

CAP167

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nationalgrid

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CUSC Criteria

Original proposed CUSC Criteria :

1. The impact on investment costs of reinforcing the GB transmission system as a result of that generator connecting.
2. The impact on operational constraint and reserve costs of the GB transmission system as a result of that generator connecting.
3. The administrative and cost burden on relevant small embedded generation projects.
4. Consideration of technical issues at the connection point and on the MITS, such as but not limited to:
 - Impact on MITS power flows etc.

versus

'New' Original CUSC Criteria

Compliance with GB Security and Quality of Supply Standard, taking into account the administrative and cost burden placed upon Relevant Small Embedded generation projects.

The GB SQSS

Transmission Licence Obligation - C17 and D3

'The licensee shall at all times:

- (a) plan, develop and operate the licensee's transmission system; and*
- (b) co-ordinate and direct the flow of electricity onto and over the GB transmission system,*

in accordance with the GB Security and Quality of Supply Standard version 1,'

'The licensee shall at all times plan and develop the licensee's transmission system in accordance with the GB Security and Quality of Supply Standard version 1,..... and shall, in so doing, take into account the system operator's obligations under standard condition C17 (Transmission system security standard and quality of service) to co-ordinate and direct the flow of electricity onto and over the GB transmission system.'

The GB SQSS - Contents

1 Introduction

2 Design of Generation Connections

3 Design of Demand Connections

4 Design of the Main Interconnected Transmission System

5 Operation of the *GB transmission system*

6 Voltage Limits in Planning and Operating the *GB transmission system*

7 Terms and Definitions

Appendices (including Appendix E Guidance on Economic Justification)

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The GB SQSS - 2 Design of Generation Connections

‘The criteria in this section will also apply to the connections from a GSP to the GB transmission system by which power stations embedded within a customer’s network (e.g. distribution network) are connected to the GB transmission system.’

Principle behind setting the thresholds

To connect as much embedded generation without breaching the Transmission Licences i.e. retaining compliance with the GB SQSS.

Why refer to GB SQSS

The impact on investment costs of reinforcing the GB transmission system as a result of that generator connecting.

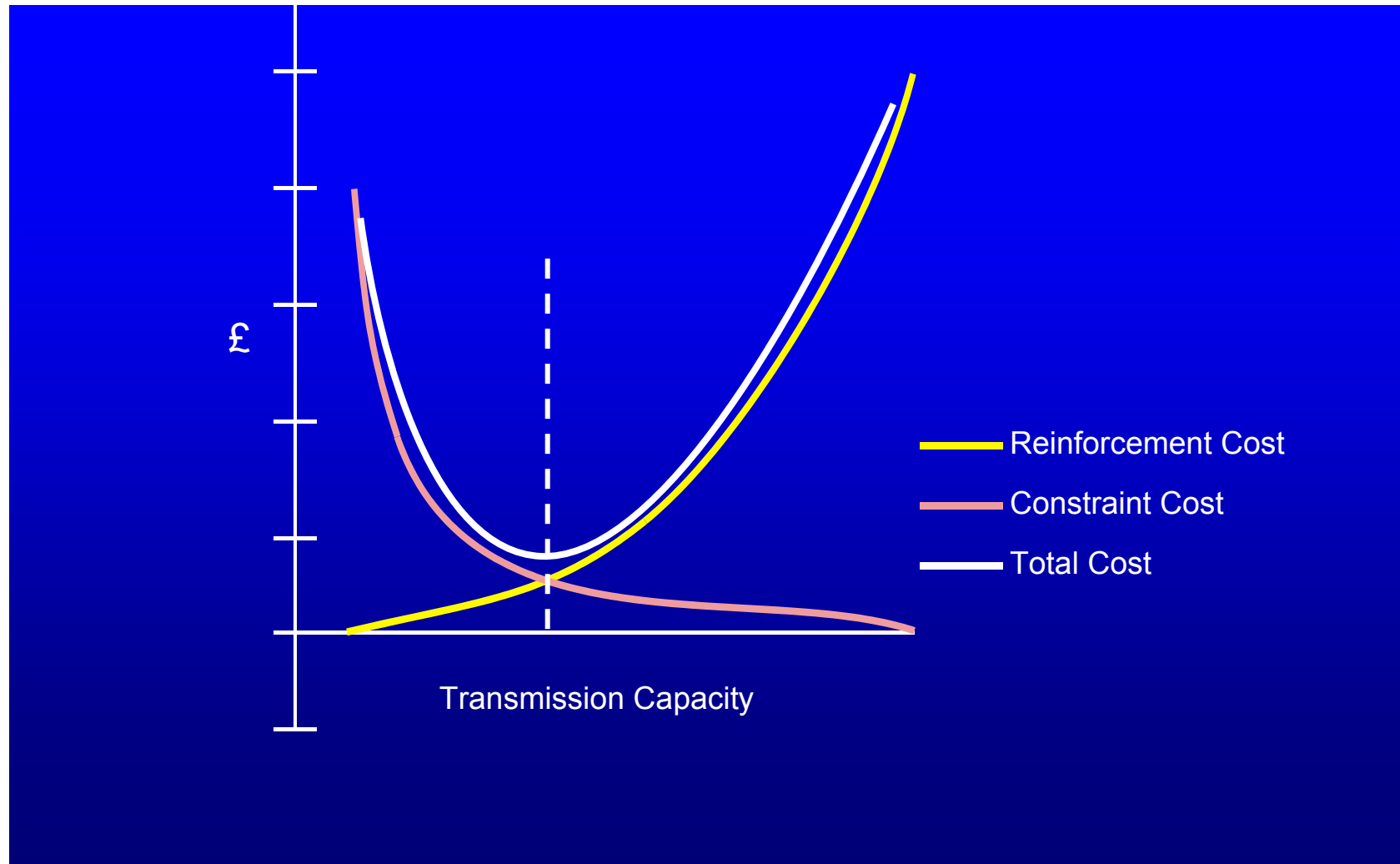
- ◆ Use criteria in chapters 2 and 4 of GB SQSS to determine non – compliance and therefore the required reinforcements.

Why refer to GB SQSS

The impact on operational constraint and reserve costs of the GB transmission system as a result of that generator connecting.

- ◆ Use criteria in chapters 5 of GB SQSS determine what events the system needs to be secured against.
- ◆ GB SQSS compliance provides an economical and efficient balance between Capital and Operational costs.
- ◆ Non compliance can incur significant additional operational costs, which could be deemed uneconomic and inefficient.

Why refer to GB SQSS



Why refer to GB SQSS

Consideration of technical issues at the connection point and on the MITS, such as but not limited to:

- ◆ Impact on MITS power flows.
- ◆ Local demand.
- ◆ Impact of generation on Supergrid Transformer circuit outages.
- ◆ Voltage / voltage step change issues.
- ◆ Fault levels.
- ◆ Stability.

Concerns about referring to the GB SQSS

- 1. Fluidity of the GB SQSS. – GB SQSS is likely to change over the next 18 months.**
- 2. Detail is missing i.e. what background should be used and what sensitivities / scenarios should be assessed.**

Summary

- ◆ **In essence, moving away from a criteria/ methodology that determines a £/MW value, and towards identifying areas with ‘spare capacity’.**
- ◆ **National Grid believe the revised wording better reflects the assessment that will be carried out and therefore is clearer and more transparent.**