

GUIDELINES FOR DISPATCH OF NSCAS

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Henry Gorniak
Senior Manager Power System Operations

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Contents

1	INTRODUCTION	5
2	PURPOSE	5
3	APPLICATION	5
4	LEGAL AND REGULATORY FRAMEWORK	5
5	RELATED POLICIES AND PROCEDURES	5
6	NETWORK SUPPORT AND CONTROL ANCILLARY SERVICE	5
6.1	DETERMINING THE REQUIREMENT FOR <i>NSCAS</i>	6
6.2	NETWORK LOADING ANCILLARY SERVICE (NLAS).....	6
6.3	TRANSIENT AND OSCILLATORY STABILITY ANCILLARY SERVICE (TOSAS)	6
6.4	VOLTAGE CONTROL ANCILLARY SERVICE (VCAS)	6
7	RESPONSIBILITIES	6
8	DISPATCH INSTRUCTIONS	7

GLOSSARY

- (a) In this document, a word or phrase *in this style* has the same meaning as given to that term in the NER.
- (b) In this document, capitalised words or phrases or acronyms have the meaning set out opposite those words, phrases, or acronyms in the table below.
- (c) Unless the context otherwise requires, this document will be interpreted in accordance with Schedule 2 of the *National Electricity Rules*.

TERM	MEANING
EMS	Energy Management System
NEMDE	National Electricity Market Dispatch Engine
NER	National Electricity Rules
NLAS	Network Loading Ancillary Service, as that term is defined in the <i>NSCAS Description</i>
NMAS	Non Market Ancillary Service
NSCAS	<i>Network Support and Control Ancillary Services</i>
NSCAS Description	The description referred to in clause 3.11.4 (a1) of the NER.
SOMMS	System Outlook for the Market Management System
TNSP	<i>Transmission Network Service Provider</i>
TOSAS	Transient and Oscillatory Stability Ancillary Service, as that term is defined in the <i>NSCAS Description</i>
VCAS	Voltage Control Ancillary Service, as that term is defined in the <i>NSCAS Description</i>

1 Introduction

- (a) These Guidelines for the Dispatch of Network Support and Control Ancillary Services (NSCAS) (**Guidelines**) are made in accordance with clause 3.11.6(d) of the National Electricity Rules (**NER**).
- (b) These Guidelines commence on 5 April 2012.
- (c) These Guidelines may only be amended in accordance with clause 3.11.6(e) of the NER.
- (d) AEMO may make minor and administrative amendments to these Guidelines without complying with the *Rules consultation procedures* in accordance with clause 3.11.6(f) of the NER.
- (e) If there is any inconsistency between these Guidelines and the NER, the NER will prevail to the extent of that inconsistency.

2 Purpose

These Guidelines support the procedures developed by AEMO for *dispatching NSCAS*.

3 Application

These Guidelines apply to:

- AEMO; and
- *Transmission Network Service Providers (TNSPs)*

4 Legal and Regulatory Framework

Clause 3.11.6(d) of the NER requires AEMO to develop and publish guidelines for the *dispatch* of NSCAS to support the procedures developed under clause 3.11.6(a1)(1).

The procedures required under clause 3.11.6(a1)(1) of the NER are required for the *dispatch* of each type of *non-market ancillary service*.

5 Related Policies and Procedures

- NSCAS Description
- NSCAS Quantity Procedure
- NSCAS Tender Guidelines

6 Network Support and Control Ancillary Service

There are three types of NSCAS:

1. Network Loading Ancillary Service (**NLAS**)
2. Voltage Control Ancillary Service (**VCAS**)
3. Transient and Oscillatory Stability Ancillary Service (**TOSAS**)

NSCAS is *dispatched* pre-emptively on the assumption that a *credible contingency event* could occur at any time. NSCAS will be dispatched in merit order based on the lowest enabling prices.

6.1 Determining the Requirement for NSCAS

AEMO will use network analysis applications, EMS Contingency Analysis (CA) or violating constraints to determine the requirement for NSCAS for system security.

AEMO can also apply a market benefit test for the dispatch of a NSCAS. This will be done by assessing the impact of the service on the objective function by utilising the marginal value of the relevant binding constraint. If the market benefit is greater than the enabling cost of the service the NSCAS may be enabled.

Pre-dispatch and dispatch results will be utilised to assess the requirement.

Benefitting regions will be identified for the purposes of cost recovery.

6.2 Network Loading Ancillary Service (NLAS)

The requirement for NLAS needs to be identified in sufficient lead time to allow providers time to enable the appropriate service. The use of *network* loading will be limited to those *network* elements for which a feasible NLAS exists.

6.3 Transient and Oscillatory Stability Ancillary Service (TOSAS)

The requirement for TOSAS needs to be identified in sufficient lead time to allow providers time to enable the appropriate service.

Clause S5.1a.3 of the NER requires that the *power system* should remain in *synchronism* and remain stable following any *credible contingency event*. In parts of the *network* this requirement can determine the maximum *active power* flow that is acceptable into or out of a *transmission network*. Increasing the transient stability limit can allow increased *active power* transfers into or out of the *transmission network*.

6.4 Voltage Control Ancillary Service (VCAS)

AEMO's basic approach to *voltage* control is as follows:

- Use network analysis applications to determine reactive requirement.
- Use *transmission elements* (*static VAR compensators, shunt capacitors, shunt reactors*) as required.
- Use online *generating units* for *reactive power* support to the full extent of their *performance standards*.
- If further *reactive power* is required for system security, or the *reactive power* requirement can be reduced, consider *dispatching NSCAS* as per section 6.1.

7 Responsibilities

AEMO is responsible for:

- determining the *dispatch* requirements for NSCAS based on *power system* conditions;
- issuing *dispatch* instructions to:
 - a provider of NSCAS with whom AEMO has an *ancillary services agreement* in accordance with that *ancillary services agreement*; and
 - a TNSP in relation to the provision of NSCAS provided to the TNSP under any *connection agreement* or *network support agreement*.

TNSPs are responsible for:

- providing details of any *NSCAS* they have acquired under contract to *AEMO*;
- ensuring that *AEMO* is advised at all times of the availability and capability of any *NSCAS* they have acquired; and
- complying with any *dispatch* instruction issued by *AEMO*.

8 Dispatch Instructions

The following dispatch instructions are for the *NSCAS* acquired by *AEMO*.

The dispatch of *NSCAS* acquired by *Network Service Providers* will be dependent on the procedure developed by the Network Service Provider. This procedure will be developed in consultation with *AEMO* as per clause 4.3.4 (1) in the Rules.

Confirmation of availability will be established prior to any instruction being issued. The requirement for *NSCAS* will be notified by telephone to the relevant provider via the normal operational contact and then a *dispatch* instruction will be issued using the SOMMS interface.

Each manual *dispatch* instruction for *NSCAS* will include the following details:

- Time the *dispatched* service level is changed;
- Types of *NSCAS* to be *dispatched*;
- Amount of *NSCAS* required (if applicable);
- Mode of operation, if applicable;
- The *region/s* that benefits; and
- The reason service is required.