



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

**Standard Pricing Approach for Connecting
Renewable Generators to the Distribution
Network**

Commission Decision

**CER/05/090
24 June 2005**

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Introduction

1. On 21 January 2005 the Commission for Energy Regulation published for consultation proposals by ESB Networks, in its capacity as Distribution System Operator (DSO), entitled “**Standard Pricing Approach for Generators.**” The proposals would introduce a standard pricing approach which would apply to all connection offers issued to renewable generators under the Group Processing Regime. The DSO had submitted these proposals to the Commission for approval.
2. The present decision sets out the terms of approval of these proposals. It is issued in the form of a direction to the DSO pursuant to Section 35 of the Electricity Regulation Act, 1999. The decision takes account of, among other things, the extensive submissions which the Commission has received under the public consultations process, and which are available on the Commission website, www.cer.ie.

Background

3. The background to and rationale for the change from an individual processing to a group processing regime for connection applications from renewable generators have been well documented by the system operators and by the Commission elsewhere¹.
4. In essence, the group processing regime is designed to:
 - a. Accommodate the unprecedented volume of connection applications in a more rational and efficient manner than under the conventional individual processing regime;
 - b. Remove the risk to developers of “interactions” between offers which would otherwise overhang many, if not all, offers;
 - c. Improve overall network planning and make better use of manpower resources;
 - d. Bring forward the aggregate volume of renewable generation connected to the system and thereby help ensure delivery of Ireland’s international obligations in this regard.
5. From the outset a key feature of the group processing regime, at least as advocated by the system operators, was the incorporation of a standard pricing approach whereby all connection offers would be

¹ See, for example, “Group Processing Approach for Renewable Generator Connection Applications” CER Proposed Direction (CER/05/010) and CER Direction (CER/05/049).

based on a standard schedule of charges for individual work items such as kilometres of line or cable, metering equipment, stations etc.

System Operator Proposals on Standard Pricing Process

6. The DSO paper of 21 January which is available on the CER website (see www.cer.ie/cerdocs/cer05004.pdf) set out the approach proposed. The proposal was published and interested parties were invited to submit comments. The proposal can be summarised as follows:
 - a. The DSO Connection Offer pricing would be based upon a desktop study plus a site visit to estimate the volume and type of material required;
 - b. The proposed connection would then be costed using a Commission approved schedule of standard charges;
 - c. Cost would be attributed to the various generators in a Group/Subgroup on the basis of the charging regime outlined in section 5.1 of TSO/DSO Joint document (CER04/317);
 - d. Following offer acceptance a detailed design of the project would commence and planning permission and consents would be obtained;
 - e. In accordance with current charging policy, where additional costs arise because of unforeseen events which are clearly outside the control of the DSO (e.g. changes to planning permission conditions) a mechanism would be in place to recover these directly from the generator rather than from the general DUoS customer. No revised connection offers would issue unless the variance expected in the overall cost is over 10%;
 - f. Any costs associated with the connection that are not recovered from the generator would be added to the DSO's regulated asset base (RAB) and recovered via the DUoS tariffs.

Submissions Received - Overview

7. The main focus of the DSO paper, and of the submissions received by the Commission, was on the actual levels of standard costs set out in Schedule 1 of the paper. Almost all of the respondents were of the view that the level of charges proposed by the DSO was too high. Many respondents also pointed to the fact that the proposed charges were well above previous quotations for similar projects/items that developers have received in recent years, and thereby questioned the justification for the proposed charges.

8. Respondents also pointed to the issue of the DSO limiting their risk and passing it to the generator by passing on extra costs associated with unforeseen circumstances. From the generator's perspective, it was argued, this uncertainty has the potential to add budgeting difficulty to the project. Furthermore, it was argued that the DSO had no incentive to keep such costs to a minimum as they would be fully passed through to the generator.
9. One respondent also was of the view that any connection cost derived under the new scheme should be less than the least cost technically acceptable (LCTA) cost under the existing scheme. Otherwise the existing scheme price and connection method should be used.
10. One particularly useful input from the consultation process was a detailed alternative costing submission from Econnect Ltd, a firm of energy consultants, on behalf of IWEA Ltd. The Commission took particular account of this submission. The submission contained a detailed analysis of each of the DSO's proposed charges and proposed alternative charges for each of item which, Econnect argued, could be achieved by contractors. The analysis and proposals were based on explicit assumptions of the technical specification of each of those items. However, the assumptions made by Econnect had differed to a certain degree from the actual technical specifications provided by the DSO. To resolve this the Commission forwarded the technical specifications of the items, as provided by the DSO, to IWEA/Econnect and invited them to revise their proposed charges based on the actual technical specifications. Econnect revised the submission and resubmitted the paper to the Commission on behalf of IWEA Ltd.

Commission Approach

11. In the first place, the Commission has accepted the argument by the system operators that a move to a standard pricing regime for connection offers is appropriate and has not received comments or information to suggest that this view should be changed.
12. Before turning to the actual *levels* of approved standard prices, it is worthwhile focussing for a moment on the *concept* of a standard price in this context. One of the advantages of the standard pricing approach should be to offer greater financial certainty to applicant generators while allowing group offers be drawn up, costed and issued more readily by the operators. Under any standard pricing approach, the actual costs of any particular project may be above or below the standard charges, since these are developed as averages of typical projects. The trade-off for applying charges that do not perfectly reflect an individual project is that the approach results in a faster application process as well as bringing greater financial certainty to the connection offer. A move to standard pricing should result, in aggregate, in more efficient and therefore lower average charges compared to an individual pricing regime. However, this does

not necessarily equate to cheaper connections for every individual applicant.

13. Turning now to the *levels* of approved standard prices, the Commission has been guided by the following principles:

- First, all standard costs should be reasonable and cost reflective from the perspective of a modern efficient system operator.
- Secondly, they should abide by the Least Cost Technically Acceptable (LCTA) principle. This means that a generator should only be required to pay for the additional system costs its individual plant, or its share of a group or sub-group of plants, will create while upholding minimum system technical and planning standards. Generators should not be asked to finance costs which are designed to better the system or anticipate future plant coming on stream.² Admittedly this LCTA principle is probably more applicable to connections methodology than standard cost levels.
- Thirdly, the Commission considers that the risk that the sum of all actual connection costs may exceed the sum of all standard charges for a given volume, or period, of connection offers, should not fall exclusively, or even largely, on the applicants in question. In other words, the standard charges should not be pitched at levels to virtually *guarantee* full cost recovery to ESB Networks from the applicants. A standard charge should be what it implies: a reasonable estimate of the likely average cost of the networks item in question when account is taken of all the known cost factors and variables.

14. The Commission engaged the services of Power Planning Associates Ltd. (**PPA**), independent UK based energy consultants, to advise it of the reasonableness, or otherwise, of the DSO's proposed costs.

15. The brief given to PPA was to advise the Commission on (i) the reasonableness, or otherwise, of the costs implied by the DSO's proposed Schedule of Charges and (ii) to compare the proposed charges with charges set by other comparable utilities. PPA's analysis was based upon their experience in the field and comparison with their associated internal costs database, as well as a benchmarking exercise which compared the proposed charges against charges for the same items charged by companies in the UK.

16. The Commission also engaged the services of a domestic based consultant to propose charges based on a bottom-up pricing approach, within an Irish context. This was intended to ensure that the final conclusion would take into account likely physical and other local conditions arising with Irish windfarm projects. In most cases the costs arrived at through this methodology were reasonably in line

² This is regardless of whether public funding, such as the EU's Grid Upgrade Development Programme, is expected to become available in the near future for such betterment costs.

with PPA's benchmarking costs. The Commission also took account of the submissions it received from the public consultation and requested its consultant advisors to do likewise.

17. The Commission also sought and received from the DSO detailed technical specifications for all the items included in its original proposals, which were forwarded to PPA. The revised Econnect submission, based on the technical specifications provided by the DSO, was also forwarded to PPA to allow them to consider the views expressed therein.
18. The DSO's proposals included a schedule of nineteen charges for generators. As part of PPA's examination of these charges, a detailed technical specification for each item was requested and provided by the DSO. This was to ensure that any cost differences in the analysis did not arise from comparing items with different technical specifications.
19. As part of the examination of the DSO's proposed charges, PPA compared generator connection charges in the UK and Europe with the DSO's proposals. These benchmark charges related to charges made by Distribution System Operators operating in similar conditions to the DSO. PPA, in their final recommendation to the Commission, also considered the analysis provided by Econnect and their proposals for appropriate charges. The Commission and PPA also met with the DSO and requested details of the assumptions made in the drawing up of the schedule of charges. The DSO in turn provided responses to these requests for further details on a number of items.
20. In addition, account was taken of the DSO's past schedules of charges and unit charges as disclosed, separately, as part of their 2006-2010 Distribution Price Control submission. However, the DSO stated that the indicative connection costs for generators outlined in table A12 of the DSO document entitled "**Charges for Connection to the Distribution System**" (see www.esb.ie/esbnetworks) were based on internal costs established a number of years ago. These had not been updated to accurately reflect the actual costs in recent years. Furthermore, the DSO stated that the proposed increases in charges were due to the fact that the DSO had under recovered on previous projects, and that the proposed charges were in line with actual experience. They provided figures showing actual under recoveries on a number of projects (as well as a small number of projects showing over recoveries). However, this submission from the DSO did not specify the reason for such under recoveries, beyond stating that the charges did not recover the costs incurred. The Commission could therefore not be confident that such under recoveries were wholly due to charges not being reflective of efficiently incurred connection costs, or that they were reflective of the total number of projects undertaken by the DSO.
21. The DSO argued that the comparative figures on which the CER was proposing to base its decision did not take account of a number of specific issues associated with wind farm connections and did not

therefore represent a valid comparison. The Commission, with PPA, therefore met with DSO to ascertain the sources of differences between charges proposed by PPA and the DSO. Some of the differences in the proposals were due to, for example, differing technical assumptions, differences in overall costs to be covered, or the range of sample costs used – in some cases the DSO had used a range of recent projects which may not have been indicative of longer term average costs. The issues pertaining to each item are described in more detail in the section below dealing with the approved charges.

Decision on Schedule of Charges

22. The Commission considers that the final advice received from PPA, following the meetings and discussions with the DSO, is reasonable, albeit subject inevitably to certain limitations of data availability and comparability, as well as to a certain degree of judgement. The Commission has therefore decided to approve a schedule of charges (see below), which is based to a large degree on PPA's recommendations. In arriving at these charges, account has also been taken of submissions made by the DSO and other parties. The approved charges are designed to be consistent with international best practice, at a level that is fair to connecting generators, and should enable the DSO to recover connection costs providing they are operating in an efficient manner. The Commission has approved the charges detailed below which are summarised in **Table 1** at the end of this document.

Line Work

23. PPA proposed costs of €180,000 for item 1, 110kV line (300ACSR) and €60,000 for item 3, 38kV (100ACSR line). The Commission has approved these charges.
24. DSO stated that their proposals for items 2 and 4 of the schedule, 38kV line (300ACSR) and MV line were intended to ensure full cost recovery on each connection and was based on recent difficult jobs completed. They accepted, however, that these costs were on the high side when a wider sample of jobs was looked at, and proposed charges of €95,100 (38kV line) and €45,400 (MV line). These figures represent a 40% and 30% premium over costs for these items (in standard conditions) presented as part of the Distribution Price Review process.
25. The Commission, having considered advice from PPA (who stated that international practice suggests a 40% premium over long lines in open country for short lines over mountainous terrain), has decided that the implied premium in the DSO revised proposal is appropriate and therefore approves charges of €95,000 and €45,000 respectively.

Station Work

26. On March 10th DSO submitted to the Commission a revised proposal of €186,350 for a MV cubicle with I/F transformer and a charge of €308,010 for a new item, the 38kV Cubicle in a 110kV station. However at a later date the DSO stated that the proposed figure of €308,010 for the 38kV Cubicle in 110kV station was erroneous.
27. The Commission approves charges based on PPA's recommendations as follows: 38kV Cubicle (item 5) - €135,000, 38kV bay in 110kV station (item 6) - €155,000, MV cubicle in 110kV or 38kV station (item 7) - €50,000, MV cubicle with I/F transformer (item 8) - €180,000.

Metering

28. There was little discrepancy between the charges proposed by the various parties. The Commission approves charges as follows: 38kV metering (item 9) - €50,000, MV metering (item 10) - €25,000.

Station Upratings

29. PPA estimated costs of €3m for a new 110kV station (item 11) and €1.3m for a new 38kV station (item 14). These were substantially lower than the charges proposed by the DSO of €4m and €1.9m respectively. Following discussions and analysis of the costing details of both parties, it emerged that the source of the difference related primarily to civil works costs. The DSO had included a higher figure for this item, based on recent work. This figure is also the most likely to vary from location to location.
30. While the Commission accepts the importance of price certainty, civil works of their nature do not lend themselves to a standard pricing approach because of the inevitable wide differences in terrain etc. The standard price for this item will therefore be exclusive of required civil works. The civil works will be subject to competitive tender, and the full cost will be borne by the developer(s). The location of the station will be for the DSO to decide, and will be consistent with the LCTA principle. The connecting parties will be aware of the location of the station at the connection offer stage, and each applicant will also be informed of what portion of the station costs they will be liable to pay. While there is a reduction in price certainty under this approach, developers will be in a position to make a reasonable estimation of the civil works costs that will be charged. In addition, they will be able to tender for the civil works.
31. The Commission has therefore, following recommendations from PPA, approved charges of €2.6m for a new 110kV station (item 11) and €1.05m for a new 38kV station (item 14). These charges exclude civil works costs, which will be passed through in full to the group/subgroup.
32. There was little variance in the costs proposed by the different parties in respect of Item 12, 110kV/38kV station, uprating of 1x31.5MVA to

2x31.5MVA. The Commission therefore approves a charge of €2.276m.

33. The uprating of station capacity will not only be of benefit to the connecting generators – there is also a potential residual benefit to general network users. The full payment of such costs by connecting generators could result in an avoided cost to the DSO of providing this upgrade. The Commission has therefore decided that generators will not pay the full cost of these upratings, with the costs above the approved charges for these items to be added to the RAB, where efficiently incurred. On this basis, the approved charge for item 13, 2x31.5MVA to 2x63MVA (110kV station) is €2.5m, and the approved charge for item 15, 2x5MVA to 2x10MVA (38kV station) is €1.5m.

Cable Costs

34. PPA proposed charges of €40,000 for the 38kV cable end-mast (item 19) and €140,000 for the 110kV cable end-mast (item 20); these figures have been approved by the Commission.
35. In relation to cabling costs, the DSO argued that the driver for these charges is primarily the materials costs, with a small allowance for jointing works. The purchase of these materials follows an open international tender process. PPA acknowledged that these costs are difficult to compare, as other comparators generally include civil works. While the Commission accepts that the materials are procured through a competitive process, PPA indicated that the cable costs as proposed by the DSO appeared marginally high. The Commission has therefore approved charges of €110,000 per km of 38kV cable (item 17) and €50,000 per km of MV cable (item 18).
36. The Commission encountered particular difficulties in approving a standard charge for 110kV cable work. The DSO had proposed a charge of €321,470 per km. PPA advised that this appeared marginally high, though it acknowledged that making meaningful comparisons for this particular category of cabling was difficult. They proposed a charge of €289,000 per km. The advice of the domestic consultant employed by the Commission was very similar to that of PPA. Following detailed discussions with the DSO and with PPA, the Commission was concluding that a charge of €305,000 per km was reasonable.
37. The Commission then received representations and supporting evidence from one interested party to the effect that 110kV cable costs per km over a considerable distance (i.e., 22km) could be very considerably below those proposed by the DSO. The Commission engaged further with the DSO and with the interested party to try to resolve this apparent discrepancy. Among the points made by the DSO were the following:
- a. The particular example cited was not in any way typical of the kind of projects on which the DSO's standard cable costings were based;

- b. Admittedly the DSO had very little experience of lengthy rural cable connection projects and “would probably never design a project which called for the laying of 22 km of 110kV cable in a rural location”;
- c. The economics of cabling over short distances (up to 1km say) and over longer distances are likely to be very different for a number of commercial and technical reasons, particularly when cabling in a Group Processing as opposed to a dedicated connection context. This calls into question the appropriateness of extending the standard charges to 110kV cables in a rural setting, either at all or where the distance exceeds 1km. Basing charges on actual tenders received from a number of pre-qualified cable suppliers could well be the fairest approach to all concerned, the DSO suggested.

38. The Commission concludes from the evidence it has received that lengthy cabling work in rural areas does not lend itself to reliable standard costing and it would be inappropriate to persist with it, notwithstanding the greater element of contract uncertainty this would bring to a small number of developers. Accordingly, the Commission approves a standard charge of €305,000 per km for 110kV cable (item 16) up to cable lengths of 1km. Where the cable exceeds this length charges will be determined on the actual tender chosen from the pre-qualified suppliers who submit tenders.

Non-Standard Items

39. In addition to the items covered by the schedule of charges, there may from time to time be other items of plant that will be required for particular connections. These will be costed on an individual basis and included in the charges contained in the connection offer.

Regulated Asset Base (RAB)

40. The DSO argued that all efficiently incurred costs must be allowed to be added to the RAB. The fact that the majority of generator connections will be undertaken by contractors engaged through competitive tender should be sufficient justification that any costs in excess of the standard prices are efficiently incurred. In their view these costs should therefore be allowed on the RAB as a matter of course.

41. Leaving aside for a moment the treatment of unforeseen costs outside the control of the DSO (see further below) the Commission would expect DSO to recover, and to be incentivised to recover, all efficiently incurred connection costs through the levying of the approved standard charges set out in the **Table 1**. Should total connection costs in any one year exceed the yield from standard charges for those connections, the Commission agrees that the additional costs should be included in the DSO’s regulated asset base (RAB) for DUoS purposes where the DSO could demonstrate to the satisfaction of the Commission that such costs were efficiently incurred. For the avoidance of doubt, where ESB Networks can demonstrate that it has

followed proper tendering procedures with contractors and/or equipment suppliers, such costs will be allowed into the RAB.

Decision on Pass-Through Costs

42. The DSO's proposals included a clause whereby costs arising out of certain circumstances, outside the control of the DSO and unforeseen at the time of the connection offer, would be passed through to the connecting generator. A description of these items was included in Schedule 2 of the DSO paper.
43. The DSO proposals also stated that revised offers would be issued if the variance in the overall cost was over 10%. However, the revision of offers based on out-turn costs run contrary to the concept of standard pricing; this proposal has therefore been rejected by the Commission.
44. The Commission took into consideration the need to give financial certainty to generators; one of the advantages of the standard pricing approach should be to offer this certainty. The Commission has therefore only allowed a limited number of extra cost items, beyond the standard charges, to be passed through to the generator where these are outside the control of the DSO, have not been factored into the standard charges and strictly apply to the project in question. It is noted that such items are exceptional in nature and should only be incurred in the minority of cases. In addition, generators to date have been issued revised offers based on exceptional additional costs; the Commission's decision will result in a continuation of this policy.
45. The Commission has not allowed the pass through of all of the costs in the DSO's proposals. This approach also avoids the potential situation of the DSO having no incentive to control such costs, since they would be fully passed through to the generators. However, a limited number of pass through costs will be charged to the developer in full:
 - **Planning Permission**
46. Any changes arising from planning permission decisions, such as changes to the route and/or special conditions attached to the planning permission, which result in increased costs that are efficiently and reasonably incurred and are considered necessary, will be charged to the relevant generators.
 - **Forestry, Wayleaves, and Consents Compensation**
47. The costs associated with forestry compensation are currently passed through to generators, and this will remain the case. Wayleaves and consents compensations are negotiated and paid by the DSO. In certain instances however these may be above the level assumed in the connection offer. These circumstances are outside of the control of the DSO. However, the DSO do have an incentive to keep such costs

to a minimum, as any other approach would weaken their position with regard to all other wayleave and consent compensations that arise with network developments throughout the country. Developers may also have had contact with landowners in their area and therefore will be aware of any potential compensation issues which may arise after the issue of the connection offer. The Commission has decided that such extra costs which may occasionally occur will be passed through to the developments concerned. Again, this is a continuation of the current situation whereby these costs are passed on to the generator.

- **Lock-Out Costs**

48. Lockout is the term used where DSO staff or their contractors arrive on site to discover that the landowner will not allow access to their land notwithstanding that wayleaves may have been served. This is an unforeseeable occurrence, which can be expensive. There is a higher incidence of lock-out for windfarm connections due to landowners using the network connection as a further means of objection to the windfarm development itself. The DSO has informed the Commission that this has resulted in coordinated action by many landowners to stop the construction of lines even after wayleaves have been served.

49. In addition, the DSO have stated that the “lockout” of construction crews is becoming increasingly common and can add considerably to the costs incurred in contract variation claims by contracting firms. In contrast, the majority of 38kV overhead line construction being undertaken presently for non-wind applications relates to the replacement of existing 38kV lines where adverse landowner reaction is far less common.

50. The Commission believes that for the reasons outlined above the most appropriate treatment of these costs is for them to be passed through directly to the developer(s) as an outturn cost. The DSO will invoice the developer once they have received the final invoice from its contractor in relation to these items. The developer(s) will be fully aware of any lock-outs occurring during the course of the project, and the DSO will inform the developers of the estimated scale of additional costs if requested.

- **Access for Delivery of Materials**

51. The approved standard charges do not include any allowance for helicopter pole delivery. If such delivery is required due to the terrain and access conditions, the costs will be passed through to the developer(s) in full. Since connection offers are based on a single site visit, it will not be possible for the DSO to state at that stage if helicopter delivery will be required. The DSO will however indicate in the connection offer areas which have been identified as potentially requiring helicopter delivery, based upon the visit and the desktop study. In any event, developers will be familiar with the terrain in the area and have a reasonable expectation of whether helicopter drops may in fact be required.

- **Payment Schedule**

52. The Commission issued a direction on this issue on the 7th April, (CER/05/049), part of which is reproduced here for completeness:

The distribution payment schedule shall remain as follows for both the Dedicated and Shared Connection Assets:

- 25% on Offer Acceptance
- 50% at Pre-Construction Stage
- 25% at Final Energisation

Further Issues Raised in Submissions Received

53. In addition to comments made regarding the level of costs contained in the DSO's proposed Schedule of Charges, a number of further issues were raised.

- **Connection Dates**

54. A number of respondents highlighted the fact that there is no completion date provided by the DSO. This can have implications for planning permission and/or financial issues.

Commission response:

55. All connection agreements issued to applicants will be subject to a validity period or backstop date. The transmission connection agreement already provides for the connecting party to meet a number of specific milestones during the process of constructing the connection asset. However, the distribution agreement contained no such provisions. The DSO has reviewed its standard connection agreement with a view to aligning it with the transmission connection agreement.

56. The DSO has recently proposed to the Commission the inclusion of the following longstop dates in its revised generator connection agreement: 1) Scheduled Consents Issue Date and associated longstop date 2) Scheduled Operational Date and associated longstop date. The Commission approves the inclusion of these longstop dates in the connection offer and has asked the DSO to bring forward detailed proposals on the calculation of these dates.

- **Contestability**

57. Almost all respondents raised the issue of contestability of connections to the distribution system. These respondents urged the Commission to allow contestability of generator connections, i.e. to allow parties other than the DSO to construct such connections. These respondents were of the view that such a move would reduce connection costs, with contractors completing such work at lower cost.

Commission response:

58. The Commission has advocated and supports contestability of distribution connection assets; however this is not currently allowed for in legislation.
59. A certain amount of competitive pressure does, however, exist within the distribution system connection process. The DSO employs subcontractors (following a tender process) to carry out connection work on a regular basis. In addition, the DSO's purchase price for materials is the result of an open international tender process and is aided by the large volume of orders over a medium term period.

Overall Conclusions

60. None of the submissions received contained objections to the adoption of standard pricing. The area of greatest concern, understandably, centred on the financial terms of the connection offers, and primarily the level of connection charges.
61. The Commission in reaching its decision was fully aware that the issue of connection costs is of prime importance to generators. To this end, the Commission sought to examine very closely the level of costs proposed, and to set charges that cover costs that are efficiently incurred and in line with best international practice. The Commission believes the approved charges have achieved this aim.
62. In addition, the standard pricing process adds a stronger degree of financial certainty due to the fact that only a limited number of costs may be passed through to generators, over the initial connection offer. Financial predictability for prospective developers is also improved, since the levels of charges are now fixed and transparent. Where it has been decided to withdraw the proposed application of standard charges (civil works for station upratings and underground cables exceeding 1 km in length) this reflects the fact that such cost items are unavoidably varied, contingent on individual circumstances, and difficult to predict reliably. A fairer and more appropriate course is to base charges on best tenders received.
63. The standard pricing approach, following this decision and that concerning the Group Processing Approach, will lead to a number of significant improvements in the processing of connection applications. The connection process will be faster, more efficient, and offer more financial certainty as a result of these decisions.

Commission Direction

64. Under Section 35 of the Electricity Regulation Act, 1999, the Commission directs the DSO to adopt the Approved Schedule of Charges in Table 1 at the end of the document. This direction will apply to all group offers issued to date and in the future. Recipients of offers issued to date shall be given a further thirty business days to accept their revised offers.

Table 1: Schedule of Approved Charges for Generator Connection

Approved Charges for Generator Connections (€, 2005)				
Category	No.	Work-type	Unit	CER Decision (€)
Line Work	1	110kV line - 300ACSR	Km	180,000
	2	38kV line - 300ACSR	Km	95,000
	3	38kV line - 100ACSR	Km	60,000
	4	MV line 92/150 ACSR	Km	45,000
Station Work	5	38kV Cubicle	unit	135,000
	6	38kV bay in 110 or 38kV station	unit	155,000
	7	MV Cubicle in 110 kV station	unit	50,000
	8	MV Cubicle with I/F transformer	unit	180,000
Metering	9	38kV Metering	unit	50,000
	10	MV Metering	unit	25,000
Stations Upratings				
a) 110KV stations	11	New 110kV station	unit	2,600,000 + Civil Works
	12	1*31.5 MVA to 2*31.5MVA	unit	2,276,000
	13	2*31.5 MVA to 2*63MVA	unit	2,500,000
b) 38KV stations	14	New 38kV Station: 2*5MVA	unit	1,050,000 + Civil Works
	15	2*5MVA to 2*10MVA	unit	1,500,000
Cable Costs	16	110kV Cable (up to 1km#)	km	305,000
	17	38kV Cable	km	110,000
	18	MV Cable	km	50,000
	19	38kV end-mast	unit	40,000
	20	110kV end-mast	unit	140,000

Where the cable length exceeds 1km the charges will be determined on the actual tender chosen from pre-qualified suppliers who submit tenders.