

Breach of clause 13.82 of the Electricity Industry Participation Code 2010

Non-compliance with dispatch instructions

Introduction

This case study discusses non-compliance with dispatch instructions.

It involves a situation where Genesis Power Limited's (Genesis) operators and traders anticipated a quick return to pre-event levels. In the circumstances, Genesis' trader decided not to submit a revised offer and claim a bona-fide physical reason. This resulted in a significant deviation from the dispatch instruction and an excess of constrained-on payments to the frequency keeping generator.

Genesis has consented to the publication of the details of this case study.

Code provisions

Clause 13.82 of the Code provides:

13.82 Dispatch instructions to be complied with

Each **generator** or **ancillary service agent** must comply with a **dispatch instruction** properly given by the **system operator** in accordance with clauses 13.73 or 13.74 except if, ...

(None of the listed exceptions applied in this case)

Circumstances

Genesis' HLY U4 was dispatched and generating 250MW. Shortly before the start of a new trading period HLY U4's Induced Draft (ID) fan group tripped and the unit automatically started ramping down (runback). After two minutes into the new trading period, HLY U4 had reached an output level of 140MW.

Genesis' trader notified the system operator of the runback, that the ID fan group would be reset, and that the unit would soon ramp back up. However, Genesis' trader decided not to submit a revised offer and claim a bona fide physical reason. As a result, the system operator did not manually constrain HLY U4's output because the Genesis trader did not advise the system operator of a bona fide reason.

At the beginning of the trading period, the system operator's market system detected that HLY U4 was not generating as dispatched, and tried to bring HLY U4 back up to 250MW. To achieve this, the market system sent an automatic dispatch instruction based on the offered ramp rate. Around 15 minutes later, after Genesis had stabilised the unit and reset the ID fan group, HLY U4 began ramping up back to 250MW.

At around 20 minutes into the trading period, Genesis contacted the system operator and advised that HLY U4's capability should be changed from 250MW to 240MW for the rest of that

trading period, and claimed a bona fide physical reason. At the same time, Genesis submitted reoffers for HLY U4 for 240MW for the subsequent trading periods. HLY U4 ramped up and reached its 240MW dispatch level about 20 minutes later.

As a result, for more than 20 minutes, HLY U4 delivered 110MW less than its dispatch instruction.

Analysis

The Code does not require a generator to claim a bona fide physical reason in these circumstances (unless the generator is revising an offer). However, by not claiming a bona fide, Genesis caused a moderate market and security impact. If Genesis had claimed a bona fide physical reason for not following the dispatch instruction, the system operator would have manually constrained HLY U4, and sent Genesis a new dispatch instruction which would have reflected HLY U4's actual output. This would have also meant that the system operator would have dispatched up the marginal generator to cover the shortage of generation.

This event had the potential for a serious market and security impact. The shortage of 110MW was covered by the frequency keeping stations that were paid at a significantly higher constrained on price than the marginal generator would have been paid. The shortage of 110MW moved the frequency keeping stations to the top end of their frequency-keeping band, limiting their capacity to provide frequency keeping services and support in case of an under-frequency event.

Steps taken to prevent recurrence

As a result of this event, Genesis issued a guidance note advising its traders in the event of a runback:

- a bona fide must be claimed for the current trading period
- the system operator must be advised of the post-runback MW
- a bona fide claim should also be considered for the subsequent trading period/s depending on the circumstances.

The guidance note further advises that, in the case of a runback event extending into the next trading period, traders are to submit a revised offer prior to the end of the current trading period.

Compliance Committee decision

The Compliance Committee decided to decline to take action on the breach of clause 13.82 of the Code and issued a warning letter.

Lessons learned

There are regular cases where, following certain events, traders and operators delay claiming a bona fide and uploading a revised offer in anticipation of a quick return to normal production. These cases are common with thermal, geothermal and co-generation plants due to the specifics of their pre-start preparations and ramping limitations.

The correct course of action includes assessment of:

- the level of discrepancy from the dispatch

- the possible time required to return to pre-event levels
- the time left to the beginning of the next trading period.

It is not unusual that the factors that cause events also prevent units from a quick return to pre-event levels. The Authority recommends claiming a bona fide and after that uploading, if required, a revised offer for the following trading period(s).

This course of action will allow the system operator to maintain system security and issue the most economic dispatch, without incurring excess payments for frequency keeping and constrained on generation.