



**Mr. Heinz HILBRECHT**

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DG TREN – EC  
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17 March 2009

Dear Mr. Hilbrecht,

We are very pleased to send you ETSO response to the EC Consultation Document on the Inter-TSO compensation mechanism and on harmonization of transmission tariffication.

Anticipating the EU Commission's work on the ITC guideline, ETSO has been, since January 2008, working extensively to find a long-term ITC mechanism. The work was particularly developed with the intention of providing a central input to the Commission's work. Please find attached a document which describes the outcome of this work done within ETSO to design a long-term ITC mechanism (annex 1). ETSO hopes that DG TREN will find the proposed mechanism a useful input to the future work of writing binding guidelines for ITC.

We are glad to confirm that ETSO members have approved to send this document as a response from ETSO to the Commission. It should be noted that it was also endorsed by our members in non EU member countries. In this context, we would like to draw your attention to a letter by swissgrid which you find in annex 2.

Finally, we would like to highlight ETSO response on the part of the consultation paper covering harmonization of transmission tariffication, attached as annex 3.

Yours sincerely,

Pierre Bornard  
Chairman of the Steering Committee

Daniel Dobbene  
President

*Annexes 3.*



# ETSO Response to EC Consultation Paper on the Inter-TSO Compensation Mechanism

## Introduction

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1. ETSO welcomes the EU commission's timely initiative to write a binding guideline for the Inter-TSO compensation mechanism. ETSO believes that the consultation paper raises appropriate issues which are essential for designing and drafting the ITC guideline.
2. Since 2001, ETSO has been developing several inter-TSO compensation mechanisms which had varying complexity and scope. Some of these mechanisms have been successfully implemented on a voluntary basis since 2002. The latest voluntary agreement has been signed by all ETSO and SETSO members and is currently in force.
3. Anticipating the EU commissions' work on the ITC guideline, ETSO has been, since January 2008, working extensively to find a long-term ITC mechanism. The work is particularly developed with the intention of providing a central input to the Commissions work.
4. This document, describes the outcome of the work done within ETSO to design a long-term ITC mechanism. ETSO hopes that DG TREN will find the proposed mechanism a useful input to the future work of writing binding guidelines for ITC.
5. The paper first briefly introduces the background of the work done by ETSO. Subsequently, an outline of the mechanism developed by ETSO will be presented. The full description of the proposed mechanism answers the questions raised in the consultation paper by DG TREN.

## Background of the Proposed ITC Mechanism

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6. European TSOs voluntarily entered into the first Inter-TSO Compensation agreement in 2002. This first ITC agreement was essential in order to abolish transaction-based cross-border tariffs, and introduced an appropriate compensation mechanism for costs incurred as a result of cross-border flows. This basic principle has remained an important feature of all subsequently agreed mechanisms.
7. However, significant market design progress has been achieved in the intervening period which has led ETSO to revise the scope and underlying principles of the ITC mechanism. The Congestion Management Guidelines are now facilitating the widespread application of market-based capacity allocation methods as well as stipulating requirements for the use of

congestion revenues. The ETSO ITC mechanism presented in this paper is tuned to accommodate for these particular market development.

8. Both complex and simple mechanism have been investigated by ETSO. Complex models apply variables that are difficult to quantify and audit. Hence, ETSO clearly prefers a mechanism that is simple, transparent and easily quantifiable.
9. ETSO believes that the internal market for electricity has been and will continue to undergo significant market design improvements. Therefore, ETSO believes that the implementation of a binding ITC guideline should make provision for a robust monitoring and review process. This will allow for continued evolution and efficient application of the mechanism adopted.
10. Consequently, the ETSO mechanism described below is simple, transparent and attempts to comply with the wider ambitions of the internal market design of electricity.

## **Overview of the Proposed ETSO ITC Mechanism**

11. The mechanism entails three distinct elements: 1) Network losses shall be compensated using the WWT methodology. 2) Congestion rent shall be used to compensate for new investments and costs linked to firmness. 3) A Framework Fund shall be established to address the need for any additional compensation. Furthermore, a unique methodology vis-à-vis the framework fund and WWT calculations shall be introduced for perimeter countries.

### **1.1. Losses**

12. Cross-border flows induce changes in the volume of losses within the transmission network. An ITC element shall therefore be set up in order to compensate for costs or benefits related to this variation of losses. Loss compensations as a result of transit shall be calculated using the WWT methodology. The WWT methodology is currently implemented as an integral part of ETSO's 2008-2009 voluntary agreement for ITC. A full description of the WWT model can be provided by ETSO upon request.
13. In principle, cost of losses approved by each regulator should be used as the basis for loss compensation. However, if the timing of the periodic regulatory approval does not coincide with the periodic ITC calculations, loss costs should be provided by the ITC party and audited by all other ITC parties.

### **1.2. Use of Congestion Rent**

14. This proposed ITC mechanism assumes that revenues accruing to TSOs, as a result of congestion management schemes at borders, shall be used to compensate for new infrastructure investments and additional costs

related to network security and firmness. This principle also complies with the Congestion Management Guidelines (now annexed to Regulation 1228)

### 1.3. Framework Fund

15. The guidelines shall establish a fixed Framework Fund to provide additional compensation for existing network costs that may not reasonably be covered via the loss compensation element of this scheme or the contribution from congestion revenues.

16. A full description of the calculation procedures for the framework fund can be found in annex 1. However, the basic elements of the calculations of the framework fund are described below.

a. Transits are defined as:

Transit = min(export, import), on an hourly basis and aggregated on an annual basis.

b. These transits are then applied to calculate: :

i. Transit factor (TF) =  $\left[ \frac{T_i}{\sum T_i} \right]$ , the ratio of a TSO's transit

relative to the aggregated transit of all participating TSOs.

ii. The Transit factor as defined above does not consider the size of transit relative to a TSO's load. Hence, the transit factor should be corrected by a load factor, in order to do this :

$$\text{Load factor (LF)} = \frac{\left[ \frac{T_i}{(T_i + L_i)} \right] * \left[ \frac{T_i}{\sum T_i} \right]}{\sum_N \left[ \frac{T_i}{(T_i + L_i)} \right] * \left[ \frac{T_i}{\sum T_i} \right]}$$

c. Then, the cost claim for an ITC party given the framework fund as fixed in the guidelines (FF) is :

$$\text{Cost claim} = (0,75 * \text{TF} + 0,25 * \text{LF}) * \text{FF}$$

d. The contribution is calculated using net flows.

e. Based on the compensations and contributions, the distribution of the fixed Framework Fund can be determined. The annual results will change according to changes in flows.

f. The final yearly settlement will take place based on the ex post data when they are available.

### 1.4. Treatment of Perimeter Countries

17. Perimeter flows shall contribute to the Framework-fund and the WWT calculations. The particular method to handle this issue requires further specification:

- a. All countries connected to the "ITC area" will be perimeter countries.
- b. Import and export from perimeter countries shall contribute based on scheduled flows.
- c. The perimeter fee shall be the same as the ex-ante net flow fee calculated on the basis of estimated net flows and losses for the forthcoming year. The calculation of perimeter fee shall be made in a transparent way.
- d. The edge country TSO collects the perimeter payment.
- e. The same principles as used in the previous agreements (2004-2007) shall be used to calculate the transit and net flow for the edge countries.
- f. No compensations shall be paid to the perimeter countries.

## **Outstanding Issues to be Resolved**

18. There are two main points to be resolved.

- a. Firstly, the size of the Framework Fund: There is an overall understanding within ETSO that the previous ITC compensation fund, which is approximately €350M (net of losses) needs to be reduced. This reduction of the fund size is appropriate due to the development of market design; in particular the introduction of market based allocation mechanisms and the related congestion rents. In order to facilitate the EU Commission's decision on the Framework Fund size, ETSO presents examples of three fund sizes (€50m, €100m and €150m). The EU Commission should evaluate and determine the appropriate and reasonable size of the fund. A large majority of TSOs are of the opinion that a fund of maximum 100 M€ represents such an appropriate and reasonable fund. On the contrary, some other TSOs, especially from highly transited countries, are of the opinion that the responsibility to define the fund size fully belongs to the Commission and Relevant Authorities, and that a larger amount can be considered.
- b. Secondly, treatment of a cross border capacity between two ITC parties where the capacity is 1) commercially allocated and operated by either one or both of the ITC parties 2) and is allocated via principles different from approved third party access principles. A vast majority of TSOs, within ETSO, consider that cross border flows arising from such capacity should be excluded from both loss compensation and the framework fund calculations. However, this is a position which requires a higher level legal/regulatory interpretation in the context of the Regulation 1228.

## **Financial Outcome Based on the ETSO ITC Mechanism**

19. Estimates of financial results applying the above mechanism with three scenarios of the framework fund of 50, 100 and 150 M€ and with the exclusion of the capacity mentioned under point 18.b can be found in annex 2 for the year 2007. The loss part is, however, based on 2008 data.

## ANNEX 1: Details of the Framework fund Calculations

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### Definitions

<i>Definition</i>	<i>Variable identification</i>	<i>Description</i>	<i>Measurement</i>	<i>Source data from:</i>
Scheduled Import Flow from Perimeter countries for an Edge Party $k$	$SIF(k)$	Aggregated yearly value of the scheduled Import from Parties not signatories in the ITC Agreement	[MWh]	Edge Countries TSOs
Scheduled Export Flow to Perimeter countries for an Edge Party $k$	$SEF(k)$	Aggregated yearly value of the scheduled Import from Parties not signatories in the ITC Agreement	[MWh]	Edge Countries TSOs
Net Import Flow for a Party $k$	$NIF(k)$	Sum of the hourly net import physical flows, calculated with a special treatment in case of a country bordering with the Perimeter	[MWh]	ETSO Database
Net Export Flow for a Party $k$	$NEF(k)$	Sum of the hourly net export physical flows	[MWh]	ETSO Database
Transit for a Party $k$	$T(k)$		[MWh]	ETSO Database
Transit Factor Coefficient	$a$	Multiplication factor	-	Fixed in spreadsheet
Transit Factor for a Party $k$	$Tf(k)$		-	Calculated in spreadsheet
Vertical TSO load for a Party $k$	$L(k)$		[MWh]	

Weighting Factor Coefficient	$b$	Multiplication factor	-	Fixed in spreadsheet
Weighting Factor	$Wf(k)$		-	Calculated in spreadsheet
Framework Fund	$FF$		[M€]	Fixed in spreadsheet
Cost Claim related to the Framework Fund element for a Party $k$	$CCFF(k)$		[M€]	Determined in spreadsheet
Framework Fund Net financial Position for a Party $k$	$NPFF$		[M€]	Calculated in spreadsheet
Losses Net financial Position for a Party $k$	$NPL$		[M€]	Calculated in spreadsheet
Total Net financial Position for a Party $k$	$NP$		[M€]	Calculated in spreadsheet

### Cost Claim Calculations

The transit parameter for a given Party  $k$  is determined, for each hour, as:

$$T(k, h) = \min[EF(k, j, h); IF(j, k, h)]$$

Where

For the whole of the Reference Period  $RP$ :

$$T(k) = \sum_{h \in RP} \min[EF(k, j, h); IF(j, k, h)]$$

Where  $L(k)$  indicates the value of the vertical TSO load referring to  $RP$ , then the cost claim for a Party  $k$  related to the Framework Fund is calculated as follows:

Define that:

$$Tf(k) = \frac{T(k)}{\sum_{i \in ITC} T(i)}$$

And that:

$$Lf(k) = \frac{\left[ \frac{T(k)}{(T(k) + L(k))} \right] * \left[ \frac{T(k)}{\sum T(i)} \right]}{\sum_{i \in ITC} \left[ \frac{T(i)}{(T(i) + L(i))} \right] * \left[ \frac{T(i)}{\sum T(i)} \right]} = \frac{\left[ \frac{T(k) \cdot T(k)}{(T(k) + L(k))} \right]}{\sum_{i \in ITC} \left[ \frac{T(i) \cdot T(i)}{(T(i) + L(i))} \right]}$$

Then the cost claim for country  $k$  can be written as:

$$CCFF(k) = FF \cdot [aTf(k) + bLf(k)]$$

### Contribution Calculations

The Net Flows in Import and Export direction are defined for any ITC Party  $k$  with no border in common with Perimeter Parties respectively as:

$$NEF(k) = \sum_{h \in RP} \max \left[ 0; \sum_{j \in ITC(k)} EF(k, j, h) - \sum_{j \in ITC(k)} IF(j, k, h) \right]$$

$$NIF(k, h) = \sum_{h \in RP} \max \left[ 0; \sum_{j \in ITC(k)} IF(j, k, h) - \sum_{j \in ITC(k)} EF(k, j, h) \right]$$

For any Edge Party, more passages are needed to define the Net Flows in Import and Export direction:

$$ANEF(k, h) = \max \left[ 0; \sum_{j \in ITC(k)} EF(k, j, h) - \sum_{j \in ITC(k)} IF(j, k, h) \right]$$

$$ANIF(k, h) = \max \left[ 0; \sum_{j \in ITC(k)} IF(j, k, h) - \sum_{j \in ITC(k)} EF(k, j, h) \right]$$

where  $j$  are Parties bordering with  $k$  and belonging to the ITC area.

$$NEFPC(k, h) = \max \left[ 0; \sum_{j \in PC(k)} EF(k, j, h) - \sum_{j \in PC(k)} IF(j, k, h) \right]$$

$$NIFPC(k, h) = \max \left[ 0; \sum_{j \in PC(k)} IF(j, k, h) - \sum_{j \in PC(k)} EF(k, j, h) \right]$$

where  $j$  are Parties bordering with  $k$  and not belonging to the ITC area.

$$T\_PC\_ITC = \min[ANEF(k, h); NIFPC(k, h)]$$

$$T\_ITC\_PC = \min[ANIF(k, h); NEFPC(k, h)]$$

Finally, it is possible to define the Net Flow values in both directions also for the Edge Parties as:

$$NEF(k) = \sum_{h \in RP} [ANEF(k, h) - T\_PC\_ITC(k, h)]$$

$$NIF(k) = \sum_{h \in RP} [ANIF(k, h) - T\_ITC\_PC(k, h)]$$

Finally, taking into account the contribution on scheduling from the Perimeter Countries, defined as:

$$SEF(k) = \sum_{h \in RP} \sum_{j \in ITC(k)} SEF(k, j, h)$$

$$SIF(k) = \sum_{h \in RP} \sum_{j \in ITC(k)} SIF(j, k, h)$$

The contribution for the Party  $k$  will be:

$$TC(k) = PFee \cdot [SEF(k) + SIF(k)] + NFFee \cdot [NEF(k) + NIF(k)]$$

### Net Results Calculations

The net financial position for the Financial Fund is defined as:

$$NPFF(k) = CCF(k) - TC(k)$$

And, taking into account the financial net position calculated by the means of the WWT methodology for losses, it results that the final financial net position for the Party  $k$  results in:

$$NP(k) = NPFF(k) + NPL(k)$$


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## ANNEX 2: Calculations based on 2007 data for framework fund and losses for 2008<sup>1</sup>

TSO		Net Result	Net Result	Net Result
		FUND=50	FUND=100	FUND=150
AL	Albania	-1	-2	-2
AT	Austria	7	10	14
BA	Bosnia&Herzegovina	2	3	4
BE	Belgium	-1	0	1
BG	Bulgaria	1	1	1
CH	Switzerland	5	7	8
CZ	Czech Republic	-5	-5	-6
D2	Denmark East	-1	-1	-1
DE	Germany	24	29	33
DK	Denmark West	7	7	8
EE	Estonia	0	0	0
ES	Spain	-1	-1	-1
FI	Finland	-2	-4	-5
FR	France	-22	-30	-37
GB	Great Britain	-6	-7	-9
GR	Greece	-2	-2	-3
HR	Croatia	1	2	3
HU	Hungary	5	7	9
IE	Republic of Ireland	-1	-1	-1
IT	Italy	-18	-25	-32
LT	Lithuania	0	1	2
LV	Latvia	-1	-2	-2
ME	Montenegro	0	0	0
MK	FYR of Macedonia	-1	-1	-1
NI	Northern Ireland	0	0	0
NL	Netherlands	0	-1	-3
NO	Norway	-5	-7	-10
PL	Poland	-1	0	1
PT	Portugal	-3	-4	-5
RO	Romania	-3	-2	-2
RS	Serbia	6	8	9
SE	Sweden	8	8	8
SI	Slovenia	2	3	5
SK	Slovak Republic	5	8	12

<sup>1</sup> The financial results presented in the table above are preliminary, and apply a reduction of transit flows originating from capacities fulfilling the conditions stated in 18.b. Currently, only a certain part of the Swiss border capacities were identified to fulfill this condition. The transit flow originating from such capacities is preliminarily estimated to be 55% of the transit flows in Switzerland and accordingly reduced; the same reduction is applied to the loss compensation. However, if the guidelines are drafted in line with these conditions, a more precise method to handle such capacities must be developed. Moreover, although ETSO could currently only identify such capacities on the Swiss borders, similar capacities may exist elsewhere and shall be treated in the same manner. If the Swiss transit flows were not reduced, Switzerland will have an annual net result of 19, 26 and 32M€ for the fund sizes of 50, 100 and 150 M€ respectively.

ETSO  
European Transmission System Operators  
Mr. Pierre Bornard  
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Belgium

6 March 2009

### **Side letter to ETSO response to DG TRENs consultation paper on the Inter TSO compensation mechanism**

Dear Mr. Bornard

The ETSO Steering Committee has approved a response to DG TRENs consultation paper on ITC. This response is the outcome of long and intensive work in the respective ETSO project and of discussions in the Steering Committee. It includes a proposal for an ITC model which could form the basis of future ITC guidelines.

During the elaboration of the ETSO response swissgrid mentioned several points for further discussion when elaborating ITC guidelines. According to swissgrids understanding the proposed ITC mechanism will be further developed and specified. Besides the already mentioned outstanding issues to be resolved, such as the size of the framework fund and the fair and equal treatment of merchant capacities for all countries, topics like future European market design and how an ITC mechanism can complement future tariff and incentive schemes, including the use of congestions rents, shall also be addressed.

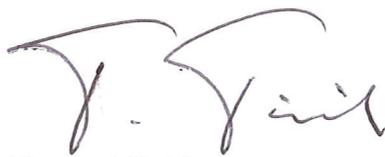
swissgrid represents a country that has an important transit function for whole Central Europe. Our main goal is to play a proactive role in building Europe's future transmission grid. Therefore the above mentioned topics are of a big importance for Switzerland. We kindly ask the Steering Committee that this letter will be annexed of the ETSO response to DG TRENs consultation. swissgrid is confident that for future ITC-guidelines a solution will be found which adequately takes consideration of the specific situation of transit countries in Europe.

Best regards,

swissgrid Ltd.



Pierre-Alain Graf  
CEO



Thomas Tillwicks  
COO Commercial Grid Management

Cc: Daniel Dobbeni, President of ETSO



## **ETSO response to the EC Consultation Document on Harmonization of Transmission Tarification**

ETSO welcomes the opportunity to comment the *Consultation document on the Inter-TSO compensation mechanism and on harmonization of transmission tarification* issued by European Commission on 9 December 2008.

As regards harmonization of transmission tarification ETSO already expressed its opinion in our letter *ETSO comments on Draft Guidelines on Transmission Tarification- ERGEG Public Consultation* dated 9 June 2005 (hereinafter referred as “letter”) which referred to draft Guidelines issued by ERGEG on 2 May 2005 (please find a copy of the letter enclosed).

In the abovementioned letter ETSO gave its opinion on transmission tariff harmonization and in general supported the draft Guidelines developed by ERGEG, although we still had some concerns regarding voltage levels to be covered by calculation of average G and for the definition of “transmission level” which we expressed in our letter to Sir John Mogg, CEER President, dated 13 March 2006 (please find a copy of the letter enclosed).

In the consultation paper it is stated that the main requirement in relation to transmission tarification is to establish a sufficiently level playing field for generators so that decisions on cross-border trade or plant location and closure are not distorted by transmission charges. We agree with this and, therefore, transmission charges shall not be transaction (distance) based but point of connection tariffs.

The main idea expressed in the draft Guidelines as regards G harmonization i.e. establishing different ranges of average G for interconnected areas in Europe will in our opinion fulfill the requirement for further development of IEM. We agree with the ranges of average G proposed in the Guidelines developed by ERGEG with the exception of the maximum G value for the Nordel system. Given the development in this area since 2005, when ERGEG draft guidelines were drafted, we propose that in the Nordel system the maximum G value should be a little higher (1.2 €/MWh). This in our opinion will contribute to an efficient development of the grid. Therefore, we propose the following text:

*The value of the ‘annual national average G’ must be within a range of 0 to 0.5 €/MWh, with the exception of the maximum values stated here below:*

- 1. The value of the ‘annual national average G’ within the Nordel system will be at a maximum 1.2 €/MWh.*
- 2. The value of the ‘annual national average G’ within Great Britain, Republic of Ireland and Northern Ireland will be at maximum 2.5 €/MWh*

However, we would like to add that these values should not be considered as a permanent cap but the most adequate for the situation today that could change in the future due to the evolution of exchange rates (for countries outside the Euro zone), price indexes, energy prices, system development...or others.

We also agree that costs of internal congestions, losses and ancillary services or specific first connection charges should not be included in calculation of the “average national G”. However, we consider those charges an important feature which should be considered in the future, at a higher stage of development and integration of IEM. The same should apply to any considerations about harmonization of tariff structures

It is also important that the Guidelines make it possible for TSOs/Member States to have locational signals. For some Member States this may be important to ensure an efficient development of the transmission system.

We would also like to refer to our abovementioned letter dated 13 March 2006. We uphold our opinion that full harmonization should include all generators at all voltage levels as well as the full amount of energy produced in calculation of “average national G” thus avoiding possible economically inefficient exchanges in IEM. If, however, the calculation of the “average national G” is kept as proposed in the ERGEG draft Guidelines, then, to avoid any misunderstanding, the Guidelines should also define clearly what should be considered “transmission level” for this purpose or else state that “transmission level” should be considered as defined by national legislations in each Member State.