

**CHARGING METHODOLOGY STATEMENT  
FOR THE  
ANGLO-FRENCH INTERCONNECTOR**

Effective From  
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## Document Location

National Grid website:

<http://www.nationalgrid.com>

- follow the links: Interconnectors, France, Charging Methodology.

## Distribution

<b>Name</b>	<b>Organisation</b>
The Gas and Electricity Markets Authority	www.ofgem.gov.uk
Interconnector Users	various
Association of Electricity Producers	www.aepuk.com
European Federation of Energy Traders	www.efet.org
National Grid Interconnectors Limited website	www.nationalgrid.com

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## 1 INTRODUCTION

- 1.1 National Grid Interconnectors Limited (NGIL) and RTE EDF Transport S.A. (RTE) are jointly responsible for the transmission of electricity across the Anglo-French Interconnector known as “Interconnexion France Angleterre” (IFA). The interconnector connects the national electricity transmission systems of France (owned and operated by RTE) and Great Britain (owned by three companies but operated by National Grid Electricity Transmission plc (NGET). NGIL is a wholly owned subsidiary of National Grid Plc formerly National Grid Transco plc (NGT) and holds a licence to operate the IFA (the “Licence”).
- 1.2 The interconnector circuits comprise two AC to DC converter stations connected by four pairs of cables between Sellindge in England and Les Mandarins in France, some 70KM distance in total, of which 45KM is subsea. Electrical current enters and leaves the interconnector circuits at the respective points of connection to the national transmission networks at these two converter stations.
- 1.3 This document sets out the charges that NGIL will levy for the use of the IFA from 1 April 2009, up until the launch of the new Capacity Management System. A further Charging Methodology Statement consultation will take place prior to the launch of the new Capacity Management System, scheduled for ‘Go-Live’ in July 2009.
- 1.4 An electronic version of this document can be obtained by visiting the National Grid Interconnectors Limited website at: [www.nationalgrid.com](http://www.nationalgrid.com) and following the links: Interconnectors, France, Charging Methodology.
- 1.5 Further information on NGIL’s activities and the information contained within this document can be obtained by contacting us by telephone, email or in writing:  
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- 1.6 All further references to NGIL in this document relate to its role and participation in the joint administration of the third party access regime for the interconnector and in relation to its obligations as an interconnector operator and licensee in Great Britain.

## **2 INTERCONNECTOR CHARGING METHODOLOGY**

- 2.1 Standard Licence Condition 10 of the Licence requires NGIL to establish a methodology showing the methods and principles on which charges for the use of IFA are based. This charging methodology is required to be approved by the Gas and Electricity Markets Authority (Authority) before it takes effect. Subsequent to this it may be modified from time to time in accordance with Standard Licence Condition 10 (5) of the Licence.

### ***Objectives of the charging methodology***

- 2.2 As a minimum the interconnector charging methodology has to comply with the objectives set out in Standard Licence Condition 10 (3) of the Licence (“relevant objectives”) which require that the Charges and their underlying methodology are :
- (a) Objective;
  - (b) Transparent; and
  - (c) Non-discriminatory.
- 2.3 In addition to this minimum set of relevant objectives NGIL has its own objectives for the charging regime. These are that the use of interconnector charges should:
- (a) Be simple to understand and implement; and
  - (b) Promote efficient use of the interconnector within the context of the differing market structures it connects.
- 2.4 Where changes are proposed to this charging methodology these will be consulted upon with the industry in accordance with Standard Licence Condition 10 (5). The Authority has the right to veto any proposed changes to the methodology before the changes would otherwise take effect.
- 2.5 NGIL believes that the methodology it has prescribed for charges for using its interconnector facilitate the relevant objectives described above.

### ***Use of interconnector charges***

- 2.6 The right to flow electricity in any particular direction (“the capacity right”) will be offered on a non-discriminatory basis via an explicit auction mechanism. The auction rules are set out in the IFA Access Rules and these will operate on a “Pay as Bid” basis up to the maximum physical capability of the IFA (France to England and England to France).
- 2.7 Capacity rights will be offered in units or multiples of 1MW/period (ie. per day, month quarter, season, year, as the case may be). The IFA Access Rules set out the basis on which capacity rights will be offered, allocated to and utilised by eligible Users.
- 2.8 Users will pay to NGIL the price they bid in an auction that was accepted by NGIL for each capacity right, irrespective of whether these rights are subsequently used or not (but subject to any curtailment in the event of unplanned outages).

### ***Bid acceptance***

- 2.9 NGIL will accept bids in strict accordance with the criteria set out in the IFA Access Rules.

### **Capacity release**

- 2.10 IFA has a maximum physical capability of 2000MW measured at mid channel in any one direction. NGIL in conjunction with the French transmission system operator Reseau de Transport d'Electricite will make available capacity rights for any given day up to the maximum physical capability via auctions and or tenders for that day taking into account planned outages and extended unplanned outages.
- 2.11 Capacity rights unsold in longer term auctions will cascade into auctions closer to the day to which the capacity right applies. This ensures that all possible capacity remains available to the market up to the day before the day of use.
- 2.12 In situations where NGIL has sold more capacity rights than it can deliver, a process will be applied to ensure that the exercisable capacity rights are no greater than the capability of IFA. This process is set out in the IFA Access Rules. Users will be invoiced only for purchased capacity that NGIL and RTE have been able to deliver.

### **TNUoS Charges**

- 2.13 The basis of the pass through mechanism is as follows:
  - (a) Generation Transmission Network Use of System (TNUoS) charges are passed through pro-rata to the amount of capacity held in the France to England direction;
  - (b) Demand TNUoS charges are passed through pro-rata to Users based on nominated flows contributing to a Net Interconnector Export (flow) in the England to France direction during a designated Triad Period.

### **3 USE OF INTERCONNECTOR CHARGES**

#### ***Introduction***

- 3.1 This publication sets out the use of interconnector charges that apply from 1 April 2009 as required by Standard Licence Condition 10 of the Licence, and are effective until the launch of the new Capacity Management System scheduled for 'Go-Live' in July 2009.
- 3.2 Details of the third party access regime applicable to IFA in accordance with Standard Licence Condition 11 of the Licence can be found at [www.nationalgrid.com](http://www.nationalgrid.com) and by following the links Interconnectors, France.

#### ***Eligibility to use the Interconnector***

Customers wishing to become an IFA user can apply via a non-discriminatory eligibility process administered jointly by NGIL and RTE. The eligibility requirements are set out in Rule B2 of the IFA Access Rules and require parties to be signatories to the IFA Access Rules via an IFA User Agreement and signatories to the relevant market codes in England, Wales and France. These codes include the Balancing & Settlement Code and Connection & Use of System Code in Great Britain and Accord de Participation in France.

#### ***IFA Access Rules***

- 3.3 This document should be read in conjunction with the IFA Access Rules that set out the conditions of access for use of IFA - this includes the process by which access rights (capacity) can be secured.
- 3.4 NGIL has an obligation to ensure that the IFA Access Rules fulfil the requirements of this Charging Methodology Statement. To the extent that changes in the IFA Access Rules result in a requirement to modify this Charging Methodology Statement then this shall be carried out in accordance with Standard Licence Condition 10 (5) of the Licence.

#### ***Units***

- 3.5 Access (capacity) charges are expressed in €/MW/period (eg. Day, Month, Quarter, Season, Year).
- 3.6 TNUoS pass through charges are expressed and charged on a £/MW/day basis.

#### ***Invoicing***

- 3.7 NGIL's invoicing team produces and issues invoices that are derived from the use of IFA charges levied in accordance with the IFA Access Rules and this statement. Payment for capacity will be in Euros only. TNUoS pass through charges will be invoiced in Pounds Sterling monthly in arrears.

#### ***Interconnector access rights***

- 3.8 Users of IFA (Users) can acquire interconnector capacity in accordance with the IFA Access Rules. Obtaining capacity permits the User the right to nominate a transfer of electricity from one end of IFA to the other.
- 3.9 All access rights (capacity) relate to a particular period and to each half hour within that period. Capacity is secured via a series of explicit "pay as bid" auctions at various periods in advance of the day of use.
- 3.10 Advance purchase of capacity is available in a series of capacity product auctions on a unidirectional basis ranging from up to one year ahead to one day ahead of the day of use.

- 3.11 NGIL publishes a guide price in advance of each auction that reflects an estimate of the value of IFA and is derived from its own observations of publicly available information on wholesale electricity price differentials in the two markets that IFA connects.

### ***Secondary trading***

- 3.12 A User that holds firm capacity may relinquish this capacity for use by others. There are two mechanisms to achieve this. The first is characterised as “sub-letting” and the second is achieved via a title transfer following its resale.
- 3.13 Sub-letting involves the reassignment of capacity to another eligible User where the original User retains the obligation to pay for that capacity.
- 3.14 A title transfer can be realised through the resale of capacity (via the auction process) to another eligible User where the proceeds of the resale are returned to the original User and the acquiring party accepts the obligation to pay NGIL.
- 3.15 NGIL facilitates a complementary resale service.

### ***Use it or lose it (UIOLI)***

- 3.16 The IFA Access Rules contain a UIOLI provision based upon the requirement for a User to declare his intention to use or reallocate his capacity rights no later than 06:00 on D-1 or the day of the auction for the contract day in question. Any capacity that remains unused at this point is deducted from the User’s entitlement and made available to the daily auction process.
- 3.17 NGIL monitors compliance with this rule to determine whether Users are abusing the process by effectively sterilising capacity through non-utilisation following the declaration of its use. In practice the rule is operated at high level and in exceptional circumstances to determine where such an abuse constitutes a breach of the Users’ obligations under the IFA Access Rules.

### ***Firm Access (Capacity) charges***

- 3.18 The charge payable to NGIL will be a unit price of capacity multiplied by the number of units of capacity.

### ***NGET TNUoS Charges***

- 3.19 The charges described above are the charges levied by NGIL for use of IFA. In addition to these charges Users of IFA will become liable to pay TNUoS charges for using the GB Transmission System. To the extent that these charges are levied on NGIL by NGET, these are subsequently levied on Users on a neutral pass through basis.
- 3.20 The basis for these charges is set out in the National Grid Statement of the Use of System Charging Methodology and the Statement of Use of System Charges which can be found on National Grid’s website at the following address [www.nationalgrid.com](http://www.nationalgrid.com) and following the links Electricity, Charging, Charging Statements.

### ***TNUoS (Generation)***

- 3.21 The England-France Interconnector Use of System Generation charge levied by NGET on NGIL is derived from the Generation Tariff covering the South East, Zone 17 based on a registered Transmission Entry Capacity of 1988MW. For information, the charge payable by NGIL for the Financial Year 2009/10 amounts to £505,942.024.

3.22 NGIL makes a pro rata adjustment to the charge that is passed through to the IFA Users to take account of interconnector losses. This reduces the charge to an equivalent level of 1976MW, representing the maximum Deemed Metered Volume delivered onto the transmission system. NGIL absorbs the difference between this and the Transmission Entry Capacity (TEC) value. Following this adjustment NGIL passes the charge directly through to the Users in proportion to their total capacity holding France to England on any particular day.

### **TNUoS (Demand)**

3.23 If IFA presents a Net Export from the transmission system over any one or all of the Triad Periods then a Use of System Demand-based charge would be levied on NGIL by NGET. NGIL then passes this charge directly through to the Users in proportion to their individual contribution to the NET Interconnector Export over the Triad Period. A Triad Period is one of the three half hour periods of highest peak demand between the beginning of November and end of February each year but separated by no less than 10 days between each of the peak half hour periods considered. In this context a Net Interconnector Export is a physical flow from England to France and a Net Interconnector Import is a physical flow from France to England.

3.24 The Demand-based charge for IFA is derived from the Demand Tariff covering the South East, Zone 11 and is £23.844075 / kW in 2009/10. The charge becomes liable for the whole year in the event of a net export recorded over any of the Triad periods and is in addition to the Use of System (Generation) charge. As IFA is assumed not to be a demand on the system no annual charge is levied, however in the event of a Demand-based charge becoming applicable interest would also be payable on the amount.

For the purposes of illustration the following scenarios are considered below:

#### Scenario 1:

Triad Period 1 (T1) Net Interconnector Export = 500MW

Triad Period 2 (T2) Net Interconnector Export = 750MW

Triad period 3 (T3) Net Interconnector Export = 250MW

TNUoS Demand-based charge per annum would be:

$$\begin{aligned} & \underline{T1 (500) + T2 (750) + T3 (250)} \times (\text{£}23.844075/\text{kW} \times 1,000) / 3 \\ & \qquad \qquad \qquad = \underline{\text{£}11,922,037.50 + \text{interest}} \end{aligned}$$

#### Scenario 2:

Triad Period 1 (T1) Net Interconnector Export = 500MW

Triad Period 2 (T2) Net Interconnector Import = 750MW

Triad Period 3 (T3) Net Interconnector Import = 250MW

TNUoS Demand-based charge per annum would be:

$$\begin{aligned} & \underline{T1 (500) + T2 (0) + T3 (0)} \times (\text{£}23.844075/\text{kW} \times 1,000) / 3 \\ & \qquad \qquad \qquad = \underline{\text{£}3,974,012.50 + \text{interest}} \end{aligned}$$

Scenario 3:

Triad Period 1 (T1) Net Interconnector Import = 500MW

Triad Period 2 (T2) Net Interconnector Import = 750MW

Triad Period 3 (T3) Net Interconnector Import = 250MW

TNUoS Demand-based charge per annum would be:

$$\frac{T1 (0) + T2 (0) + T3 (0) \times (\pounds 23.844075/\text{kW} \times 1,000)}{3} = \underline{\pounds 0.00}$$

## 4 EXAMPLES

4.1 The following pages set out a series examples of how to calculate the charges for the use of IFA.

4.2 Charges produced by NGIL's invoicing section are definitive and the examples produced here are purely illustrative. The prices of capacity used in these examples in no way reflects the value a user may place on that capacity in any particular auction. The price used in the examples is an arbitrary number to enable the example calculations to be followed more easily.

### 4.3 Example 1

For a given day a total of 1750MW of capacity rights are allocated in the direction France to England of which an individual user has secured 100MW at a price of €70/MW/Day and exercises those rights in full.

The TNUoS (generation) charge for 2009/10 is £505,942.024 based on a Registered Transmission Entry Capacity (TEC) of 1988MW

Process	Calculation used
<p>Capacity Charge</p> <p>Invoiced in €/MW/Period - Daily capacity is invoiced on a daily basis, Weekend block capacity is invoiced on a weekly basis whilst Monthly, Quarterly, Seasonal and Annual capacity is invoiced on a monthly basis.</p>	<p>As determined by pay as bid auction</p>
<p>TNUoS Pass Through Charge</p> <p>Invoiced Monthly in arrears by NGIL in pounds sterling</p>	<p>Transmission Network Use of System Charge (Generation Tariff) for Zone 17 Estuary based on a registered Transmission Entry Capacity (TEC) of 1988MW.</p> <p>NGIL adjusts this charge pro rata to reflect the difference between the Registered TEC and maximum Deemed Metered Volume delivered onto the Transmission System (1976MW).</p> <p>This charge is then apportioned on a daily basis pro-rata to capacity allocated.</p> <p>Steps to calculate Pass through charge:            (TNUoS Charge minus adjustment) divided by 365) divided by Capacity Allocated.</p>

For the given day the User would pay a total of €7,000 ( $€70/\text{MW} \times 100\text{MW}$ ) for Capacity and TNUoS charges of £78.73 based on  $((£505,942.024 - £3,053.98) / 365) / 1750 \times 100\text{MW}$ .

#### 4.4 Example 2

For a given day a total of 1500MW of capacity rights are allocated in the direction England to France of which an individual User has secured 100MW at a price of €35/MW/Day and exercises those rights in full outside of a TNUoS Triad Charging Half Hour period.

Capacity Charge	As determined by pay as bid auction
Invoiced in €/MW/Period - Daily capacity is invoiced on a daily basis, Weekend block capacity is invoiced on a weekly basis whilst Monthly, Quarterly, Seasonal and Annual capacity is invoiced on a monthly basis.	

The User would only pay the Capacity Charge of €3,500 for the given day. No TNUoS pass through charge would be become payable.

#### 4.5 Example 3

For a given day a total of 1500MW of capacity rights are allocated in the direction England to France of which an individual User has secured 500MW at a price of €35/MW/Day and exercises those rights in full during a single TNUoS Triad Charging half Hour Period. Taking into account other Users nominated flows the interconnector exports 1000MW England to France during one of the Triad Charging Half Hour Periods.

The interconnector flows France to England during the remaining two Triad Charging Half Hour Periods.

Capacity Charge	As determined by pay as bid auction
Invoiced in €/MW/Period - Daily capacity is invoiced on a daily basis, Weekend block capacity is invoiced on a weekly basis whilst Monthly, Quarterly, Seasonal and Annual capacity is invoiced on a monthly basis.	
TNUoS Demand Pass Through Charge	$T1 = 1000, T2 = 0, T3 = 0$ $((1000 + 0 + 0) \div 3) \times (23.844075 \times 1000)$ Total Charge = £7,948024.99

Invoiced in £ sterling after 28 <sup>th</sup> February each year	Users Proportion of Demand = 50%
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The User would pay the Capacity Charge of €17,500 and a 50% proportion of the TNUoS demand charge amounting to £3,974,012.50 on a pass through basis.

#### 4.6 Example 4

For a given day a total of 1500MW of capacity rights are allocated in the direction England to France of which individual Users have secured 500MW at a price of €35/MW/Day and exercises those rights during the TNUoS Triad Charging Half Hour Periods, as per the following:

Triad Period	(1)	(2)	(3)
User A	500MW	0MW	0MW
User B	0MW	300MW	200MW
User C	400MW	200MW	100MW
User D	100MW	0MW	450MW
Total	1000MW	500MW	750MW

$$\text{Average Demand} = (1000\text{MW} + 500\text{MW} + 750\text{MW}) / 3 = 750\text{MW}$$

Capacity Charge	As determined by pay as bid auction
Invoiced in €/MW/Period - Daily capacity is invoiced on a daily basis, Weekend block capacity is invoiced on a weekly basis whilst Monthly, Quarterly, Seasonal and Annual capacity is invoiced on a monthly basis.	
TNUoS Demand Pass Through Charge	T1 =1000, T2 = 500, T3 = 750 $((1000 + 500 + 750) / 3) \times (23.844075 \times 1000)$
Invoiced in £ sterling after 28 <sup>th</sup> February each year	Total Charge = £ 17,883,056.25

The Users would pay the Capacity Charge associated with their capacity holding as determined by the auction in which capacity was secured and a proportion of the TNUoS demand charge as set out in the table below on a pass through basis.

User A – Proportion of total Demand =  $500\text{MW} / 2250\text{MW} = 22.22\%$  (£3,973,615.10)

User B – Proportion of total Demand =  $500\text{MW} / 2250\text{MW} = 22.22\%$  (£3,973,615.10)

User C – Proportion of total Demand =  $700\text{MW} / 2250\text{MW} = 31.11\%$  (£5,563,418.80)

User D – Proportion of total Demand =  $550\text{MW} / 2250\text{MW} = 24.45\%$  (£4,372,407.25)

## **5 CAPACITY TO BE OFFERED**

- 5.1 The capacity offered will be 100% of IFA capability taking into account planned and unplanned outages, and IFA reliability. Details of planned outages are published and can be found at [www.nationalgrid.com](http://www.nationalgrid.com) and clicking on Interconnectors, France, Notices & General Information. In the event of an unplanned outage curtailment will be applied where necessary, in accordance with the IFA Access Rules.
- 5.2 A timetable for auctions other than daily is also published on the website at the URL above.