



Application of Changes in Modelling Assumptions to the ITC Analysis

An Information Note by EirGrid

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Introduction

EirGrid, the Transmission System Operator (TSO), is responsible for determining and administering the allocation of financial firm access, or firm access quantities (FAQs), to generators. FAQ is only accorded to a generator once those projects within the transmission capital works that are linked to the provision of that generator's FAQ are complete. These projects are referred to as the individual generator's associated transmission reinforcements (ATRs). A generator with FAQ will be financially compensated up to their FAQ amount on occasions where the generator was scheduled in the unconstrained electricity market but the generators actual power output was reduced as a result of a network constraint. EirGrid uses a computer program, called the ITC (Incremental Transfer Capability) Program, to perform the analysis to determine FAQs and ATRs.

This note sets out the basis upon which changes in various factors, which are considered as modelling assumptions during EirGrid's analysis, may affect the determination of FAQs, and subsequently ATRs, during a re-study of FAQs and ATRs. This note aims to provide some clarity as to how these changes are catered for and the exposure of generators to these changes. This is part of EirGrid's desire to provide information to both its customers and the general public, on the basis of its actions. It is a general guideline note and should be treated as such.

General Exposure to Changes

The standard terms and conditions offered to generators include details of the transmission reinforcement works required to be completed to provide firm access for the generator and an estimate of the date for completion of these works, henceforth referred to as forecasted FAQ date. Under these terms and conditions there are two primary reasons to which generators, having already entered into a connection agreement, are subject to the risk of alteration in forecasted FAQ date:

- (i) Where transmission reinforcements are delayed: in such circumstances it is generators who bear the risk of any associated delay. The standard lead times provided reflect typical construction times and in general assume non contentious consenting etc. If the required works are in areas where development may be contentious then they will likely take longer (the standard lead times are not normally distributed in relation to probable outcomes) and generators currently bear this risk of this.*
- (ii) Where transmission reinforcements are altered as a result of optimisation i.e. in the interest of overall efficient and economic development of the transmission system: generators bear the risk of a change in reinforcements as part of the overall optimal development of the transmission grid.*

It is therefore against these terms and conditions, and consistent with the principles of these terms and conditions, which have applied since the inception of SEM, that the FAQ dates as part of a re-study can be/ have been amended. The application in the case of a re-study is set out in more detail in the next section.

Influencing Factors on FAQ Dates

The raw output from the ITC Program analysis can show changes to the FAQ dates for some generators when compared against the originally published forecasts. These changes are due to one, or a combination, of the following factors:

- a) *Later assumed completion dates for transmission reinforcements relative to those dates used in the original analysis;*
- b) *Updated network development plans;*
- c) *Modified generation dispatch scenarios;*
- d) *Changes in the calculation methodology; and*
- e) *Revised system demand level forecasts.*

Factors c) and d) are considered to be improvements that will, in general, improve forecasted FAQ dates (and the scale and extent of ATRs) for generators. However, a possible secondary impact of improving forecasted FAQ dates for some generators is a disimprovement on other generator's forecasted FAQ dates.

The raw output from the ITC program for the FAQ restudies completed shows a number of generators with earlier forecasted FAQ dates than was originally forecast and published. Additionally more firm access overall is available with fewer grid reinforcements. However, for a number of generators the forecasted FAQ dates are somewhat later (and/or potentially different ATRs) to those originally forecast and published. While it is relatively clear that these disimprovements are primarily due to the fact that there has been some slippage in scheduled completion dates for some Grid25 projects, it may also be due to one, or a combination of some, of the other factors outlined above.

Explanation of changes in FAQ dates with specific reference to Gate 3

The cause of changes to a generator's FAQ date may be due to a number of factors and can be extremely difficult to pinpoint. This, as alluded to above, is due to:

- the number of factors and the circuitous nature of the effects of the factors which influence FAQ dates;
- the sheer scale of projects under study (e.g. Gate 3 comprises 198 individual applications totalling nearly 5400MW); and
- the large number of reinforcements linked to the provision of firm access (e.g. >130 individual reinforcements modelled for Gate 3 FAQ restudy).

Therefore, protecting a generator's firm access rights from each and every change, besides those resulting from (1) delays to ATRs or (2) network optimisation, will not always be possible.

Methodology Applied

In the case where a forecasted FAQ date disimproves, the analysis has been designed to ensure that the generator's forecasted FAQ date disimproving is due to at least one of the following:

- (1) Delays to associated transmission reinforcements; and/or
- (2) Where transmission reinforcements have altered (e.g. as a result of network optimisation).

If at least one of (1) and (2) is not present, then the generator's original FAQ date will be held as any diminution of FAQ must be due to factors (e.g. demand drop) that should not affect the generator's firm access rights. Accordingly, ATRs will reflect this FAQ date (refer to Table 1 below).

If (1) and/or (2) is present, the diminution of FAQ *may* additionally be in part as a result of other influencing factors (e.g. demand drop) and it is not practicable to disentangle the two effects.

Therefore there is the *possibility* that there will be some instances of deterioration in FAQs due to factors other than (1) and (2).

In addition, while some generators may have different ATRs, and therefore potentially different risk profiles (which could be better or worse), to those identified in the original analysis, their forecast FAQ dates resulting from this analysis will not be made worse unless their origin of influence includes (1) and/or (2) above (refer to Table 1 below).

Scenario 1

Previous Analysis	Final Result	ATR A (2012)	ATR B (2013)	ATR C (2015)
	Intermediate Result	ATR A (2014)	ATR C (2016)	ATR D (2018)
New Analysis	Final Result	ATR A (2014)	ATR C (2016)	

Scenario 2

Previous Analysis	Final Result	ATR A (2012)	ATR B (2013)	ATR C (2015)
	Intermediate Result	ATR D (2014)	ATR E (2015)	
New Analysis	Final Result	ATR D (2014)	ATR E (2015)	

Scenario 3

Previous Analysis	Final Result	ATR A (2012)	ATR B (2013)	ATR C (2015)
	Intermediate Result	ATR D (2014)	ATR E (2015)	ATR F (2017)
New Analysis	Final Result	ATR D (2014)	ATR E (2015)	

Table 1: Possible scenarios showing ATR Ref. & (Scheduled Completion Date)

Summary

This note sets out the basis upon which changes in modelling assumptions may affect the determination of FAQs, and subsequently ATRs, during EirGrid's ITC Program analysis are catered for and aims to provide some clarity on the exposure of generators to these changes. The principles outlined in relation to this are consistent with the transmission access arrangements pertaining in Ireland and are those which have been applied by EirGrid in providing forecasted FAQ dates in the re-study of FAQs for Gate 1, Gate 2 and Gate 3 generators.