through a mix of financial and physical solutions, including insurance policies with large reinsurers, bi-lateral contracts with generators and TSOs, interruptible products in its long-term contracts and a level of self-insurance for risks that cannot be economically laid off to third parties.

Regulatory risk

The Project is being developed against a changing regulatory environment. The Third Package proposes significant changes to the rules and regulations relating to the EU energy market. Implementation of these changes is not uniform across the EU and regulations relating to electricity generation have yet to be formalised as network codes. Regulatory uncertainty can feed into revenue uncertainty by making the cost of complying with any relevant regulations uncertain.

Construction risk

The Project is innovative and faces considerable technical risks specific to this investment, including the risk of cost overruns and delays during construction due to the complexities of building an interconnector through the existing Channel Tunnel infrastructure in close proximity to existing operations. Construction cost overruns and delays can have a large negative impact on the rate of return associated with the Project since they would affect cashflows in the near-term and would thus not be diminished by the effect of discounting.

In addition, the modelling results presented in Exhibit C demonstrate that some of the highest revenues from ElecLink are likely to come in the first few years of operation of ElecLink, namely in Q4 2016 and 2017, when capacity margins in GB are expected to be relatively tight due to LCPD plant retirements. Hence significant construction delays are likely to have a particularly large negative effect on financial returns from the Project. As an example, we estimate that a one year delay in construction would result in a €97m loss of potential revenues⁶⁷.

4.3 Criterion C

The interconnector must be owned by a natural or legal person which is separate at least in terms of its legal form from the system operators in whose systems that interconnector will be built

ElecLink is to be owned 51% by STAR Capital and 49% by Groupe Eurotunnel. Neither STAR Capital nor Groupe Eurotunnel has any direct or indirect links to energy producers or suppliers, except in the capacity of consumers of electricity and gas (where we procure our supplies on an open and transparent basis), nor are they participants in the national transmission system operators of GB or France.

4.4 Criterion D

Charges are levied on users of that interconnector

The investment and operating costs associated with ElecLink are to be recovered from congestion revenues arising from price differences between GB and France, either directly or indirectly by selling capacity rights over ElecLink. Our proposed capacity allocation and congestion management

⁶⁷ This is calculated as the loss of net present value due to revenues that would have been earned between Q4 2016 and Q3 2017 inclusive instead being earned at the end of the project 40 year economic life, using a discount rate of 12.2%.

arrangements are set in Section 2.3.4. Hence, charges will be levied on those who would benefit financially from the utilisation of ElecLink.

No part of the Project's costs will be recovered through regulated transmission charges.

4.5 Criterion E

Since the partial market opening referred to in Article 19 of Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity, no part of the capital or operating costs of the interconnector has been recovered from any component of charges made for the use of transmission or distribution systems linked by the interconnector

ElecLink is a new interconnector being built by Shareholders who have no current investments in the electricity sector in any Member State and no part of the costs of the Project has yet been recovered.

4.6 Criterion F

The exemption must not be to the detriment of competition or the effective functioning of the internal market in electricity, or the efficient functioning of the regulated system to which the interconnector is linked

Competition

Exhibit D sets out a full analysis of the impact of ElecLink on competition in the French and GB electricity markets. It recognises the possibility that market players with an existing dominant market position can use import capacity rights to enhance their existing position unless specific remedies are put in place to prevent this. Those remedies are derived as part of the analysis undertaken in Exhibit D. This analysis takes into account the market shares of key players in France and GB between 2017 and 2030 as predicted in the modelling undertaken by our economic advisers. It shows that the electricity generation market is highly concentrated in France and reasonably fragmented in GB. Hence it is deemed that specific market power remedies would be required to ensure that the impact of ElecLink on competition in the French market is positive.

We propose to put in place a limit of 50% on the proportion of ElecLink import capacity into France that a dominant party would be permitted to acquire. This is significantly lower than the 70% threshold limit derived in Exhibit D that would ensure that the allocation of ElecLink import capacity into France would always result in lower French electricity generation market concentration under the Reference scenario assumptions. A 50% limit would ensure that the effect of ElecLink on market concentration is positive under a wide range of outcomes that differ from the Reference scenario assumptions.

A significant proportion of transmission capacity rights on ElecLink may take the form of physical rights to nominate that capacity. Exhibit D sets out the measures that would be put in place by ElecLink in order to eliminate any possibility that dominant market players would be able to use physical transmission rights over ElecLink in order to enhance their existing market position. These would take the form of anti-hoarding measures, or more specifically UIOSI rules applied to any physical rights to nominate ElecLink capacity. Such measures would prevent strategic withholding of ElecLink capacity by parties who may have an economic interest in doing so, as demonstrated in Exhibit D with reference to academic literature published in peer-reviewed journals.

Effective functioning of the internal market in electricity

ElecLink will expand the total cross-border transmission capacity between GB and France, and in a broader EU context, the transmission capacity between GB and the Continental EU states. This will expand the possibilities for welfare-enhancing cross border trade where cheap electricity generation in one market is substituted for more expensive generation in another market, thus assisting the effective functioning of the internal market in electricity. This is shown to be the case in the modelling undertaken by our economic advisors. Section 2 of Exhibit D estimates that the impact of ElecLink will be to increase net social welfare in France and GB by €640m. This does not account for any additional benefits from increased security and diversity of supply or avoided investment in back-up capacity.

The proposed capacity allocation and congestion management arrangements on ElecLink, as set out in Section 2.3.4, are designed with the view to creating an economically efficient way to allocate transmission capacity rights on ElecLink and to ensure that this capacity is dispatched in a way that promotes the effective functioning of the EU electricity market. Further to this, Exhibit G considers the current draft framework CACM guidelines and, for each of the provisions contained within those guidelines, sets out our intentions with respect to aligning the capacity allocation and congestion management arrangements for ElecLink to those provisions.

- **Capacity allocation** – ElecLink capacity would be allocated in an open, competitive and transparent manner, with specific market power remedies put in place to make sure that the effect of this allocation is to enhance competition in the connected electricity markets. As set out in Exhibit G, shorter term rights to ElecLink capacity would be allocated in a manner that is broadly consistent with the current draft framework CACM guidelines and the allocation mechanism for capacity rights over other interconnectors on the same border. Further, a secondary capacity market would be facilitated in which the holders of long-term capacity rights would be able to sell a part or all of their holding, thus increasing liquidity in the market for transmission capacity rights. These mechanisms would ensure that ElecLink capacity is allocated to parties who are best able to use it in an economically efficient manner, thus contributing to the effective functioning of the internal market in electricity.
- **Congestion management** – To the extent that any physical rights to nominate ElecLink capacity are allocated, those rights would be subject to UIOSI provisions. In Exhibit D, such arrangements are demonstrated to be equivalent to allocating financial transmission rights in terms of efficiency of interconnector dispatch, and are therefore beneficial to the effective functioning of the internal market in electricity. In addition, as set out in Section 2.3.4 and Exhibit G, any ElecLink transmission capacity that is not allocated through long-term physical capacity rights would be subject to the congestion management arrangements that are broadly consistent with the current draft framework CACM guidelines and the arrangements that would apply to other interconnectors on the same border.. This would ensure a level playing field between different interconnectors on the GB to France border, particularly for parties acquiring shorter term capacity rights on ElecLink and IFA, thus further promoting the effective functioning in the internal market for electricity.

Efficient functioning of the regulated system to which the interconnector is linked

We intend to design the short-term capacity allocation and congestion management arrangements relating to ElecLink (i.e. for any capacity that is not allocated in the form of long-term physical capacity rights) to be consistent with the arrangements that are prevailing in the market at the time. For any long-term physical capacity rights over ElecLink capacity rights, we intend to put in place UIOSI provisions that would ensure the equivalence of those physical rights to financial rights in the context of market coupling. This will ensure, in line with the provisions of the Third Package, that across the same border, the arrangements are consistent between IFA and ElecLink and that the operations of the IFA interconnector are not negatively affected by flows on ElecLink.

As a result of these arrangements, we believe that ElecLink would be integrated with the regulated electricity transmission networks in France and GB without compromising the efficiency of their functioning. In addition, a separate study by an independent consultancy (Consentec) has considered the physical effect of ElecLink flows on the wider transmission network in France. In light of the findings from this study, Consentec do not believe that the network in France would be unduly stressed with the introduction of ElecLink.

A Glossary of Terms

AC: Alternating Current

ACER: Agency for the Cooperation of Energy Regulators

ARA: Amsterdam-Rotterdam-Antwerp (reference coal price index)

BDI: Baltic Dry Index (reference coal price index)

BritNed: Interconnector between GB and Belgium

BSUoS: Balancing Services Use of System charge. Charge applied by National Grid to recoup balancing costs

CACM: Capacity Allocation and Congestion Management Draft Network Code

CCA: Climate Change Agreements

CCC: Climate Change Committee

CCGT: Combined Cycle Gas Turbine

CCL: Climate Change Levy

CIF: Cost, Insurance, and Freight (the price includes insurance and transport)

Channel Tunnel: the twin bored tunnel rail link, with associated service tunnel, under the English Channel between Cheriton in Kent and Frethun in the Pas-de-Calais, together with the terminal areas for control of access to, and egress from, the tunnels, and shall include any freight or other facility, and any road link between the United Kingdom and France,

CHP: Combined Heat and Power station

Concession Agreement: the concession agreement between The Secretary of State for Transport in the Government of the United Kingdom of Great Britain and Northern Ireland and Le Ministre de l'Urbanisme, du Logement et des Transports representing the French State of the one part, and The Channel Tunnel Group Limited and France-Manche S.A. of the other part dated 14th March 1986.

CPS: Carbon Price Support (UK government policy to decarbonise the economy)

CRE: Commission de Régulation de l'Énergie (French Energy Regulator)

Cross Border Regulation: Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003.

CTA: Contribution Tarifaire d'Acheminement. Tax on network usage bill to finance French gas and electricity sector employees' pensions.

DA: Day-ahead

DC: Direct Current

DECC: The Department of Energy and Climate Change (DECC) is a British government department

DG Ener: The Directorate-General for Energy (DG Ener) is a Directorate-General of the European Commission

EC: European Commission

ECF: European Climate Foundation

EDF: Électricité de France

Elia: Belgian electricity transmission system operator

ElecLink: ElecLink, a company incorporated in England (registered number 7595420) whose registered office is 33 Cavendish Square, 6th Floor, London W1G 0PW, United Kingdom.

Energy-intensity ratio: Evolution of a country's GDP (in %) divided by the evolution of this country's electricity demand (in %) over the same period of time

ENTSO-E: European Network of Transmission System Operators for Electricity

EPC: Engineering, Procurement and Construction

ERGEG: European Regulators' Group for Electricity and Gas

EU: European Union

EUA: European Union emission Allowance (European carbon trading framework)

EU ETS: European Union Emissions Trading Scheme

EUR: Euro (€)

FG: Framework Guidelines

FUI: France-UK-Ireland region

GB: Great Britain

GBP: Great Britain Pound (£)

GDP: Gross Domestic Product

GQCHP: Good Quality Combined Heat and Power plant

Groupe Eurotunnel: Groupe Eurotunnel SA, a company registered in France (registered number 483 385 142) whose registered office is 3 rue la Boétie, 75008 Paris, France.

GW: Gigawatt (one billion Watt)

HTB: Haute Tension B. Represents the French grid with the highest category of voltage (as opposed to HTA)

HVDC: High Voltage Direct Current (cable)

IEA: International Energy Agency

IED: Industrial Emissions Directive (2010/75/EU)

ICE: Inter Continental Exchange (a commodity exchange)

IFA: Interconnexion France-Angleterre. A regulated interconnector between France and Great Britain jointly owned by RTE and National Grid

IFA 2: Planned interconnector between France and Great Britain jointly owned by RTE and National Grid

IGC: The Intergovernmental Commission, which regulates the Channel Tunnel

IT: Information technology

LCPD: Large Combustion Plant Directive (2001/80/EC)

MIP: Market Index Price (reference GB power market price index)

MW: Megawatt (one million Watt)

MWh: one million Watt-hours

National Grid: Great Britain's transmission system operator

NBP: National Balancing Point. Virtual market point for electricity trading in GB.

NEMO: Planned interconnector between GB and Belgium jointly owned by National Grid and Elia

NOME: Nouvelle Organisation du Marché de l'Électricité. French law passed in December 2010 deciding allocation of up to 100 TWh of nuclear electricity to alternative suppliers at a regulated price.

NorNed: A regulated interconnector linking the Netherlands and Norway jointly owned by TenneT and Statnett

NRA: National Regulatory Authority (for electricity)

NREAP: National Renewable Energy Action Plans drawn up by all Member States of the European Union in 2010. These plans provide detailed roadmaps of how each Member State expects to reach its legally binding 2020 target for the share of renewable energy in their final energy consumption required by Article 4 of the renewable energy Directive (2009/28/EC).

NWE: North West Europe

Ofgem: Office of Gas and Electricity Markets (British Energy Regulator)

PCI: Projects of Common Interest, Proposal for a Regulation Of The European Parliament And Of The Council on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC

PPI: Programmation Pluriannuelle des Investissements d'Électricité. A policy document setting out the French government's vision of the national, long-term generation capacity.

Project: the new 1000 MW merchant interconnector through the Tunnel of the Channel Tunnel to link the 400kv grids in England and France described in this document.

PLEXOS: Fundamental power market modelling software

PWR: Pressurised Water Reactor. A technology of nuclear reactors.

Redpoint Reference scenario or "Reference scenario": Forward looking projection of the development of electricity systems in North West Europe to 2030 carried out by Redpoint Energy. It is intended to reflect a steady-state evolution of the market based on consensus and referenceable

assumptions where possible. Key outputs include generation mix, generation costs, market prices and emissions in each market covered by the model. A full description of the Reference scenario and the underlying modelling assumptions is provided in Section 3 of Exhibit C.

Renewable Energy Directive: Directive 2009/28/EC of the European Parliament and of the Council, of 23 April 2009, on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC

Running Tunnel: two 7.6-metre diameter rail tunnels of the Channel Tunnel

RTE: Réseau de Transport d'Électricité. French electricity transmission system operator.

rTPA: regulated Third Party Access

Safety Case: the rules and procedures adopted by the Channel Tunnel Safety Authority pursuant to Article 11 of the Treaty of Canterbury.

Service Tunnel: the 4.8m in diameter tunnel lying between the two rail tunnels of the Channel Tunnel

Shareholders: STAR Capital Partners and Groupe Eurotunnel

SMP: System Marginal Price (System SRMC plus uplift)

SRMC: Short Run Marginal Cost (of an electricity generating system)

STAR Capital: STAR General Partner Limited, a company incorporated in England (registered number 3840208) whose registered office is at 6th Floor, 33 Cavendish Square, London W1G 0PW, United Kingdom

TEN-E: Trans-European Networks – Energy

Tennet: Dutch electricity transmission system operator

Third Package: The Third Package consists of the Third Package Electricity Directive and the Cross-Border Regulation together with a gas directive, a gas regulation and a regulation establishing ACER.

Third Package Electricity Directive: Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC. In addition to this, the package is completed by a gas directive, a gas regulation and a regulation establishing ACER.

TNUoS: Transmission Network Use of System. Charge applied by National Grid.

TPA: Third Party Access

Treaty of Canterbury: means the Treaty between the French Republic and the United Kingdom of Great Britain and Northern Ireland concerning the construction and operation by private concessionaires of a Channel fixed link signed at Canterbury on 12th February 1986.

TSO: Transmission System Operator

TYNDP: Ten Year Network Development Plan

UK: United Kingdom

UIOSI: Use-It-Or-Sell-It

VSC: Voltage-Source Converter

WTI: West Texas Intermediate (reference oil index)

WWF: World Wildlife Fund