



# **Standard Pricing Approach for Generators**

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**ESB Networks  
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## 1.0 About this document

This document outlines DSO's proposed Standard Pricing approach for Generators as referred to in the Group Processing Approach<sup>1</sup>. The new pricing methodology will take effect with the first connection offer to issue under the Group Processing Approach.

### 1.1 Background

The existing connection process for generators involves a number of site visits, and on this basis DSO will endeavour to issue a firm connection offer within 90 business days from receipt of the deemed application complete date. Following acceptance of the connection offer, a detailed design would be carried out, which, in some cases, may result in a revised connection offer issued to the generator.

However, the recent moratorium<sup>2</sup> led to a backlog of applications to be processed. As outlined previously the continued application of the existing process would result in a further delay in issuing connection offers to all these applicants.

As outlined in the Joint TSO/DSO Document, a key principle of the Group Processing Approach for DSO connections and the provision of connection offers in a timely manner<sup>3</sup> is the implementation of the Standard Pricing approach.

## 2.0 Standard Pricing Approach

The application of the Standard Pricing approach, as outlined below, is the most effective and equitable means of processing the applications while facilitating the provision of DSO connection offers in a timely manner. For avoidance of doubt, this approach will apply to both the shared and dedicated connection assets for generators.

The Standard Pricing process and charges are outlined below.

### 2.1 Standard Pricing Process

1. The DSO Connection Offer pricing is based upon a desktop study plus a site visit to estimate the volume and type of material required.
2. The proposed connection is then costed using the schedule of charges detailed in Schedule 1.

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<sup>1</sup> Joint TSO/DSO Document - CER/04/317 published 5th October 2004

<sup>2</sup> Which was put in place on 3<sup>rd</sup> December 2003

<sup>3</sup> Gate 1 approved by CER on 23<sup>rd</sup> December 2004,

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3. Cost are attributed to the various generators in a Group/ Subgroup (by the relevant System Operator) on the basis of the charging regime outlined in section 5.1 of TSO/DSO Joint document (CER 04/317)<sup>4</sup>
  4. Following Acceptance of the Connection Offer, a detailed design of the project commences and Planning Permission and consents are obtained<sup>5</sup>.
  5. In addition, circumstances may arise, outside the control of DSO and unforeseen at the time of the connection offer<sup>6</sup>. In accordance with current policy for all connections to the distribution system, costs arising out of such circumstances are recovered directly from the customer / generator rather than from the DUoS end-user<sup>7</sup>.

Therefore DSO will issue a revised connection offer<sup>8</sup> to the generator(s), incorporating these revised costs.

Examples of such circumstances include, but are not to be limited to, the following:

- Changes to Planning Permission conditions
- Wayleaves and Consents compensation
- Changes to items of significant cost<sup>9</sup>
- Station site conditions and costs
- Ground conditions of the route following site tests
- Access issues.

A more detailed description is provided in Schedule 2.

6. This revised connection offer will incorporate the revised costs based on the change in work required or the availability of more detailed costs. In accordance with DSO Guiding Principles<sup>10</sup> and to minimise financial exposure to final end-user, the generator(s) will be required to pay the revised costs to progress the project to the next stage.
7. To provide stability in pricing no revised connection offers will issue unless the variance expected in the overall cost is over + 10%, in which case a revised connection offer for the costs in excess of 110% will issue to the applicant.

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<sup>4</sup> Section 5.1 extract provided in Appendix 1.

<sup>5</sup> This process usually takes 6 months or more where Planning Permission is required (e.g. 38kV overhead line; 110kV/38kV or 110kV/MV stations), and about 3 months where MV work only is involved.

<sup>6</sup> Based on a desktop study and a single site visit

<sup>7</sup> For avoidance of doubt, this process is in addition to that described in section 4.1(8) of TSO/DSO document (CER/04/317) dealing with revised connection offers arising as a result "of a major change in shared connection design"

<sup>9</sup> For example major road crossings, forestry compensation, telecom crossings, river crossings

<sup>10</sup> As outlined in Joint TSO/DSO Document - CER/04/317 published 5th October 2004

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8. Any costs associated with the connection that are not recovered from the generator, will be added to the respective RAB and recovered via the DUoS tariffs.

## **2.2 Standard Pricing Charges**

The charges set out in Schedule 1 are average charges devised on the basis of DSO's experience of generator connections in recent years.

## **2.3 Payment Schedule**

In addition, the proposed DSO payment schedule (refer to Appendix 2) retains the existing arrangements for the cost of the Dedicated Connection Asset. The cost of the relevant portion of the Shared Connection Assets will require 100% payment at the Acceptance of Offer stage. This will further minimise any financial exposure of the DUoS end-user arising from the risk of stranded assets<sup>11</sup>.

## **3.0 Conclusion**

The implementation of this Standard Pricing approach for DSO is critical to the successful implementation of Gate 1. The continued application of the current design mechanism would result in a further delay in the provision of DSO connection offers.

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<sup>11</sup> The Capacity Bond of €10,000 per MW will cover only a fraction of the cost of the shared connection asset.

## Schedule 1: Schedule of Charges

**Table 1. Schedule of Charges for Generators<sup>12</sup> Excluding VAT**

No.	Description	Unit	Total €
<b>LINE WORK</b>			
1.	Standard 110kV line	Per km	189,860
2.	38kV 300SCA		102,730
3.	38kV 100SCA		67,850
4.	MV 150AAAC / 92 SCA		58,250
<b>STATION WORK</b>			
5.	38kV Cubicle <sup>13</sup>	Per cubicle	308,010
6.	MV Cubicle (110KV/MV Station) <sup>14</sup>		56,670
7.	MV Cubicle with Interface transformer <sup>15</sup>		255,170
<b>METERING</b>			
8.	38kV Metering and Power Quality		50,020
9.	MV Metering and Power Quality		25,220
<b>STATION UPRATINGS</b>			
<b>110kV Stations</b>			
10.	New 110kV / MV Station <sup>16</sup>	Station	4,011,820
11.	1 x 31.5 MVA to 2 x 31.5 MVA <sup>17</sup>		2,275,660
12.	2 x 31.5 MVA to 2 x 63MVA <sup>18</sup>		2,756,720
<b>38kV Stations</b>			
13.	2 x 5 MVA	Station	1,923,780
14.	2 x 5 MVA to 2 x 10MVA		2,130,500

<sup>12</sup> In accordance with the practice in relation to other charges, these will need to be reviewed and updated on an annual basis.

<sup>13</sup> Cost based on spare 38kV bay available, Bay with distance protection, no extra SCADA

<sup>14</sup> Cost based on MV bar available, Bay with overcurrent protection

<sup>15</sup> Cost based on MV spare bay available, Bay with overcurrent protection

<sup>16</sup> Cost based on tailed 110kV station, standard connections, remote end works not included

<sup>17</sup> Cost based on new 110kV busbar to be constructed, two trafo bays, one line bay, C/P needed

<sup>18</sup> Cost based on new Civil Works to be installed, uprating of 110kV busbar necessary

<b>CABLE COSTS (Excludes all civil works and ducting) <sup>19</sup></b>			
<b>15.</b>	110kV cable (400Cu)		321,470
<b>16.</b>	38kV cable (630XLPE)	Per km	113,760
<b>17.</b>	MV cable (400 XLPE)		51,450
<b>18.</b>	38kV cable end mast	Per Mast	44,750
<b>19.</b>	110kV cable end mast		140,230

Notes:

1. All costs exclude site acquisition costs
2. Up to two cable end masts may be required per cable circuit.

<sup>19</sup> It is assumed that all civil works, excavation and ducting will be done by the generator in accordance with ESB Networks Specification.

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## **Schedule 2: Revised Connection Offers**

An example of some circumstances, which may arise leading to an increase in costs, and a revised connection offer, are set out below:

### **Circumstances which may arise during detailed design resulting in a change in costs:**

#### 1. Planning Permission

The final Planning Permission dictates the nature of the final connection and its route, which may have changed from the original design.

In addition, special conditions may be applied to line planning permissions; e.g. attendance of archaeologist or other professional during construction.

#### 2. Wayleaves and Consents compensation

Prior to direct negotiations with landowners, it may be that the figure assumed in the connection offer for compensation did not accurately reflect costs ultimately agreed with landowners.

#### 3. Changes to items of significant cost

Changes to items such as river crossings, major road crossings, and telecom crossings, Forestry compensation may give rise to increased costs.

#### 4. Station Site Conditions

Where the connection involves building a HV/MV substation, a station site will not be available at the time of the initial connection offer. An increase in costs can occur if site conditions are such that civil works costs are higher than expected.

### **Issues which may arise during the course of the construction work**

The current access conditions specified in the general conditions may need to be reviewed to provide for cases where the developer has undertaken to negotiate directly with landowners for route access.



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**Transmission Connections:  $P_T * X * (Z/W)$**

**Distribution Connections:  $[(P_T * X) + (P_D * Y)] * (Z/W)$**

Where:

X = Total cost of providing the associated transmission works of the Shared Network including remote end station allocated charges

Y = Total cost of providing the associated distribution works of the Shared Network

Z = MEC (in MW) of the specific generating plant

W = Total MEC (in MW) of the Generator Applications in that Subgroup

$P_T$  = Transmission Probability Factor<sup>+</sup>

$P_D$  = Distribution Probability Factor<sup>+</sup>

- In addition, generators will be charged 100% of the cost for providing the Dedicated Distribution Connection Asset, in accordance with CER approved connection charging policies.
- In the event that another generator is connected to an existing Subgroup, the connection charges for this generator and all other existing generators in this Subgroup are recalculated and refunds are apportioned to existing generators in accordance with the relevant system operator policy<sup>23</sup>.
- Following connection, the generator<sup>24</sup> will be subject to the Annual Ongoing Service charges in respect of the connection.

The probability factor is aimed at minimising the cost liability if a committed project fails to proceed after offer acceptance. Such a factor will protect the remaining generators who would continue to be liable only for the full 'original' shared network charge. It attempts to ensure that generators pay for connection assets *on average*. It has the advantage of providing generators with greater financial certainty upon accepting a connection offer.

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<sup>+</sup> The absence of a probability factor can lead to an extended process of issuing revised quotations based on the level of take-up of the connections offers and the possibility of design changes based on this take-up would result. This is an iterative process and the revised quotation may result in increased costs to the generators. Therefore there is a risk of an increased level of 'drop-outs' as the process progresses thereby incrementing costs to the remaining generators. This introduces a level of financial uncertainty to those generators wishing to proceed in addition to prolonging the overall process. This option, whilst ensuring that developers pay for shared connection assets on a case by case basis, clearly has financial implications for developers and the perceived level of risk when accepting a connection offer. The system operators expect that it could result in a climate of uncertainty that will result in fewer offer acceptances.

<sup>23</sup> The exact connection method of the new generator will determine the extent of the refund (e.g. applies to the dedicated distribution connection asset and/or the shared subgroup connection) and the generators entitled to a refund.

<sup>24</sup> Applicable to generators connected to the Distribution System

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For example; If it is believed that 80% of the requested MW in the applications will commit to connecting under the connection offer process then the TSO would charge 1.25 times the pro-rata cost in each offer ( $1/0.8 = 1.25$ ). Should the expected level of uptake occur then one would expect that overall the correct amount of money would be received from developers for the shared connection asset costs.

It is proposed that as the level-of-take is identified as various Groups/Subgroups progress, the probability factors are altered accordingly to best reflect cost recovery from the generators thereby minimising burden on the end-user customer. The use of separate transmission ( $P_T$ ) and distribution ( $P_D$ ) probability allows the flexibility to apply factors based on particular situations.

A sample calculation is provided in Appendix 5.

In addition to the benefits outlined in section 4.2 above, there are a number of advantages to adopting this charging regime which include:

- Promotes certainty for developer;
- Charges are cost reflective
- Increased probability of recovering the actual costs.
- Expedites process for all applicants
- Frees up resources to progress further offers.

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## **Appendix 2: DSO Revised Payment Schedule:**

Extract from TSO/DSO Joint Consultation Document “Group Processing Approach for Renewable Generator Applications” (CER/04/317 published 5th October 2004) Section 4.4 (4). For complete document please refer to [www.cer.ie](http://www.cer.ie)

### **4. DSO Revised Payment Schedule:**

For DSO applications, DSO proposes the following payment schedule – please note that all payments are non-refundable:

- a) Acceptance of Offer stage: Applicants pay 100% of the quoted Connection Charge for the Shared Connection Asset and 25% of the quoted Connection Charge for the Dedicated Connection Asset.
- b) Pre-Construction Stage: Applicants pay 50% of the quoted Connection Charge for the Dedicated Connection Asset.
- c) Pre-Final Energisation Stage: Applicants pay 25% of the quoted Connection Charge for the Dedicated Connection Asset.

This schedule, while retaining the current arrangements for the Dedicated Connection Asset, ensures that the DUoS customer is protected against the financial risk of the cost of the Shared Connection Asset in the event the generator drops out having previously accepted its connection offer. Any further proposal to accept a partial payment at the Acceptance of Offer stage will require DSO to re-assess the proposed charging regime as outlined below.