

Public version

Risk-preparedness plan of the Czech Republic

pursuant to Articles 10, 11 and 12 of Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC

(Current as of: January 2022)

Na Františku 32, 110 15 Praha 1
Czech Republic

+420 224 851 111

posta@mpo.cz, www.mpo.cz



Contents

Risk-preparedness plan of the Czech Republic	1
Contents	2
Definition of basic terms and abbreviations	5
1 INTRODUCTION	7
2 GENERAL INFORMATION	8
2.1 Basic information	8
2.2 Member States in the region	8
3 SUMMARY OF ELECTRICITY CRISIS SCENARIOS	9
3.1 Regional electricity crises scenarios relevant for the Czech Republic.....	9
3.2 National scenarios for electricity crisis	9
4 ROLES AND RESPONSIBILITIES OF THE COMPETENT AUTHORITY	9
4.1 Other relevant entities.....	10
5 CRISIS COORDINATOR	13
5.1 Composition of the CSCC	13
5.2 Distribution of competence within CSCC	13
5.3 Contact point of the CSCC	14
5.4 Contacts to the CSCC members	14
6 PROCEDURES AND MEASURES IN THE ELECTRICITY CRISIS.....	16
6.1 National procedures and measures	16
6.2 Basic Procedures in the Electricity Crisis	17
6.3 Uniform flow of information and instructions in the frame of the operational management of the TS and DS	18
6.4 Scenario-specific preventive and preparatory measures.....	20
6.5 Measures to avoid spreading of system failures.....	20

6.6	Measures to mitigate electricity crises on the supply and demand side	22
	6.6.1 Restoration of market activities	22
	6.6.2 TSO Guidelines - SM/76 Procedures for Declaring the State of Emergency	23
	6.6.3 DSO's procedures when declaring the state of emergency for a specific area or its part 24	
6.7	Measures to restore the system	24
6.8	Framework for manual reduction of consumption and switching off customers	25
	6.8.1 Curtailment of electricity consumption.....	25
	6.8.2 Customers with special protection against curtailment and disconnection.....	26
	6.8.3 Switching off electricity consumption.....	27
6.9	Mechanisms to inform the public of the electricity crisis	27
	6.9.1 Basic information to inform the public is provided through the following steps:	27
6.10	Additional measures on national, regional and municipal levels	30
	6.10.1 Additional measures at the national level within the state competence.....	31
	6.10.2 Additional measures at the regional level	32
	6.10.3 Additional measures at the municipal level.....	33
6.11	Regional and bilateral procedures and measures.....	35
	6.11.1 Mechanisms for cooperation between the TSOs on the regional level.....	35
	6.11.2 Mechanisms for cooperation between EU Member States on the regional level.....	35
	6.11.3 Regional and bilateral arrangements between TSOs, including all necessary technical, legal and financial arrangements for the implementation of the coordinated measures	35
	6.11.4 Regional and bilateral arrangements between the EU Member States, including all necessary technical, legal and financial arrangements for the implementation of the coordinated measures	35
7	CONSULTATIONS OF STAKEHOLDERS	37
8	EMERGENCY PREPAREDNESS CHECKS	38
8.1	Time Schedule.....	38
8.2	Agreed procedures and entities involved	38

8.3	Regional and bilateral coordination	38
8.4	Plan Update	38



Definition of basic terms and abbreviations

aFRR	automatic Frequency Restoration Reserves
AnS	Ancillary Services
CA	Competent Authority
CI	Critical infrastructure
CMT	Crisis Management Team
Core	Region for the coordinated capacity calculation between zones established on the basis of the decision of the Agency for the Cooperation of European Regulators (ACER) number 06/2016
Coreso	Company providing operational and security agenda and coordination between TSOs and performing the function of RSC/RCC
CPP-CI	Crisis Preparedness Plan of a CI facility
CSCC	Central Staff of the Crisis Coordinator
ČEPS	ČEPS, a.s. - Transmission System Operator pursuant to Act No. 458/2000 Coll.
DS	Distribution system operated by DSO (Distribution System Operator)
DSO	Distribution system operator ¹
DSR	Demand side response
EC	European Commission
ENTSO-E	the European Network of Transmission System Operators for Electricity
EP TSO	Emergency plan of the TS operator
ERÚ	(Czech) Energy Regulatory Office
GCC	Grid Control Cooperation
mFRR	manual Frequency Restoration reserve
MMS	Business portal of ČEPS
MPO	Ministry of Industry and Trade of the Czech Republic
NC ER	Commission Regulation (EU) 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration ²
OTE	OTE, a.s., market operator
PS	Power system

¹ ČEZ Distribuce, a. s., EG.D, a. s., PREdistribuce, a. s.

² On the grounds of NC ER, the TSO prepared emergency and restoration plans, see PI 620-14 and 620-22 of ČEPS

PSS	Power System Stabilizers
RDSO	Grid code of the Distribution System Operation
RECS	Regional Electricity Crisis Scenarios ³
RPP	Risk-Preparedness Plans
RPR	Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC
RSC/RCC	Regional Security Coordinator/Regional Coordination Centre
RTSO	Grid Code of the Transmission System Operation
SM	Internal guidelines of ČEPS ⁴
SO GL	Commission Regulation (EU) 2017/1485 of 02 August 2017 establishing a guideline on electricity transmission system operation ⁵
TS	Transmission system
TSCNET	The company providing operational and safety services and coordination between TSOs performing the function of RSC/RCC
TSO	Transmission System Operator (ČEPS, a. s.)
TSFO	Technical System for Physical Protection
vDR	Decree No. 79/2010 Coll., on Dispatcher Management of the Power System and Data Transmission for Dispatcher Management
vSN	Decree No 80/2010 Coll., On the State of Emergency in the Electricity Sector and on the Content of the Emergency Plan PI Operational Instructions ⁶

³ ENTSO-E – RECS under Article 6 of the RPR, under ENTSO-E methodology: Methodology for Identifying RECS under Article 5 of RPR link.

⁴ Internal Guideline SM/76/2020 Procedures for declaring and ending emergencies according to the requirements of the Czech and EU legislation.

⁵ Based on SO GL, TSO prepared a security plan for the protection of critical infrastructure and CPP-CI, which also meets the requirements of Act No. 240/2000 Coll., On Crisis Management and on Amending Certain Laws.

⁶ For the following entities: TSO, DSO, ERÚ, OTE, producers and providers of ancillary services. PI 020-8 Unified flow of instructions and information in operational control of TS and DS, PI 420-12 Regulation of U and Q of the TS of the CR, PI 620-6 Frequency plan, PI 620-14 Emergency plan against the spread of system faults in the PS, PI 620- 22 System Recovery Plan, PI 620-23 Procedure for restoration of market activities at the end of “emergency prevention” or “the state of emergency”, PI 820-1 Shut-down Plan for the PS of the CR, PI 820-2 Regulatory Plan for the PS of the CR, PI 820-3 Restriction Plan for power generation from photovoltaic and wind power plants.

1 INTRODUCTION

This document is the risk-preparedness plan established pursuant to Articles 10, 11 and 12 and Annex 2 of the Regulation (EU) 2019/941 (hereinafter RPR).

Pursuant to provisions of RPR, a Competent Authority (CA) is responsible for establishing the risk-preparedness plan for the identified national scenarios according to Article 7 (or Article 6 - regional scenarios) of the RPR. The Ministry of Industry and Trade (MPO) has been designated as the Competent Authority in the Czech Republic

The plan provides information on national and regional (or cross-border) measures, definition of roles and responsibilities, communication tools, etc. in accordance with Articles 11 and 12 of the RPR.

The Risk-Preparedness Plan includes regional electricity crisis scenarios (hereinafter RECS) identified by ENTSO-E according to Article 6 of the RPR, national electricity crisis scenarios according to Article 7 of the RPR as well as management documentation and implementing regulations binding on TSOs, DSOs and other entities, adopted under Czech and EU legislation, which are confidential by virtue of Article 19 of the RPR. Confidentiality applies also to the information on contracts listed in Chapter 2.4.9 - Regional and Bilateral Procedures and Measures. Upon request, a Member State or an authority may provide a non-confidential summary of this information in accordance with Article 19 (1) of the RPR. Recipients of information pursuant to Article 19 (2) of the RPR are obliged to maintain the confidentiality of sensitive information. The procedures to be followed by TSOs and DSOs in cases of electricity crises are made available publicly in Grid Code of the Transmission System Operation (hereinafter RTSO⁷) and Grid code of the Distribution System Operation (hereinafter RDSO⁸) and also in the type plan of the MPO called *Narušení dodávek elektrické energie velkého rozsahu* (Large-scale disruption of electricity supplies) [link](#).

The risk-preparedness plan will be published on the website of the CA and the EC pursuant to provisions of Article 10 (7) of RPR by 5 January 2022 latest.

⁷ RTSO – Part V. Operational Safety and Quality at the TS Level and TS Code – Part VI. Dispatcher Control.

⁸ RDSO – chapter 4.4 Limiting consumption in emergency situations, chapter 5 Procedures for prevention and management of the state of emergency, chapter 6 Document for addressing emergency situations in DS.

2 GENERAL INFORMATION

Ministry of Industry and Trade is the Competent Authority of the Czech Republic responsible for Regulation (EU) 2019/941.

2.1 Basic information

Ministry of Industry and Trade

Na Františku 32

110 15 Prague 1

Czech Republic

2.2 Member States in the region

The Czech Republic is a part of the Core region.

In respect of the Czech Republic the following countries are relevant for the regional/bilateral cooperation: Slovakia, Poland, Germany, and Austria.



3 SUMMARY OF ELECTRICITY CRISIS SCENARIOS

3.1 Regional electricity crises scenarios relevant for the Czech Republic

In accordance with the provisions of Article 6 of the RPR, ENTSO-E identified electricity crisis scenarios. Relevant regional scenarios of energy crisis from the perspective of the Czech Republic are listed in Table 1. These scenarios take into account the risks in accordance with Article 5 of RPR. When identifying RECS according to the methodology described in Article 5 of the RPR, ENTSO-E worked closely with European TSOs and identified in total 31 scenarios - see the ENTSO-E document⁹. The national electricity crisis scenarios (see Chapter 2.2.2) of the Czech Republic are consistent with the regional scenarios identified by ENTSO-E in accordance with the provisions of Article 6 of the RPR, and they reflect the risks relevant from the point of view of the Czech Republic.

3.2 National scenarios for electricity crisis¹⁰

The Czech Republic national electricity crisis scenarios were identified pursuant to Article 7 of RPR in cooperation among the CA, TSO, ERÚ, and were consulted with relevant entities. These scenarios reflect risks stated in Article 5 of RPR and represent the most relevant scenarios from the Czech Republic point of view (having regard affected entities, electricity market participants, etc.). According to the RPR they are in consistent line with regional crisis scenarios identified by ENTSO-E (see 3.1.). There were in total twelve national electricity crisis scenarios identified. They are categorized and grouped according to the nature of the risk – cyberattacks, attacks on ICT infrastructure, physical attacks, extreme weather conditions, fuel shortages, health and social risks.

4 ROLES AND RESPONSIBILITIES OF THE COMPETENT AUTHORITY

Pursuant to provisions of Article 3 of RPR, the MPO has been determined as the CA. The CA bears the responsibility for meeting the requirements and tasks set by the RPR. At the same time, it may delegate operational tasks to other entities in the Czech Republic.

⁹ ENTSO-E report: Risk-preparedness regulation – identification of RECS

¹⁰ MPO document „Draft of national electricity crisis scenarios pursuant to Article 7 of Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC“

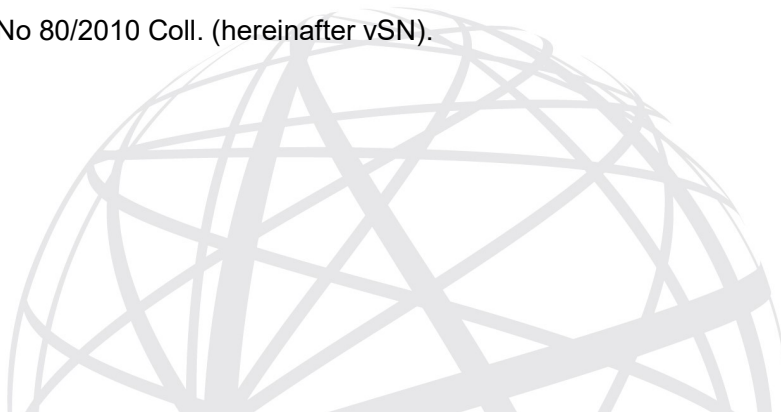
Competent Authority

- coordinates the identification of national scenarios of energy crisis and the preparation of the Risk-Preparedness Plans (hereinafter RPP) in the Czech Republic;
- is responsible for international agreements between Member States in accordance with Article 15 of the RPR;
- is responsible for early warning and declaration of an electricity crisis pursuant to provisions of Article 14 of RPR;
- monitors the crisis, evaluates all available information and informs relevant actors;
- ensures the fulfilment of obligations arising from international agreements by which the Czech Republic is bound or obligations arising from membership in international organizations;
- chairs and manages the Central Staff of the Crisis Coordinator (CSCC).

4.1 Other relevant entities

Transmission System Operator

- is a member of the CSCC;
- cooperates on drafting of the national electricity crisis scenarios according to the authorization granted by the CA and in compliance with provisions of Article 7 of the RPR;
- cooperates on drafting of the RPP in accordance with Articles 10, 11 and 12 of the RPR within the scope of the mandate granted by the CA;
- ensures reliable, safe operation and development of the CR's TS in accordance with § 24 of the Act No. 458/2000 Sb., on Business Conditions and Public Administration in the Energy Sectors and on Amending Certain Laws (hereinafter Energy Act), including the management of activities aiming at the prevention of a state of emergency, and in the event of emergency acts in accordance with § 54 of the Energy Act;
- informs the CA immediately about the need for early warning and declaration of an electricity crisis pursuant to provisions of Article 14 of the RPR;
- when eliminating the consequences of a state of emergency, the emergency plans of the TSO and DSOs are followed (vSN, Annex No. 4);
- cooperates with DSOs in accordance with the requirements of Decree No. 79/2010 Coll. (hereinafter vDŘ) and Decree No 80/2010 Coll. (hereinafter vSN).



Distribution System Operators

- are members of the CSCC;
- participate in consultation procedures according to the RPR and ensure reliable operation and development of the DS in accordance with § 25 of the Energy Act;
- manage activities aiming at the prevention of a state of emergency, and if there is the state of emergency declared in a certain part of the republic, they act in accordance with § 54 of the Energy Act;
- when eliminating the consequences of extraordinary situations and of the state of emergency, the emergency plans of distribution system operators are to be followed;
- cooperate with TSO in accordance with the requirements of vDŘ and vSN.

Electricity Producers

- follow the instructions of the TSO technical dispatching centre or the relevant DSO of the system to which the electricity generation plant is connected, namely in accordance with dispatching rules;
- provide support services to ensure the operation of the electricity system pursuant to § 23 of the Energy Act.

Market Operator

- is a member of the CSCC;
- Based on provisions of § 20a of the Energy Act the market operator performs, inter alia, the following tasks:
 - organizes a short-term electricity market and, in cooperation with TSO also a balancing market of regulatory energy,
 - evaluates deviations for the whole territory of the Czech Republic and forwards this evaluation to the TSO,
 - ensures and provides electricity market participants with the actual values of electricity supply and consumption and other necessary information.

Energy Regulatory Office

- is involved in the consultations regarding national electricity crisis scenarios and RPP according to the RPR (Articles 7 and 10), which are coordinated by the CA;
- performs the function of an administrative regulatory body pursuant to § 17 of the Energy Act and carries out, inter alia, the following tasks:
 - approves RTSO and RDSO for the entire power industry, which must contain the basic conditions for the use of the electricity system, operating regulations including maintenance rules, rules for the TS operation planning and development, emergency plans and emergency reserves, rules for forwarding of data and information necessary for reliable operation and development of the electricity system,

- in urgent cases, it decides on the imposition of the obligation to provide energy equipment necessary for the performance of the imposed obligation to supply power beyond the scope of the license, including the decision on easement,
- decides on the imposition of the obligation to supply power beyond the scope of the license,
- decides on granting, changing or revocation of the license.



5 CRISIS COORDINATOR

The CSCC is a body composed of the relevant national electricity and energy crisis managers, whose task is to act as a contact point and to coordinate the flow of information during the electricity crisis.

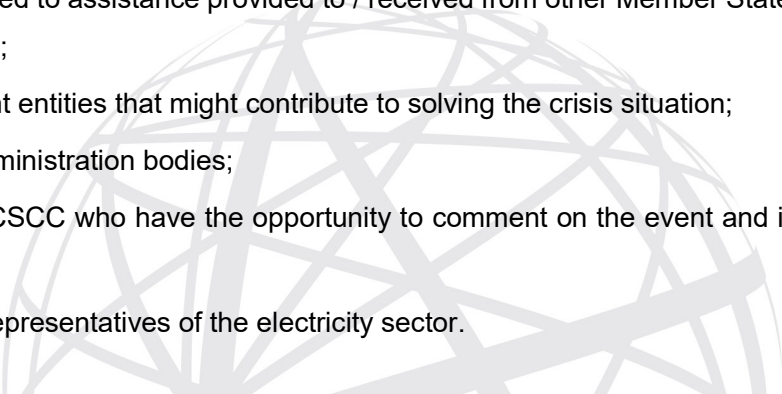
5.1 Composition of the CSCC

- Chairman to the CSCC, who is a representative of the MPO - Director of the Department of Electricity and Heating
- Representatives of ČEPS CMT
- Representatives of DSOs CMTs
- Representatives of the MPO (Director of the Department of Security and Crisis Management, Deputy Minister for the Energy Sector)
- OTE

The initial assessment of the situation is carried out by the ČEPS control centre. The identified and verified information is immediately forwarded to the chairman of the CSCC who decides to convene the CSCC meeting after consultation with representatives of the ČEPS Crisis Coordination Team. The CSCC members are called together by the CSCC chairman. The CSCC then acts as a contact point which intermediates and coordinates the flow of information. The technical solution to the crisis is the responsibility of the ČEPS.

5.2 Distribution of competence within CSCC

Competence of the MPO representatives:

- National/international cooperation;
 - External communication, inter alia, with competent authorities and crisis coordinators of relevant Member States;
 - Coordination of all actions related to assistance provided to / received from other Member States under the Regulation 2019/941;
 - Communication with all relevant entities that might contribute to solving the crisis situation;
 - Collaboration with the state administration bodies;
 - To inform all members of the CSCC who have the opportunity to comment on the event and its solution;
 - If necessary, to involve other representatives of the electricity sector.
- 

Competence of the representatives of ČEPS CMT

- To inform the CSCC immediately about the implementation of all measures and decisions that will limit the damage to an unavoidable minimum in the event of an electricity crisis;
- To inform the CSCC immediately about the approval or rejection of the basic dispositions for the mitigation of extraordinary situations, failures and accidents in the electricity system, which result in the electricity crisis.
- To keep the CSCC informed about the state of the crisis resolution by ČEPS, and its expected development.
- In the case of assistance provided to / received from other Member States under Regulation 2019/941, communication with the relevant TSOs of those Member States.

General competence of the CSCC

- consultancy and coordination activities,
- analysis and documentation of the situation, assessment of possible developments,
- determining the communication strategy needed to manage crises and setting internal rules,
- retrospective assessment of the causes of the crisis,
- it confirms the activation of measures of an international nature in accordance with related national and EU legislation.

In the event of a forecasted escalation of the crisis situation in the electricity sector of the Czech Republic, the director of the Security and Crisis Management Department of the MPO would convene the CMT of the Ministry, and in case of expected impact on all ministries, a proposal to convene the Central Crisis Staff would be made.

5.3 Contact point of the CSCC

The Ministry of Industry and Trade, Na Františku 32, 110 15 Prague 1,

5.4 Contacts to the CSCC members

Organisation	Name, function	Address
MPO	Department of Security and Crisis Management, Director	Ministry of Industry and Trade, Na Františku 32,

	Department of Power Engineering and Heating, Director	110 15 Prague 1 – Staré Město
ČEPS	Director of Security Section	ČEPS, a.s. Elektrárenská 774/2
	Supervisory Control Section, Director	101 52 Prague10
PREdi	Grid Operations Control Section, Manager	PREdistribuce, a.s. Svornosti 3199/19a 150 00 Prague5
ČEZdi	Company Security and Governance Department, manager	ČEZ Distribuce, a. s. Teplická 874/8
	DS Operations and Control Section, Director	405 49 Děčín
EG.D	Grid Operations Control, manager	EG.D, a.s. Špitálka 6 602 00 Brno
	Head of Cyber and Physical Security Control	EG.D, a.s. Lidická 1873/36 Černá Pole 602 00 Brno
OTE	Electricity Balance Department head	OTE, a.s. Sokolovská 192/79 186 00 Prague8 - Karlín

6 PROCEDURES AND MEASURES IN THE ELECTRICITY CRISIS

6.1 National procedures and measures

Procedures for declaring and ending a state of emergency in the electricity sector are provided for in the vSN and further specified in the TSO's internal guideline No. SM/76 and in the TSO's Emergency Plan. The state of emergency is declared by the CMT of the TSO¹¹.

There are different types of disruption to the electricity supply. According to RPR the electricity crisis is defined as *"a present or imminent situation in which there is a significant electricity shortage, as determined by the Member States and described in their risk-preparedness plans, or in which it is impossible to supply electricity to customers"*¹². Such a situation also means that a return to normal operation state cannot be expected in the short and medium term.

In case of an electricity crisis, electricity customers entitled to receive special protection against disconnection are specified in the national law, specifically in vSN., Annex I, II(12) (see chapter 6.8.2).

In the case of crisis prevention or crisis management, other actors, besides TSO, are involved and proceed according to their responsibilities and cooperate together.¹³ First, TSO and DSOs who are responsible for security of the power grid, second the Ministry and the government who are in charge of national coordination; and third, the municipalities (on the regional level), who are responsible for coordination on the local level, see the scheme of cooperation on Figure 1.

¹¹ The CMT of ČEPS has been established for the purpose of prevention and solution of emergency situations in connection with Energy Act Sb., on business conditions and public administration in the energy sectors and amending certain laws (the Energy Act), as amended, Decree of the MPO No. 80/2010 Sb., On the State of Emergency in the Electricity Sector and on the Content of the Emergency Plan, as amended, and other related acts and regulations aiming at the solution of crisis situations which may occur in the TS. ČEPS also addresses the measures to solve exceptional situations outside the TS, which can seriously endanger its functionality and reliability, fulfils the tasks related to declaration of the state of emergency, state of danger and state of war pursuant to Act No. 110/1998 Sb., On the Czech Republic's Security, as amended, and the state of crisis under Act No. 240/2000 Sb., on Crisis Management and on Amendments to certain acts (Act No. 240/2000 Coll., On Crisis Management and on Amending Certain Laws), as amended.

¹² EU 2019/941

¹³ See also: Type plan of large-scale electricity supply disruption issued by MPO.

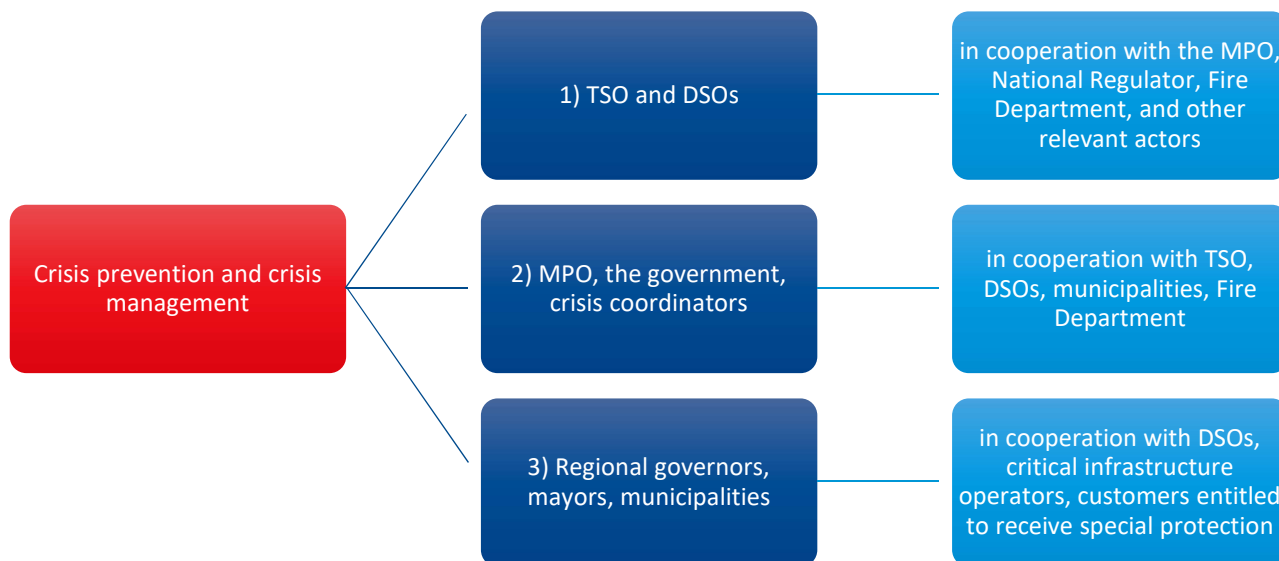


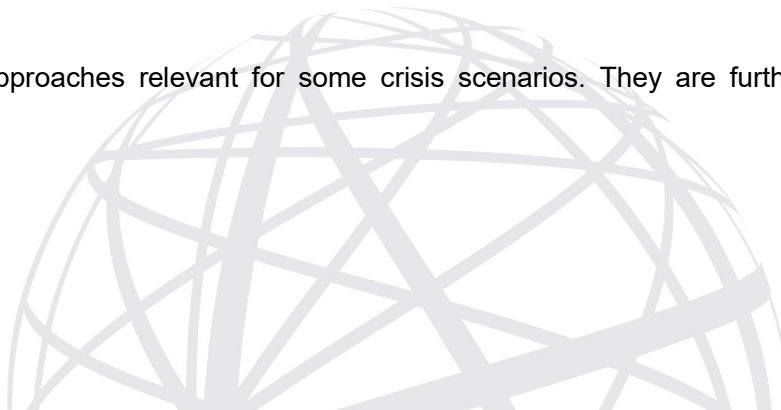
Figure 1 Scheme of cooperation in crisis prevention and management

6.2 Basic Procedures in the Electricity Crisis

Despite different potential crisis triggers (according to the scenarios) leading to an electricity crisis, the preventive and mitigating procedures and actions applied, comprise of similar or same steps aiming at crisis mitigation. These common steps are defined as follows:

- activation of crisis management bodies, including CSCC,
- monitoring and analysing of the situation and implementing appropriate crisis measures,
- providing means and resources for solving the electricity crisis,
- ensuring the supply of electricity to customers according to the determined shedding level from their backup sources (incl. refuelling),
- performing the necessary repairs of electrical equipment,
- restoration of electricity supply,
- securing of cross-border cooperation,
- analysing of the crisis situation causes and implementing measures to increase the resilience of the electricity system.

However, there are some specific approaches relevant for some crisis scenarios. They are further detailed in chapter 6.4.



6.3 Uniform flow of information and instructions in the frame of the operational management of the TS and DS

The information flow and communication within the operational control of the TS and DSs is described in the document *PI 020-8 Jednotný tok pokynů a informací při operativním řízení PS a DS* (Unified flow of instructions and information in the operational management of the TS and DSs). This document determines rules and principles of communication between the entities involved in the supervisory control of the Czech Republic's electricity system. For the needs of this PI, as required by the vDŘ, it supplements the decree vSN and NC ER. The flows of information are schematically shown in figure 1.



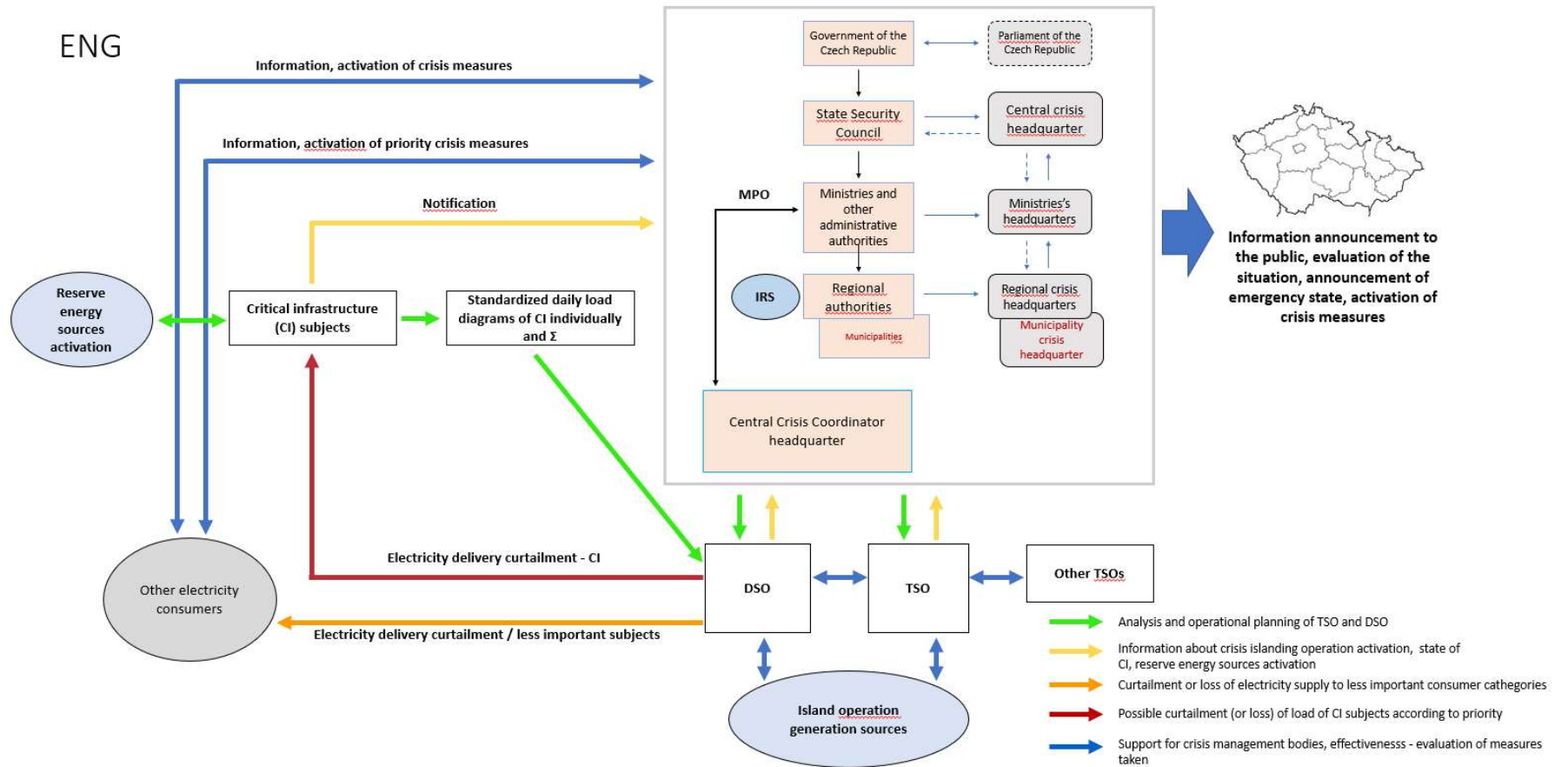


Figure 3 Links and communication between the entities

6.4 Scenario-specific preventive and preparatory measures

Early warning and electricity crisis declaration according to article 14 of RPR implies activation of CSCC and involvement of CMTs of TSO and DSOs. The objective of electricity crisis prevention, control and mitigation is to ensure electricity delivery or its restoration. It implies, that procedures and approaches applied are scenario independent, (i.e. regardless the initiating event/s). However, there might be some differences in preventive/mitigating actions dependent on specific situation. Those differences are described below in this chapter.

In order to prevent and prepare for potential electricity crisis TSO, DSOs and other electricity market participants in the Czech Republic shall do preventive actions.

6.5 Measures to avoid spreading of system failures

Basic steps and activities to avoid spreading of system failures are specified in the Defence Plan prepared in accordance with the NC ER. NC ER summarizes measures against the occurrence and spread of failures aiming at the reduction of the risk of collapse and leading to possible outage shortening; for more details see *PI 620-14 Plán obrany* (Defence Plan)¹⁴. The measures relate to both dispatching control (in real-time) and technical measures carried out automatically. The technical measures are provided by protections, automatic devices and functions within control systems. In a broader sense, the Defence Plan concerns the safety of the electricity system operations, i.e. system's ability to withstand short-circuit failures and unexpected equipment failures. The Defence Plan is divided by individual fault types threatening the safe operation of the TS. A short overview of selected measures is given here:

- a) Decrease and increase in frequency (see *PI 620-6 Frekvenční plán*)¹⁵

In the event of an emergency, the TSO dispatcher may, with regard to provisions of Article 18.4 of the NC ER, disconnect power plants or a DSO, either directly or indirectly via the DSO. These will remain disconnected until further instructions are issued. If they are connected to the DS and disconnected directly, the relevant DSO must be informed without undue delay. In the event of under-frequency, in view of Article 18 (5) of the NC ER, the TSO's dispatcher shall instruct the DSO to switch off storage devices that operate in the loading mode (charging).

- b) Decrease and increase in voltage (see *PI 420-12 Regulace U a Q PS ČR*)¹⁶

¹⁴ The Defence Plan pursues the goal to prevent the transition from the "EMERGENCY" state to the "BLACKOUT" state

¹⁵ The aim of the Frequency Plan is to define automatic and dispatching measures both on the generation side and on the consumption side, to maintain the operation with electrical parameters (frequency, voltage) which are not endangering the operation of power plants and grid equipment, and to enable fast elimination of the failure and resumption of planned electricity supplies from producers and traders to customers.

¹⁶ The aim of the operating guideline is to define the main principles of U and Q regulation in the TS of the CR. This guideline applies to the TS equipment, power plants connected to the TS and significant power plants operating in 110 kV networks.

In accordance with Article 19 of NC ER, when the voltage value exceeds 420 or 242 kV in any of the DS's substations, the TSO dispatcher shall use available means to reduce the voltage (for details see *PI 420-12*).

c) Oscillation and loss of synchronism

Excitation sets of power plant units are equipped with system stabilizers (hereinafter PSS), the setting of which primarily serves to dampen the so-called inter-system oscillations with a frequency of 0.2–1 Hz. For newly installed units, the PSS equipment is mandatory. The methodology for setting up PSS and evaluating their effectiveness is set out in the RTSO. If the angular stability of parts of the network is disturbed in oscillation, remote protections, the first zones of which do not have a barrier against oscillation, will react to this situation and will give a command to switch off the line which is in the centre of the oscillation. In this way the affected parts of the network will be separated and spreading of the fault to the surrounding system prevented.

d) Overloads

If the technical limits of any line are exceeded in real time, the TSO dispatcher shall take remedial measures:

1. Cancellation of trading (cancellation of unused capacity in the direction of deteriorating situation)
2. Stopping GCC and blocking aFRR (simultaneously with point 1)
3. Reconfiguration of the TS/DS network
4. Redispatching (internal / international, including MRA)
5. Curtailment of already allocated capacities (agreed nominations) in an applicable ratio according to operating planning/56
6. Switching off the overloaded TS element (automatic/manual)
7. Load shedding (according to Art. 22 of the NC ER through activating *PI 820-1 Vypínací plán*¹⁷)

In the state of emergency, the dispatcher may, with regard to Article 14 (3) of the NC ER, proceed to the manual switch-off of any element of the TS that has a significant cross-border impact, including the cross-border line, provided that:

- A. he coordinates his steps with the neighbouring TSOs
- B. this measure will not cause the state of emergency or blackout in the remaining parts of the interconnected TS.

¹⁷ The shut-down plan, developed by the TSO dispatcher/controller in cooperation with the DSO dispatchers, determines the procedure and scope of switching off the power taken from the TS or DS for individual switching stages in the course of prevention or resolution of the emergency situation.

With regard to provisions of Article 14(4) of the NC ER, the controller may manually shut down the line without coordination, namely in exceptional circumstances indicating that operational safety limits are being exceeded, in order to avoid endangering the safety of workers or damage to the equipment.

In accordance with Article 22 of the NC ER, the dispatcher may activate *PI 820-1 Vypínací plán elektrizační soustvy ČR* (Electricity System Shut-down Plan) to resolve the overload, specifying the required nodal area in which the reduction of load is to be provided. In case of danger of delay, the entire TS/DS transformer may be switched off.

The limitation of the load in accordance with the decree vSN is further specified in the Regulation Plan for the PS of the CR (*PI 820-2 Regulační plán elektrizační soustvy ČR*, see Chapter 6.8. – Framework for manual reduction of consumption and switching off customers).

The basic conditions for the use of the TS and the legislative framework of the Defence Plan are further specified in the RTSO, part V. Safety of operation and quality at the level of the TS.

6.6 Measures to mitigate electricity crises on the supply and demand side

6.6.1 Restoration of market activities

The restoration of market activities is detailed in *PI 620-23 Obnova tržních činností* (Restoration of market activities)¹⁸ and takes place in accordance with the NC ER, and determines the activities of ČEPS, OTE and AnS providers in the course of:

1. Prevention of the state of emergency
2. State of emergency
3. Return from the state of emergency

Preparation for the procedure terminating the “prevention of the state of emergency” or the “state of emergency” runs continuously, and it is regularly ascertained whether it would be possible to cover the balance either from own sources or by electricity imports.

After the announcement of the expected termination of the state of emergency declared in accordance with the vSN, as amended, the provider is obliged to provide ČEPS with maximum cooperation consisting in particular, but not exclusively, in the obligation to follow the instructions issued by the ČEPS dispatching centre when ordering the preparation of operation, which may set different requirements for the ordering method than those applicable in the normal state. In particular, it is a fact that in the context of the return from the state of emergency, the preparation of operation is always initiated for the period of at least 24

¹⁸ The operating guidelines describe the procedure for restoration of market activities at the end of the “Prevention of the State of Emergency” or at the end of the “State of Emergency” designed pursuant to Article 37 of NC ER.

hours following the expected end of the state of emergency, and its approval/rejection or the necessity of its updating is decided by the ČEPS dispatching centre.

1. Preparation for the return from the state of emergency (runs continuously)

As part of the preparation, it is being verified that the necessary systems are fully functional. The access of AnS providers to MMS is verified by telephone. Subsequently, there is an assessment made to confirm whether it is possible to continue even if some AnS providers/participants of cross-border trade do not have access to the trading portal. Then, the outlook of available balancing reserves (aFRR, mFRR, frequency in general), non-frequency reserves and the possibility of block phasing is processed.

Following facts are checked:

- evolution of trade balance and available import capacities on the 50Hz profile, TenneT, APG -> ČEPS.
- annual average price of each AnS and ranking by volume for the purpose of purchasing AnSs.

2. Return from the state of emergency

The CMT decides the expected time of the end of the state of emergency / prevention of the state of emergency. Then information on the expected time of the end of the state of emergency is published. Restoration of business processes. The load forecasts are updated, the range of confirmed AnSs is identified; generation of updated operation planning, the review of the updated operation planning in context of the current situation, and the decision to purchase additional AnSs to cover the balance.

Subsequently, a report on the risks associated with the delayed termination is processed. The CMT is informed of the risks related to the postponement of termination; information on missing AnS volumes is provided, demand for additional AnS and insertion of new contracts into MMS follow. Subsequently, the CMT is informed about the possibility to terminate the state of emergency; and information about the end of the prevention of the state of emergency and/or the end of state of emergency is published.

6.6.2 TSO Guidelines - SM/76 Procedures for Declaring the State of Emergency

The procedure for announcing the prevention of the state of emergency or declaring the state of emergency, respectively notifying about their termination, and the obligations of ČEPS employees related therein, is defined by ČEPS's internal guidelines SM/76 Procedures for declaring and terminating the state of emergency¹⁹.

¹⁹ The directive is based on the provisions of the Energy Act and decree vSN, and specifies the procedure to be followed by ČEPS employees when declaring the state of emergency or announcing the prevention of the state of emergency, and/or their termination.

Pursuant to § 54 of the Energy Act, the ČEPS dispatching centre announces and notifies, by means of a structured message, the beginning and end of the event, its scope and the following states:

- a) Prevention of the state of emergency
 - ČEPS announces the prevention of the state of emergency no later than 1 hour after the commencement of activities aiming at resolving the situation, always for the entire territory of the Czech Republic.
- b) Declaring of the state of emergency
 - The state of emergency is usually declared and called off in advance. In the event of a rapid breakdown of the electricity power system, the state of emergency may be declared afterwards. ČEPS always declares the state of emergency for the entire territory of the Czech Republic.
- c) Termination of the emergency prevention
 - As a rule, termination of the emergency prevention takes place at the end of the trading interval (a full hour).
- d) Termination of the state of emergency
 - In order to ensure a smooth transition from a state of emergency, there was the PI 620-23 adopted based on the Rules for Suspension and Resumption of Market Activities approved by the ERÚ¹⁸ (Procedure for restoration of market activities when ending the state of emergency).

Communication is ensured through the ČEPS spokesperson.

6.6.3 DSO's procedures when declaring the state of emergency for a specific area or its part

When announcing the prevention of a state of emergency or declaring a state of emergency, or notifying their termination, the DSOs shall proceed in accordance with the applicable legislation²⁰.

6.7 Measures to restore the system

The measures for the system restoration are set out in *PI 620-22 Plán Obnovy* (Restoration Plan) developed in accordance with the NC ER, which defines measures for restoration of the network integrity and the supply of power to customers in cases where there was a complete or partial breakdown of the system, i.e. when the system is in an EMERGENCY state according to the criteria set out in Article 18(3) of the SO GL, or a BLACKOUT state according to the criteria set out in Article 18(4) thereof.

²⁰ The Energy Act, pp. 54 State of Emergency; vDŘ; vSN.

In the first phase of the procedure, all possibilities and causes of the failure are to be identified, and the auxiliary consumption of nuclear power plants verified and, if necessary, ensured. Subsequently, the system restoration process will be started according to the priorities determined in the guideline (e.g. auxiliary consumption of system power plants, the capital city of Prague)

Procedure for system restoration from abroad according to cross-border (bilateral) contracts (agreed parameters, e.g. change of active power, maximum flow of active/reactive power and duration of this regime)

6.8 Framework for manual reduction of consumption and switching off customers

6.8.1 Curtailment of electricity consumption

The framework for limiting the power withdrawal from TS and DS is determined in the Energy Act, vDŘ and vSN, and is further described in detail in the operating guideline PI 820-2 *Regulační plán* elektrizační soustavy ČR (Manual load shedding Plan of the electricity system of the CR). This operating guideline prepared by the TSO in cooperation with the DSOs, determines the procedure and scope of limiting the power withdrawal from the TS or DS for individual load shedding plan levels in the course of prevention or resolution of the state of emergency. The operating guidelines are updated every year.

The extent of the reduction of electricity consumption in the course of mitigation of serious system or local failures in the area where there is an imminent threat of a state of emergency or for which a state of emergency has been already declared is given by the application of the appropriate level of the load shedding plan.

The exact meaning of the individual manual shedding levels, principles for assigning customers to shedding categories and the values of the reduced power for each category in percentages, as well as the effectiveness after the declaration, are stated in the decree vSN, Annex 1. The application of the levels of the load shedding plan does not apply to customers whose equipment is connected only to a foreign electricity system, to which only the restrictions of such a foreign electricity system apply; they also do not apply to the technological auxiliary-consumption for electricity generation and heat production and supply.

A brief overview of the categorization of customers into shedding levels:

1. Customers are classified into load shedding levels according to vSN²¹ according to:
 - a. method of appliances control through multiple remote control,

²¹ Pp. 1, pp. 4 of Annex 1 and 2.

- b. the nominal values of the voltage in a part of the electrical system to which the electrical equipment of a specific customer is connected,
- c. the value of the reserved input power specified in the connection contract.

2. The customers are classified into shedding levels as follows:

- Shedding level 1 - Customers with power consumption control using HDO or another power consumption management system.
- Shedding level 2 - Customers with voltage > 1 kV and with the value of reserved power input <100 kW, and customers with voltage < 1 kV with circuit breaker value < 200 A.
- Shedding level 3 - Customers with voltage > 1 kV and with the reserved power input >1 MW.
- Shedding levels 4 to 6 - Customers with voltage > 1 kV and with the reserved power input from 100 kW to 1 MW, and the and customers with voltage < 1 kV with circuit breaker value > 200 A.
- Shedding level 7 applies to all the customers.

6.8.2 Customers with special protection against curtailment and disconnection

In line with vSN Annex I section II, there are predefined categories of electricity consumers, which pose special treatment and protection against load curtailment and switching off. To those categories of customers (see below) the load shedding levels 2 to 7 as stated in chapter 6.8.1 point 2, do not apply.

This concerns to customers whose predominant activities belong to the following areas:

- Healthcare
- Telecommunications and postal services
- Water utility and infrastructure management
- Drinking water supply
- Defence of the state
- Underground mining
- Civil air transport
- Operation of public rail transport
- Public transport
- Buildings and facilities of Office of the Government of the Czech Republic
- the Czech National Bank
- the Ministry of the Interior of the Czech Republic
- the Ministry of Justice
- the Police of the Czech Republic

Furthermore, load shedding levels 2 to 7 also do not apply to the following subjects:

- Other parts of the Integrated Rescue System

- Customers providing heat supply
- To electricity producers in the cases where nuclear safety could be endangered
- Economic mobilization entities
- Suppliers of supplies listed in the economic mobilization crisis plan in case of crisis

6.8.3 Switching off electricity consumption

The framework for limiting the power taken from TS and DS is determined in the Energy Act, vDŘ and vSN, and is further described in detail in the operating guidelines *PI 820-1 Vypínací plán elektrizační soustavy ČR* (Shut-down Plan of the electricity system of the CR)¹⁷. The operating guidelines are updated every year.

The shut-down plan, developed by the TSO in cooperation with the DSO control rooms, determines the procedure and scope of switching off the power taken from the TS or DS for individual switching stages in the course of prevention or resolution of the emergency situation.

The sizes of the consumption to be switched off (in MW) in the individual switching stages are determined by the respective DSO. Each DSO control room processes its operating guideline, which specifies how to implement the shut-down plan.

The extent to which electricity consumption is switched off during the mitigation of major system or local faults in an area where the state of emergency is imminent or where it has been already declared is given by the application of the relevant level of the shut-down plan, by an instruction to switch off a specific volume of consumption (in MW) in a particular area, or by an instruction to reduce the load of a specific TS/DS transformation to a specific value (in MW).

The values of the power to be switched off for individual switching stages in percentages are specified in the vSN, Annex 2.

Following the shut-down plan announced by the TSO, the DSO implements measures according to its priority plans, with the selected categories (e.g. Hospitals, Rescue Services, Petrol Stations, etc.) being prioritized in terms of securing electricity supplies. From the point of view of the TSO, the priority is given to ensuring the operation of nuclear power plants and ancillary services providers (AnS).

6.9 Mechanisms to inform the public of the electricity crisis

6.9.1 Basic information to inform the public is provided through the following steps:

In case of emergency prevention, the TSO shall announce emergency prevention for the entire territory of the country no later than 1 hour after the commencement of activities carried out in a situation where there is a real risk of an emergency, and shall immediately notify the MPO, the ERÚ, the Ministry of the Interior, DSOs, regional authorities and the Municipal Authority of the Capital City of Prague.

For the entire territory of the country, the TSO shall announce²² the exact time of the start or termination of the state of emergency through mass media and through means of supervisory control, and shall immediately notify the MPO, the ERÚ, the Ministry of the Interior, regional authorities and the Municipal Authority of the Capital City of Prague. In addition, according to the above-mentioned decree, it announces, promulgates and revokes shedding levels via the mass media in regular time-specific or extraordinary broadcasting.

- In order to simplify this communication, the Crisis Communication System (CCS) has been introduced for the needs of the ČEPS dispatching centre, which allows sending of predefined messages to all predefined numbers in the form of e-mail, SMS or voice messages.
- Information about the current shedding level or state of emergency is also announced via the crisis website www.ceps.cz and can also be obtained by calling the ČEPS Information Line +420 800 199 100.

In case of emergency prevention for the selected territory or its part, the TSO shall announce emergency prevention to the MPO, the ERÚ, the Ministry of the Interior, affected TSOs, local DSOs, regional authorities, or the Municipal Authority of the Capital City of Prague immediately (no later than 1 hour after the commencement of activities carried out in a situation where there is a real risk of emergency)

For the selected territory or its part, the TSO shall announce the exact time of the start or termination of the state of emergency through public media and means of dispatch management, and shall immediately notify the MPO, the ERÚ, the Ministry of the Interior, affected TSOs, local DSOs, regional authorities, or the Municipal Authority of the Capital City of Prague.

The information that the TSO and DSO pass on to the MPO must contain:

- the date and time of the incident,
- the place of its origin,
- the cause of the incident and a description of its development into a crisis situation,
- data of its scope,
- affected area,
- limitation in electricity consumption and generation,
- how the crisis situation is going to be dealt with and the measures taken,
- assessment of options and estimation the time necessary to overcome the crisis.

The procedures applied by the TSO, DSOs and electricity producers in the course of mitigation the consequences of the crisis situation are monitored by the Ministry of Industry and Trade in cooperation with the State Energy Inspectorate.

²² Under s. 54 of the Energy Act and s.6 of the vSN.

Ways of information dissemination for particular shedding levels:

- The basic, warning level and information on the use of shedding level 1 is announced and recalled by the TSO or DSO through their control rooms and mass media in regular time-specific or extraordinary broadcasting.
- Shedding levels 2 - 7 are announced and recalled by the TSO or DSO through their control rooms and mass media in regular time-specific or extraordinary broadcasting.

In the case of customers with the voltage > 1 kV with the reserved input > 1 MW, the announcement and revocation of shedding levels 3, 5 and 7 is also carried out by the TSO control room, via DSO's control rooms, by phone, SMS, e-mail, fax, or by other comparable means agreed with customers.



6.10 Additional measures on national, regional and municipal levels

In electricity crisis management the TSO plays the main role. However, additional steps are being taken simultaneously on national, regional and municipal levels as presented in Figure 2 and described in detail in chapters 6.10.1-6.10.3.

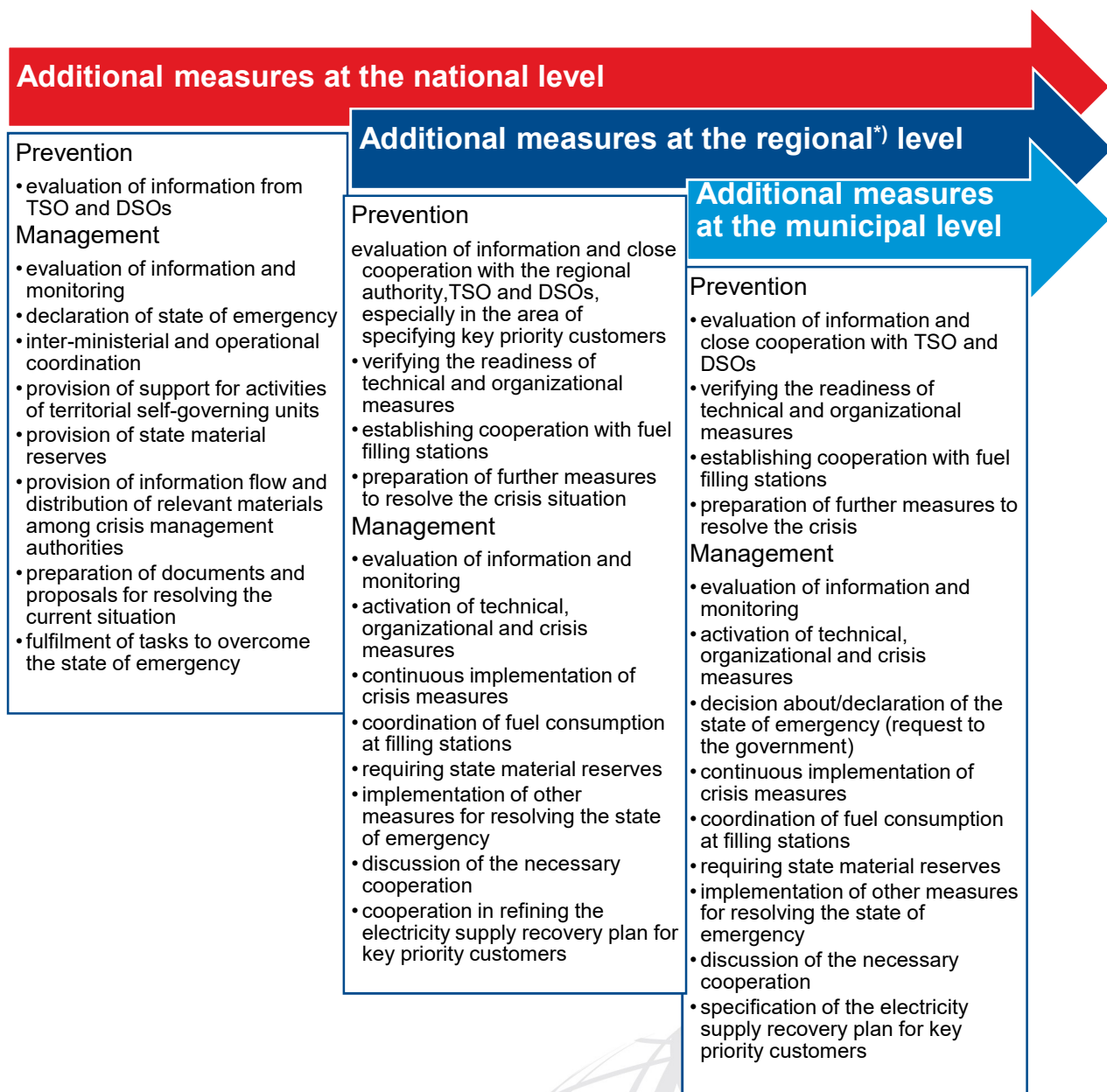


Figure 2 Scheme of additional measures in crisis prevention and management

Note *) Regions in this context are understood as administrative entities within the Czech Republic

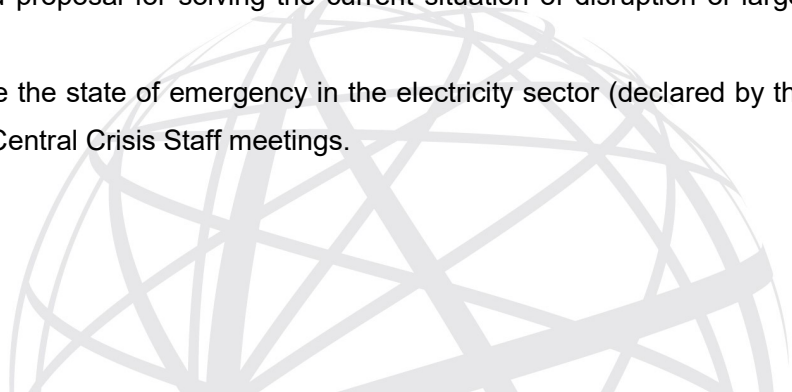
6.10.1 Additional measures at the national level within the state competence

Crisis Prevention

- evaluation of information from TSO and DSOs.

Crisis Management

- evaluation of information from the TSO and distribution system operators, convening of the crisis staff of the Ministry of Industry and Trade;
- creation of an expert working group for resolving the state of emergency in the electricity sector (declared by the operator)
- preparation of technical and organizational measures to ensure the operation of the MPO and crisis management authorities;
- discussion of the necessary cooperation of state authorities, the possibility of shortening the liquidation time of the consequences of the state of emergency in the electricity sector (declared by the operator) with the transmission system operator and distribution system operators;
- submission of a draft solution plan to the Central Crisis Staff; if it is not possible to effectively avert the threat in the event of an emergency, a proposal for a declaration of the state of emergency at the national level (declared by the government) is submitted to the Government, **in that case, the procedure that follows is:**
- declaration of the state of emergency at the national level (declared by the government);
- inter-ministerial coordination of implementation measures to address large-scale electricity supply disruptions following the declaration of the state of emergency at the national level (declared by the government);
- operational coordination, monitoring, and evaluation of the state of implementation of measures to resolve the crisis;
- providing support for activities of self-governing territorial units;
- provision of state material reserves with a focus on alternative energy sources;
- ensuring an alternative way of transmitting information and distributing materials between crisis management authorities in the event of a disruption of electricity supply;
- preparation of documents and proposal for solving the current situation of disruption of large-scale electricity supply;
- fulfilment of tasks to overcome the state of emergency in the electricity sector (declared by the operator), participation in the Central Crisis Staff meetings.



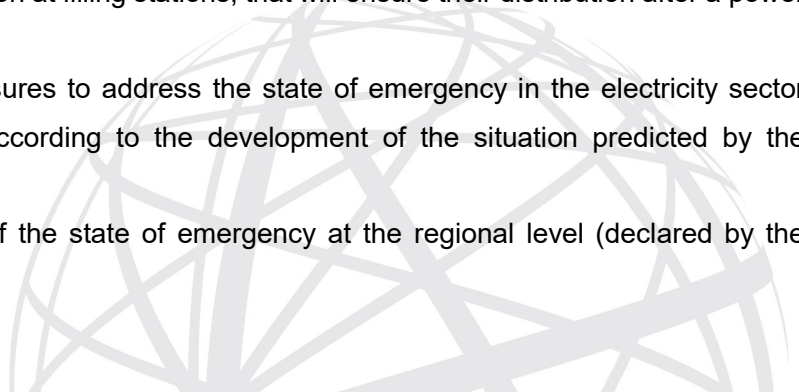
6.10.2 Additional measures at the regional level

Crisis Prevention

- evaluation of information and close cooperation with the transmission system operator and distribution system operators, especially in the area of specification of key priority customers;
- verifying the readiness of technical and organizational measures to ensure the functioning of the office and crisis management authorities;
- verifying the readiness of crisis measures in order to provide:
 - o information and warning of the population and liaison between crisis management authorities by means independent of electricity supply,
 - o monitoring the functionality of alternative sources of electricity at key priority customers,
 - o necessary resources and the availability of qualified staff for the transport and distribution of fuels and work with electrical equipment (alternative energy sources),
- establishing cooperation with fuel filling stations, that will be able to ensure their distribution after a power failure (or with other distributors);
- preparation of further measures to resolve the crisis according to the crisis plan.

Crisis Management

- evaluation of information and close cooperation with the transmission system operator and distribution system operators, especially in the area of specification of key priority customers;
- activation of technical and organizational measures to ensure the operation of the office and crisis management authorities;
- activation of crisis measures:
 - o information and warning of the population and liaison between crisis management authorities by means independent of electricity supply,
 - o necessary resources and qualified staff for the transport and distribution of fuels and work with electrical equipment (alternative energy sources),
 - o support for ensuring the functionality of alternative sources of electricity for key priority customers,
- coordination of fuel consumption at filling stations, that will ensure their distribution after a power failure;
- implementation of other measures to address the state of emergency in the electricity sector (declared by the operator) according to the development of the situation predicted by the distribution system operator;
- deciding on the declaration of the state of emergency at the regional level (declared by the regional governor);



- discussion of the necessary cooperation with crisis management authorities, distribution system operators to shorten the time of liquidation of the consequences of the state of emergency in the electricity sector (declared by the operator).

In case of declaration of the state of emergency at the regional level (declared by the regional governor), **the procedure that follows is:**

- declaration of the state of emergency at the regional level (declared by the regional governor);
- submission of a request to the government to declare a state of emergency at the national level (declared by the government);
- evaluation of information and close cooperation with the transmission system operator and distribution system operators, especially in the area of specification of key priority customers;
- continuous provision of technical and organizational measures to ensure the operation of the office and crisis management authorities;
- continuous implementation of crisis measures:
 - o information and warning of the population and liaison between crisis management authorities by means independent of electricity supply,
 - o the use of necessary resources and the involvement of qualified staff for the transport and distribution of fuels and work with electrical equipment (alternative energy sources),
 - o support for ensuring the functionality of alternative sources of electricity for key priority customers,
- coordination of fuel consumption at filling stations, that will ensure their distribution after a power failure (or at other distributors);
- requiring state material reserves to overcome the crisis;
- implementation of other measures for resolving the state of emergency in the electricity sector (declared by the operator) according to the development of the situation predicted by the distribution system operators according to the crisis plan;
- discussion of the necessary cooperation with crisis management authorities, distribution system operators (components of the integrated rescue system) to resolve the crisis;
- specification of the electricity supply recovery plan for key priority customers.

6.10.3 Additional measures at the municipal level

Crisis Prevention

- evaluation of information and close cooperation with the regional authority, the transmission system operator and the distribution system operator, especially in the area of specifying key priority customers;
- verifying the readiness of technical and organizational measures to ensure the operation of the office and crisis management authorities;

- control of readiness of crisis measures in order to provide:
 - o information and warning of the population and liaison between crisis management authorities by means independent of electricity supply,
 - o monitoring the functionality of alternative sources of electricity at key priority customers,
 - o necessary resources and the availability of qualified staff for transport and distribution of fuels and work with electrical equipment (alternative energy sources),
- establishing cooperation with petrol stations, which will be able to ensure their distribution after a power failure (possibly with other distributors);
- preparation of further measures to resolve the crisis according to the crisis plan.

Crisis Management

- evaluation of information and close cooperation with the regional authority, with the transmission system operator and distribution system operators, especially in the area of specification of key priority customers
- activation of technical and organizational measures to ensure the functioning of the office and crisis management authorities,
- activation of crisis measures:
 - o information and warning of the population and liaison between crisis management authorities by means independent of electricity supply,
 - o the use of means and professionally qualified persons for the transport and distribution of fuels and work with electrical equipment (alternative energy sources),
 - o support for ensuring the functionality of alternative sources of electricity for key priority customers,
- coordination of fuel consumption at service stations, that will ensure their distribution after a power failure;
- implementation of other measures to address the state of emergency in the electricity sector (declared by the operator) according to the development of the situation predicted by the distribution system operator;

In case of declaration of the state of emergency at the regional level (declared by the regional governor), **the procedure that follows is:**

- evaluation of information and close cooperation with the crisis staff of the region, with the transmission system operator and distribution system operators, especially in the area of specifying key priority customers;
- continuous provision of technical and organizational measures to ensure the functioning of the office and crisis management authorities;
- continuous implementation of crisis measures:

- information and warning of the population and liaison between crisis management authorities by means independent of electricity supply,
 - the use of necessary resources and the involvement of qualified staff for the transport and distribution of fuels and work with electrical equipment (alternative energy sources),
 - support for ensuring the functionality of alternative sources of electricity for key priority customers,
- coordination of fuel consumption at service stations, which will ensure their distribution after a power failure (or at other distributors);
 - requiring state material reserves to overcome the crisis;
 - implementation of other measures for resolving the state of emergency in the electricity sector (declared by the operator) according to the development of the situation predicted by the distribution system operators according to the crisis plan;
 - cooperation in refining the electricity supply recovery plan for key priority customers.

6.11 Regional and bilateral procedures and measures

There is an existing regional and bilateral cooperation on the TSO level that is described below. Furthermore, there is an ongoing preparation of regional collaboration on the ministry level between the Czech Republic and its neighbouring countries, as required in Article 15 of RPR.

6.11.1 Mechanisms for cooperation between the TSOs on the regional level

non-public content

6.11.2 Mechanisms for cooperation between EU Member States on the regional level

Information about the above stated measures is included in the international agreements concluded in accordance with the provisions of Article 15 of the RPR.

6.11.3 Regional and bilateral arrangements between TSOs, including all necessary technical, legal and financial arrangements for the implementation of the coordinated measures

non-public content

6.11.4 Regional and bilateral arrangements between the EU Member States, including all necessary technical, legal and financial arrangements for the implementation of the coordinated measures

Information about the above stated measures is included in the international agreements concluded in accordance with the provisions of Article 15 of the RPR.

ČEPS is a part of the regional coordination within the Core region and is also a shareholder of TSCNET, based in Munich, Germany, which brings together TSOs across Europe, including non-EU countries (Switzerland - the Swissgrid TSO), to provide the Coordinated Traffic Security Analysis service. As part of this service, N-1 calculations are performed on a common network model a day ahead, and appropriate corrective measures are proposed if N-1 non-compliance is identified. Within a given day Intraday Congestion Forecast, the results are further adjusted every hour.

Being a part of regional coordination, RSC Coreso provides a Short-Term Adequacy analysis service in the Core region through which it identifies lack of resource adequacy on a week-ahead to day-ahead basis. Based on the expected availability of generation resources (under the preparation of the operation planning), the predicted consumption and the planned state of the system, the RSC evaluates whether it is possible to cover all the consumption of the whole region and of the individual TSOs by their own power generation and/or imports.

As the output of this service, there is a warning sent to the TSOs regarding potential problems - lack of resource adequacy. The TSOs can respond by postponing planned outages to allow for more power generation or to increase cross-border trading capacity. All this is done in coordination with other TSOs in the region, if necessary, so that they can support each other.

In the state of a crisis, NC ER provides the TSOs with a number of options to address arising problems such as frequency deviations, island operations or lack of power adequacy. The TSO can thus enforce power changes, including the start-up or shut-down of important equipment in the TS or DS. As a last resort, TSO can also order to shed a part of the load. On the other hand, the TSO may ask for help from other TSOs, that are obliged to provide it, unless they have serious problems themselves, To this end, they also have the right to enforce power changes at major installations in their system.



7 CONSULTATIONS OF STAKEHOLDERS

When developing the risk-preparedness plan (RPP), the CA conducts and coordinates public consultations as required by Article 10 of the RPR.

Consultations with stakeholders are fully under the responsibility of the CA, which submits the material to the stakeholders for their comments. The process consists of the following steps:

- The CA, in cooperation with the TSO, produces a draft RPP and organizes consultations with the above stated entities.
- The CA sends the draft RPP in electronic form to the relevant entities for comments.
- The CA collects comments and subsequently holds follow-up consultations to discuss the comments.
- The CA addresses comments from relevant stakeholders and incorporates them into the RPP.



8 EMERGENCY PREPAREDNESS CHECKS

8.1 Time Schedule

The emergency plans are regularly updated once a year.

The cumulative update of the Crisis Preparedness Plan of a CI facility (hereinafter CPP-CI) shall be carried out in four-year cycles from its approval.

8.2 Agreed procedures and entities involved

The review of risk preparedness plans will be carried out according to the requirements of the CA in cooperation with the TSO and DSOs at two-year intervals. Upon request by the CA, all subjects involved shall prepare a common testing scenario(s), including verification and timetable. This framework has to be agreed and approved by CA no later than 31.12.2021.

8.3 Regional and bilateral coordination

In the second half of 2021, the Czech Republic began a dialog about regional cooperation with relevant neighbouring countries, namely Austria, Germany, Poland, and Slovakia. The aim of these meetings was to start dialogue about regional cooperation in order to meet the requirements for regional agreement as specified in Art. 15 of the EU Regulation 2019/941. As a first step, all parties decided to prepare a Memorandum of understanding that will lay down a framework for future cooperation and future binding agreement. We expect this Memorandum to be signed at the beginning of the year 2022. We see this as an important milestone within our region.

This step will be followed by further negotiations aiming to reach a binding agreement for assistance in case of an electricity crisis and preparation of crisis exercises.

8.4 Plan Update

On national basis every two years.

On regional basis every four years.

