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Reg. No. 1606 of 16 December 2002: Regulations relating to contingency planning in the power supply system

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Regulations relating to contingency planning in the power supply system

Chapter 1. Introductory provisions

Section 1-1. Contingency planning concept

All units of the Power Supply Preparedness Organisation (PSPO) shall implement a comprehensive contingency planning concept. The concept shall optimise prevention and handling of all extraordinary situations that can harm or hinder the generation, transmission and distribution of electrical power. The concept shall be integrated into ordinary activities.

The contingency planning concept shall consist of the following main phases:

- a) Analysing threats and risks,
- b) implementing protective measures,
- c) planning and organising in order to be able to handle extraordinary situations,
- d) handling extraordinary situations and restoring functionality, and
- e) evaluating exercises and events.

Section 1-2. Quality system

All PSPO units shall have a quality system that documents that the requirements in these regulations have been complied with. The system shall contain information and documentation necessary for carrying out supervisory activities. The system shall reflect actual conditions and it shall be possible to verify this.

Section 1-3. Risk and vulnerability analysis

All PSPO units shall have updated risk and vulnerability analyses to identify the risk potential of operations and the measures that effectively comply with the requirements of these regulations.

Section 1-4. Contingency plan

All PSPO units shall have an updated and functional contingency plan. The contingency plan shall, *inter alia*, include preparations and measures that may be necessary to implement in the event of accidents, damage, rationing and other extraordinary situations that may affect power supply operations and safety. The contingency plan shall be coordinated with affected authorities and other relevant actors.

Section 1-5. Exercises

All PSPO units shall carry out exercises with a content, scope and frequency permitting the unit to develop and maintain the competency that will enable it to discharge the duties it may face.

Chapter 2. The Power Supply Preparedness Organisation (PSPO)

Section 2-1. Duties

The PSPO shall prepare, establish and maintain a structure giving all relevant levels in the power supply system tasks and responsibilities in order to efficiently handle extraordinary situations in the power supply system and appurtenant watercourse structures.

Section 2-2. Organisation

The PSPO shall include all of the units undertaking production with appurtenant watercourse regulation, transmission and distribution of electrical power and district heating pursuant to the Energy Act. The Norwegian Water Resources and Energy Directorate may decide that undertakings that supply goods, perform services or other parties that may have a bearing on power supply system operation and safety shall be included in the PSPO.

The PSPO shall be organised as follows:

- a) The Norwegian Power Supply System's Central Command shall consist of the contingency planning authority and system operator,
- b) the Norwegian Power Supply System's Regional Managers shall be appointed from the system operator,
- c) the Norwegian Power Supply System's District Managers shall be appointed from PSPO units, and
- d) other PSPO units.

Section 2-3. Responsibilities and authority

Heads of PSPO units shall be responsible for contingency planning. The unit shall appoint a contingency planning head. The head of contingency planning shall ensure necessary planning and performance of contingency work, including establishing and maintaining contacts with authorities and relevant PSPO units.

All PSPO units shall have a contingency planning coordinator. The contingency planning coordinator is the unit's administrative liaison to the Norwegian Water Resources and Energy Directorate.

Section 2-4. *Obligation to follow the contingency planning authority's orders*

All PSPO units are obliged to comply with the orders issued by the contingency planning authority.

Chapter 3. Resources

Section 3-1. *Personnel*

All PSPO units should be able to meet personnel needs required for maintaining operations in extraordinary situations. To achieve this there shall be a plan covering own personnel, contract personnel and any possible need to be supplied personnel from the employment service.

Section 3-2. *Competency*

All PSPO units shall have personnel possessing the competency required in various functions in order to be able to carry out their duties in a safe and efficient manner in connection with accidents, damage and other extraordinary situations.

Section 3-3. *Exemption schemes*

Following an application from a PSPO unit, personnel who are important for maintaining power supply operations during war, may receive a deferment or exemption for serving in the Norwegian Defence in the event of mobilisation. Following an application from a PSPO unit, these personnel may also be exempted for service in the civil defence force and police reserves.

PSPO personnel who have been given a deferment or exemption for other contingency service shall be registered by the use of civilian war service cards. PSPO personnel shall be equipped with personal equipment.

PSPO service involves service obligations for individuals during exercises and mobilisation on par with other service in the contingency bodies of the Norwegian Total Defence.

Section 3-4. *Operations*

All PSPO units shall in extraordinary situations be able to efficiently operate the power supply installations and the part of the power supply system for which the unit is responsible. The unit shall plan and establish an organisation with the competency, perseverance and resources to carry out the duties this requires in a safe and efficient manner.

Power supply installations, equipment and other resources of significance for operation and safety shall be kept in proper order. This equipment and the resources shall be available to the unit.

Section 3-5. *Restoration of functions*

All PSPO units shall at short notice be able to obtain the necessary number of suitable and competent persons to restore necessary functions at the power supply installations and the part of the power supply system for which the unit is responsible.

The unit shall have the necessary overview of and access to spare parts, repair equipment and other resources needed to carry out these activities in a safe and efficient manner. Spare parts and other necessary resources for restoration of function shall be kept in proper order and ready for use.

The unit shall be able to document the power supply installations and the part of the power supply system for which it is responsible, including priority customers, disconnectable loads, grid connection diagrams and bottlenecks.

Section 3-6. *Transport*

All PSPO units shall have sufficient transport preparedness to be able to handle extraordinary situations, and the ability to quickly restore function. This covers means of transport with necessary equipment and people who can handle them.

In regard to the PSPO units' means of transport and private means of transport belonging to power supply system personnel for which there is a service-related need, applications shall be made if possible to exempt them from prearranged requisitioning to the Norwegian Defence etc.

Section 3-7. *Information*

All PSPO units shall have an information plan and efficient information preparedness in extraordinary situations. These activities shall, *inter alia*, include information communicated internally in the unit, to affected authorities, the public and media, and advice and instructions to customers.

Section 3-8. *Communications*

All PSPO units shall have internal and external communications preparedness for daily operations, handling of extraordinary situations and the ability to quickly restore necessary management, operations and safety functions.

Chapter 4. Security

Section 4-1. *Responsibilities and organisation*

The head of PSPO units is responsible for security and shall in that respect establish and follow up the organising of security, routines and instructions.

Section 4-2. *Personnel control*

Persons who may gain access to information that is classified pursuant to Act No. 10 of 20 March 1998 relating to protective security services (the Security Act), shall have a security clearance and be authorised as needed. Authorisation for RESTRICTED may take place without prior security clearance.

Security clearance and authorisation shall be carried out pursuant to provisions laid down in and pursuant to the Security Act.

Section 4-3. *Procurements in the power supply system*

Suppliers who in connection with assignments for the power supply system may gain access to sensitive information, shall sign a security agreement with the Norwegian Water Resources and Energy Directorate or relevant PSPO unit.

In the event of assignments by which the supplier may gain access to classified information, the procurement shall be carried out in accordance with provisions laid down in and pursuant to the Security Act.

Section 4-4. Limited call for tenders

A call for tenders shall be limited when it is necessary to prevent classified or other sensitive information from becoming publicly available through the tender documents. This applies, *inter alia*, to sensitive objects pursuant to the Security Act and sensitive information pursuant to section 6-2 of these regulations.

Section 4-5. Access control

All power supply installations shall be protected against access by unauthorised persons. This also applies to other buildings of significance to the management and operation of the power supply system. In addition, operation control centres with associated equipment shall be defined as separate access control security zones.

Section 4-6. Restrictions on visits

All operation control centres in classified operational control systems, and all power supply installations classified as Class 3 pursuant to section 5-3 of these regulations, shall have restrictions on visits. The Norwegian Water Resources and Energy Directorate may decide that Class 2 power supply installations shall also have restrictions on visits.

At installations subject to restrictions on visits:

- a) Visitors shall follow a set defined route,
- b) visitors shall be accompanied at all times by an experienced and responsible representative of the owner of the installation,
- c) no information regarding sensitive matters shall be provided,
- d) no detailed information shall be provided about the installation's design, operation or similar conditions,
- e) photography shall be prohibited unless a special permit has been obtained from the owner of the installation.

On-site studies and trainee service at installations subject to restrictions on visits may be performed by Norwegian citizens. On application, the Norwegian Water Resources and Energy Directorate may grant permission for on-site studies and trainee service by foreign nationals.

Owners of installations subject to restrictions on visits shall prepare instructions for visits.

Chapter 5. Security measures

Section 5-1. Duty of security

All installations covered by section 6-3 of the Energy Act Regulations shall be protected against undesirable events and actions.

Section 5-2. *Duty of notification*

Owners of existing and planned power supply installations covered by section 6-3 of the Energy Act Regulations, cf. section 6-6 of the Energy Act, shall notify the Norwegian Water Resources and Energy Directorate well before work commences.

Such notifications regarding building, expansion, rebuilding etc. of installations, shall accompany the documents that are necessary for making decisions about security levels.

Section 5-3. *Classification*

The Norwegian Water Resources and Energy Directorate shall classify installations as described in section 6-3 of the Energy Act Regulations into three classes according to their importance for the nation's power supply system.

a) *Class 1*

Installations of lesser importance.

b) *Class 2*

Installations of importance to the maintenance of the power supply system at the county level or for operation of regional grids.

c) *Class 3*

Installations of importance for the power supply system in a part of the country, region or for operation of the central grid or for large population groups, important infrastructure or other special considerations.

Section 5-4. *Analysis*

On the basis of the Norwegian Water Resources and Energy Directorate's decision regarding classification, owners shall undertake their own risk and vulnerability analysis, and plan and build the installations and systems as specified in these regulations. The Norwegian Water Resources and Energy Directorate shall be informed of planned measures and when installation will be completed.

Section 5-5. *Security level*

Power supply installations shall according to their class meet the following security requirements:

a) *Class 1*

The installation can generally be built with simple security level requirements. It shall be possible to restore loss of function within reasonable time.

b) *Class 2*

The installation shall be built and equipped according to medium requirements regarding security. In extraordinary situations, loss of vital functions shall be limited and following any damage it shall be possible to restore the functionality of the installation within a reasonable amount of time.

The security level of the installation shall be a combination of, *inter alia*, the

following measures:

1. Undesirable events and actions shall be discovered quickly and handled by an efficient reaction pattern.
2. Physical performance and protection shall be at a level that limits loss of function and destruction.
3. Restoration of any loss of function shall take place within a reasonable amount of time.
4. Redundancy in the installation or power supply system.

The installation shall function independently of the power outages that may occur in ordinary power supply and foreseeable faults in its own power supply system.

It shall be possible to operate the installation locally with competent staff in extraordinary situations pursuant to the requirements in section 3-4 of these regulations.

c) *Class 3*

The installation shall be built and equipped according to high standards regarding security. Vital functions shall be maintained in extraordinary situations and quickly restored following any damage.

The security level of the installation shall be a combination of, *inter alia*, the following measures:

1. All undesirable events and actions shall be discovered immediately and handled by an efficient reaction pattern.
2. Physical performance and protection shall be at a level that prevents or forestalls loss of function and destruction.
3. Restoration of any loss of function shall take place immediately.
4. Redundancy in the installation or power supply system.

The installation shall function independently of ordinary power supply and faults in the installation's own power supply system. Function shall also be maintained in the event of unforeseeable and long-term power outages.

At the same time and within a reasonable amount of time, it shall be possible in extraordinary situations to operate all installations locally by competent staff pursuant to the requirements of section 3-4 of these regulations.

Section 5-6. Surveillance

Owners of power supply installations prioritised for surveillance in extraordinary situations shall assist in the planning and implementation of surveillance in cooperation with the police and armed forces.

Owners shall accordingly assist with:

- a) Identifying the installation's vital parts and general characteristics,
- b) procuring parts and carrying out other security measure to aid security guards, and

- c) facilitating exercises on the installation's site, including fenced-in high-voltage areas and the like.

Section 5-7. Inspections and maintenance

Owners of installation shall check that mandatory and implemented security measures such as equipment, parts, physical and electronic systems are present, function as designed and that necessary maintenance is carried out.

Chapter 6. Information security

Section 6-1. In general

All PSPO units shall regularly undertake a comprehensive evaluation of information security. Necessary measures and routines shall be established and maintained.

Information security in the power supply system shall include confidentiality, integrity and accessibility of information and resources. This shall apply to the following areas:

- a) Sensitive information about the power supply system that can be used to impede or harm the functions of the power supply system,
- b) all systems and units that safeguard important operational control functions, including both information processing and communication for, respectively, operational reliability, monitoring, control, maintenance and fault correction of power systems, installations and watercourse regulation for power generation,
- c) administrative and commercial systems that process sensitive information, or are of significance for the operation of the power supply system.

All PSPO units shall appoint an expert IT security manager. This person shall assist the unit leader in carrying out information security. IT systems shall be located so as to ensure the least possible possibilities for damage.

Section 6-2. Protection of information

Sensitive information about the power supply system shall not be made public.

Sensitive information covering the following areas shall be effectively shielded at all times from unauthorised persons:

- a) Operational control systems (overviews of system, security measures, vulnerability and the like),
- b) detailed overviews (power supply system, maps, tables and the like) of the central and regional grid system where the status of transformer outputs or power lines with voltage level and/or transmission capacity are stated,
- c) overviews of distribution grids that supply power to major military facilities and other contingency-related and socially vital activities,
- d) protective and security measures,
- e) contingency room/command posts,
- f) detailed analyses of vulnerability resulting from incurred damage,

g) overviews of spare parts depots and repair possibilities.

This shall include evaluating the information that is important or sensitive for operations and security. The location of sensitive information and the rightful users of this information shall be identified.

Efficient access control shall be established for this information so that only rightful users have access to information and resources. Communication shall be protected against bugging and manipulation by unauthorised persons. Security instructions shall be prepared and implemented and measures and routines shall be carried out to safeguard the aforementioned.

The Norwegian Water Resources and Energy Directorate may decide that information about the power supply system shall be classified and treated pursuant to the provisions of the Security Act.

Section 6-3. *Back-up copies*

Updated back-up copies shall exist at all times of information and software of importance to the operation and security of the power supply system. All necessary information and software in this respect shall be protected by remote storage of back-up copies.

Necessary documentation about the power system and installations saved in computer media shall also exist in hard copy. It shall be updated annually and stored in a safe place.

Section 6-4. *Special requirements for operational control systems*

Operational control systems include operation control centres, communications systems and other systems and components that safeguard operational control functions.

a) Plans and documentation

All PSPO units shall have updated documentation at all times of existing and planned operational control systems.

b) Access control

All operational control systems shall have control schemes providing effective internal and external protection against unauthorised physical and electronic access and dissemination of malicious software and the like.

c) System security

Class 2 operational control systems shall be built with redundancy up to the individual Class 2 and 3 power supply installations so that important functions are not lost due to faults or a single event.

Class 3 operational control systems shall be built with full redundancy in the entire system up to the individual Class 2 and 3 power supply installations, and to other relevant Class 2 and 3 operational control systems, so that a fault or single event cannot put important functions out of service. The redundancy shall be built with physical and electronic separation. The operational control system shall be built so robustly that function is also maintained during major and prolonged stresses. Class 3 operational control systems shall function independently of public networks

and telecommunications services.

Class 2 and 3 operational control systems and other communication of importance to the operation and security of the power supply system shall have a minimum of two physically separated and independent communication paths to Class 2 and 3 power supply installations.

d) *EMP and EMI protection*

Operation control centres, other control equipment and Class 2 and 3 communication installations shall be protected against electromagnetic pulse (EMP) and electromagnetic interference (EMI).

e) *Fire safety*

Automatic fire alarms shall be installed in all rooms in the portion of the building where the operation control centre and associated equipment is installed. The system shall also notify any personnel on standby duty at home.

f) *Contingency room*

All operation control centres in Class 3 control systems shall have contingency rooms for management and operations personnel.

The Norwegian Water Resources and Energy Directorate may decide that operation control centres in Class 1 and 2 control systems shall have contingency rooms.

Contingency rooms shall serve as emergency operation control centres and support other management functions in extraordinary situations, and provide protection for personnel.

Section 6-5. *Mobile radio networks - operations radio*

All PSPO units dependent on reliable mobile communication for operations, security or restoration of function shall have access to a mobile telecommunications system.

This telecommunications system shall:

- a) Have a sufficient degree of coverage for the installations and operation of the power supply system,
- b) function independently of malfunctions in public networks,
- c) have sufficient emergency power in the event of extensive or prolonged power failures,
- d) have necessary functionality with, *inter alia*, direct device-to-device communication, group sending and joint call, and
- e) be able to function as reserve communication should other communication fail.

Section 6-6. *Relay communications - protection of power supply system*

Communications-based protection systems in the central and regional grid system shall have reliable and secure communications that work unaffected by faults in the power supply system, and ensure the transmission of necessary signals and messages to relevant operation control centres.

Protection systems shall ensure speedy and selective disconnection of units with function failures to limit the consequences of faults in the power supply system.

Chapter 7. Other provisions

Section 7-1. Reporting

All PSPO units shall submit reports of extraordinary situations to the Norwegian Water Resources and Energy Directorate, including illegal photographing, entry, theft, vandalism and sabotage or attempts at such activities, together with breakdowns, mishaps and accidents of significance to operations and security.

Section 7-2. Grants for security measures and procurement of spare parts

On application, the Norwegian Water Resources and Energy Directorate may provide grants for security measures and procurement of spare parts.

Section 7-3. Appeal of decisions

Decisions made by the Norwegian Water Resources and Energy Directorate may be appealed to the Ministry. The appeal shall be addressed to the Ministry and submitted to the Norwegian Water Resources and Energy Directorate for preliminary processing.

Section 7-4. Exemptions

The Norwegian Water Resources and Energy Directorate may in special circumstances grant exemptions from these regulations.

Section 7-5. Entry into force

These regulations shall enter into force on 1 January 2003.