Electricity Governance Rules: Case Studies

Case Study One:
Compliance with Dispatch Instructions

Rule 4.11 of section III of Part G
of the Electricity Governance Rules 2003

Introduction

Welcome to this, the first case study produced by the Electricity Commission's Market Governance team.

This study is about rule 4.11 of section III of Part G of the Electricity Governance Rules (compliance with dispatch instructions). Rule 4.11 has been chosen because data shows that it is the most commonly breached rule and because of the potential for breaches of this rule to impact quite seriously on the electricity market and system security.

Our aim in providing participants with information on the Commission's approach to rule 4.11 is to improve generators' and ancillary service providers' knowledge of and compliance with the rule.

In this case study you'll find:

- some details on how often 4.11 is breached
- a sample 4.11 case and Commission decision which is based on a number of real cases
- suggestions from Commission staff about how to avoid breaching 4.11.

Rule 4.11 frequently breached

All notifications of rule 4.11 breaches are handled by the Electricity Governance Rules Committee, a committee of the Commission Board.

Rule 4.11 requires generators and ancillary service agents to comply with the System Operator's dispatch instructions for energy and reserves, except in some limited circumstances.

The Committee is seeing more and more notifications of rule 4.11 breaches, and is concerned by this trend. Since 2004 the Commission has received 112 notifications of breaches. In 2007 it was the most commonly breached rule in the book with 21 notifications received, and 31 have already been received so far this year.

Overview of Committee's decisions on 4.11 breaches

Of the 112 breaches reported to date 16 have gone to investigation. Half of those investigations were for breaches relating to the dispatch of energy and half related to reserves.

Breaches are generally considered to be quality and security breaches because of the impact they can have on the functioning of the electricity system and market. Regulation 63 of the Electricity Governance Regulations 2003 requires participants to report quality and security breaches, and Regulation 64 makes it an offence not to do so.

Breaches where ancillary service agents don't provide reserves that they have contracted to have available and dispatched are of particular concern to the Committee.

The Committee will generally appoint an investigator to the more serious cases. Although notifications relating to reserves make up only a quarter of all reported 4.11 breaches, they make up half of the cases that have gone to investigation.

A sample 4.11 case

It's sometimes helpful to see how the Committee approaches 4.11 breaches by reviewing an actual case. In order to protect confidentiality but still provide useful information, we have created a sample 4.11 case covering situations that a number of participants have experienced.

Our sample case shows the types of everyday problems that, without following proper processes, can lead to breaches of rule 4.11, and shows what the Committee might decide to do on such a sample case.

Background

In its daily report, the System Operator alleged a generator had breached rule 4.11 by failing to comply with dispatch instructions for energy. The generator's output was 15% less than instructed. The Commission contacted the generator who admitted the breach and explained the circumstances that led to it.

Circumstances

The generator advised that the reason they did not comply with the instruction was a bona fide physical reason.

The generator's unit was dispatched but failed to start. The plant operator noted the unit's failure to respond and switched to manual control, which was also unsuccessful. The problems were expected to be resolved very quickly. The generator did not revise its offer for that trading period because it believed that the unit would be ready to start before then. The participant's offer for the trading period remained in place.

However, the fault-finding took longer than expected and the generator failed to keep the System Operator informed of the technical problem and subsequently failed to comply with the System Operator's dispatch instructions.

The generator's operators were so closely involved in fixing the faulty unit that they failed to follow the generator's procedures. Had the generator's correct procedures been followed the rule breach would have been avoided as the procedures provided for a number of responses, including contacting the System Operator, submitting a revised offer, and/or using station dispatch to get as close to the dispatch set point as possible.

Effect of breach

As a result of this breach the Frequency Keeper was moved up its frequency keeper band and was constrained on for most of the time of the breach, thereby increasing costs.

The Committee considered the operational and market impact of the failure to comply with the dispatch instructions. In this case the shortfall between the dispatch instructions and the actual generation was small, however the same circumstances could have produced a far more substantial negative impact on the market.

Previous breaches

The Committee was advised that the generator had breached rule 4.11 four times previously in the past, and of the actions the Committee took on those previous breaches.

The Committee's decision

The Committee considered the breaches and accepted the investigator's recommendations to:

- decline to pursue notification of the admitted alleged breach in accordance with regulation 67(1); and
- issue a warning letter.

After considering factors including the generator's previous breaches of this rule, the need for the staff to be educated on the proper procedures and processes, the probability of the problem that led to the rule breach recurring and the actual impact of the breach, the Committee decided to decline to pursue the notification.

The Committee Chair sent a warning letter to the generator's Chief Executive advising of the decision and the reasons. The letter noted the number of previous breaches of this rule by the participant and that they had all been notified by the System Operator, and indicated that any further breaches of this rule by the participant would be likely to result in an investigator being appointed.

The letter advised that the Committee considered that the admitted breach should also have been self-reported (as required by regulation 63 of the Electricity Governance Regulations 2003) and expects the participant to have in place compliance processes to identify and self report such breaches where it is reasonably believed that a breach has occurred.

If this breach had been related to reserves as opposed to energy it is likely that it would have gone to investigation.

Investigator's tips on how to avoid breaching rule 4.11

The Committee is supported in its role of assessing breaches of rule 4.11 by the Commission's investigators. Over time the investigators have looked into many alleged breaches and have the following tips for how to avoid breaching rule 4.11. Remember, the tips are just that - tips. You know best how to run your operations to comply with the Rules!

- **Keep the System Operator informed:** it often happens that staff are aware of technical problems, but are overly optimistic that the problems will be resolved in time to comply with the dispatch instruction.

  Investigators suggest keeping the System Operator informed of all potential problems. That way if the problem doesn't resolve itself in time, steps can be taken to minimise the impact.

- **Review procedures:** while some human errors are inevitable the instances of breaches of rule 4.11 can be reduced if procedures are reviewed periodically, particularly where previous mistakes have led to breaches of the Rules.

  Investigators suggest checking that processes required to comply with rule 4.11 co-ordinate with other processes, particularly those that apply when unexpected events occur.

- **Remember block dispatch:** Investigators have noticed that a generator's pre-occupation with problems at a particular unit can lead to failure to comply with dispatch instructions (Rule 3.6, part G, section III).

  Investigators consider that problems with one unit need not prevent a generator complying with instructions. If block dispatch is used, instructions could sometimes still be met.

- **Anticipate dispatch:** The system provides a number of tools that generators can use to anticipate dispatch instructions. These tools include the pre-dispatch schedule (PDS) and the schedule of dispatch prices and quantities (SDPQ). (Rules 3 and 5, part G, section III).

  Investigators suggest that generators' knowledge of their own production, combined with the information available in the PDS and the SDPQ, should enable them to anticipate dispatch instructions and identify any potential problems in meeting those instructions.

- **Remember:** Most breaches are avoidable. Most solutions are simple.

This case study provides information on the Commission's approach to rule 4.11 of the Electricity Governance Rules 2003. It is intended for information purposes only and does not create a precedent for future decisions. There's no substitute for Participants getting their own advice.