ZYRA E RREGULLATORIT PËR ENERGJI
REGULATORNI URED ZA ENERGIJU
ENERGY REGULATORY OFFICE

AMENDED ITEMS OF THE OPERATIONS CODE

February 2015

Approved amendments to the **Grid Code – Operations Code**

Article 5.5.3.4 has been**:**

5.5.3.4 In the event of the frequency rising above 50.50 Hz the emergency actions detailed in Appendix 2 to this contingency planning code will take place.

Table 1 – Actions for a low system frequency

Frequency	**Action**
>49.80 Hz	Normal operational limit
49.80 Hz	Start of primary load frequency control
49.75 Hz	Personnel alerted and activation of generation capacities not yet activated
49.50 Hz	Activation of the additional measures for load-frequency control like e.g. demand control
49.20 Hz	First stage of Instantaneous under frequency **load shedding**
48.80 Hz	Second stage of Instantaneous under frequency **load shedding**
48.40 Hz	Third stage of Instantaneous under frequency **load shedding**
48.00 Hz	Fourth stage of Instantaneous under frequency **load shedding**
47.50 Hz	Disconnection of the **power plants** from the **system**
	TOTAL **SYSTEM** COLLAPSE

Table 2 – Actions for a high system frequency

Frequency	**Action**
< 50.20 Hz	Normal operational limit
50.20 Hz	Start of primary load frequency control

50.50 Hz	Manually lower **generating unit** outputs
51.50 Hz	Manually start to shutdown **generating units**.

Amended to:

5.5.3.4 In the event of the frequency rising above 50.50 Hz the emergency actions detailed in Table 2 to this contingency planning code will take place.

Table 1 – Actions for a low system frequency

Frequency	**Action**
>**49.98** Hz	Normal operational limit **(activation of primary control of frequency accorded)**
49.80 Hz	**Complete activation of the reserve of primary control of frequency accorded**
49.75 Hz	Personnel alerted and activation of generation capacities not yet activated
49.50 Hz	Activation of the additional measures for load-frequency control like e.g. demand control
49.00 Hz	First stage of Instantaneous underfrequency **load shedding**
48.80 Hz	Second stage of Instantaneous underfrequency **load shedding**
48.40 Hz	Third stage of Instantaneous underfrequency **load shedding**
48.00 Hz	Fourth stage of Instantaneous underfrequency **load shedding**
47.50 Hz	Disconnection of the **power plants** from the **system**
	TOTAL **SYSTEM** COLLAPSE

Appendix 2 – Actions for a high system frequency

Frequency	**Action**
< 50.20 Hz	Normal operational limit **(>50.02 Hz activation of primary control of frequency**
50.20 Hz	**Complete activation of the reserve of primary control of frequency accorded**
50.50 Hz	Manually lower generating unit outputs
51.50 Hz	Manually start to shutdown generating units.

Article 6.11 has been**:**

6.11 The details of the under frequency protection scheme are fully covered in the contingency planning code but in essence a total of around 55% of the total load is disconnected in four stages from 49.00 Hz to 48.00Hz, according to the table[1] below:

	Stage 1 (49.2 Hz)	Stage 2 (48.8 Hz)	Stage 3 (48.4 Hz)	Stage 4 (48.0 Hz)
Single stage load reduction (%)	10	15	15	15
Total Load reduction (%)	10	25	40	55

Amended to:

	Stage 1 (49.0 Hz)	Stage 2 (48.8 Hz)	Stage 3 (48.4 Hz)	Stage 4 (48.0 Hz)
Single stage load reduction (%)	**10**	**15**	**15**	**15**
Total Load reduction (%)	**10**	**25**	**40**	**55**

In addition to these there were made also some minor amendments such as: linguistic improvements and text adjustments.

[1] These values derive from the agreement between SEE TSOs. This agreement also specifies that after Stage 2 each power system should decide independently on disconnection from the regional interconnection.

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