



Course: Security management

Theme: Critical infrastructure protection

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Introduction

The term infrastructure (from French - word “infra-structure”) has been used since 1927 to refer collectively to the roads, bridges, rail lines, and similar public works that are required for an industrial economy, or a portion of it, to function. The term also has had specific application to the permanent military installations necessary for the defense of a country.

Necessity of intense approaches towards security issues that influence state security, economy or living standards emerged with for the first time after the September 2011 attacks in USA. The importance of this problem confirms the fact that European Union and Nord Atlantic Treaty Organization (NATO) have taken solution of critical infrastructure protection as a one of their most important tasks.

Critical infrastructure as a system is the essential part of society functional continuity, its economic or social structure and systems. In relation to this fact, there were created approaches, tools, which reflect above mentioned essentiality and created the framework for risk or those factors assessment system, which are able to affect the functionality and resilience.

1. Legislation and terms

Protection of critical infrastructure was solving in the Czech Republic in particular sector at various levels, separately and no law- making materials. Problem of critical infrastructure protection was solved in Czech Republic in particular sectors at different levels, scattered and mainly by non-legislative materials.

This act ended several years lasting process that started with - detailed analysis of security threats and emerged into clearly defined requirement for creation of legal framework of protection of critical infrastructure not only in the Czech Republic, but also in European Union. (The Council Directive 2008/114/EC dated 8 December 2008 on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection).

Critical Infrastructure Protection in the Czech Republic is guided by the Act 430/2010 Coll., which is seen as the implementation of Council Directive 2008/114/EC on the identification and designation of European Critical Infrastructures and the assessment of the need to improve their protection, which provides a framework for creating a common European access to Critical Infrastructure Protection.

This Directive establishes certain instruments for the identification and designation of a European and national infrastructure (sectorial and cross - cutting criteria) as well as tools for increasing the protection of Critical Infrastructure in the context of the need to maintain functional continuity of the society (Operator Security Plan, Security Liaison Officer, Public Private Partnership). These tools can be seen also from resilience evaluation point of view, where as we said before resilience is seen as an indicator that quantifies the ability to provide functionality in terms of internal and external factors effects, provided to the need of establishing the limits, where degradation of system functionality is acceptable and when it is not.

Implementation of the Council Directive 2008/114/EC in the Czech Republic

The Council Directive 2008/114/EC establishes a procedure for the identification and designation of European critical infrastructures ("ECIs"), and a common approach to the assessment of the need to improve the protection of such infrastructures in order to contribute to the protection of people.

In compliance with the Art 3 - Identification of ECIs and the Art 4 - Designation of ECIs, paragraph 3, the Czech Republic fulfilled the topic on the identification and designation of intended ECIs with the neighboring member states ("MS"), i.e. Austria, Slovakia, Germany and Poland on a bi- and multilateral basis. The Czech Republic signed both the general and the technical protocols with these MS. ECIs that might affect those MS have only been identified in the energy sector.

The representatives of the stakeholders consequently identified the security liaison officers. They have checked and modified the existing security documentation with a view to meet the security plan content in accordance with the Council Directive.

The official report designed for the Commission containing generic data on a summary basis on the types of risks, threats and vulnerabilities encountered per ECI sector located on the territory of the Czech Republic in which an ECI has been designated pursuant to Article 4 was sent on 11 January 2011.

Amended law:

- asses state authority in protection of critical infrastructure,
- implementation Directive No. 2008/114/EC establishes a procedure for the identification and designation of European critical infrastructures into national law by amendment of the Crisis Act (which was approved on 21 December 2010 and entered into force on January 1 2011).
- establishes a procedure for the identification, designation and defence of critical infrastructure.

Crisis management shall denote

the summary of management activities of crisis management authorities focused on analysis and evaluation of security risks and planning, organization, implementation and control of activities performed in connection with:

- preparation for crisis situations and their solution or
- protection of critical infrastructure,

Critical infrastructure shall denote

the element of critical infrastructure or the system of elements of critical infrastructure, disruption of which would have a significant impact on the State security, on ensuring the basic living needs of the population, on health of people and State economy.

European critical infrastructure

shall denote the critical infrastructure within the territory of the Czech Republic, disruption of which would have a significant impact on other member state of the European Union. Seriousness of impact of disruption of critical infrastructure element is assessing according to cutting criteria.

Element of critical infrastructure

shall denote primarily building, establishment, vehicle or public infrastructure, determined in accordance with the cross-cutting and sectorial criteria; in case the element of critical infrastructure is a part of European critical infrastructure it is considered to be an element of European critical infrastructure.

Measures

Critical infrastructure protection shall denote the set of measures aimed at reducing disruption risk of function of the critical infrastructure element.

Subject of critical infrastructure

shall denote the operator of the critical infrastructure element; in case the operator is the operator of European critical infrastructure, the element is considered to be the subject of European critical infrastructure.

2. Cross-cutting criteria

Cutting criteria for assessing of critical infrastructure element is:

- a) limiting value of loss of lives (so-called “**Casualties criterion**” borderline value of the potential fatalities is 250 and borderline value of the potential injures is 2500 with condition of consequent hospitalization exceed to 24hours),
- b) extremely severe economic impact (so-called “**Economic effects criterion**” borderline value of economic loss for gross domestic product more than 0,5 % or higher),
- c) impact on public as a result of extensive restriction of provision of essential services or other serious intervention into everyday life (so-called “**Public effects criterion**” borderline value of large scale reduces for provides of essential services to 125 thousand people).

All borderlines values for cross - cutting criteria are determined by relevant Government Regulation.

Sectorial criteria

shall denote the technical or operational criteria determining the critical infrastructure element in the sector of:

1. ENERGY,
2. WATER MANAGEMENT,
3. FOOD INDUSTRY AND AGRICULTURE
4. HEALTH SERVICE
5. TRANSPORT
6. COMMUNICATION AND INFORMATION SYSTEMS
7. FINANCIAL MARKET AND CURRENCY
8. EMERGENCY SERVICES AND
9. PUBLIC ADMINISTRATION

3. Critical infrastructure elements and responsibility of subjects

The process of critical infrastructure elements determination of

Objects being run by state organization send their suggestions to the ministry of Interior that presents them to the government.



According to Crisis Act critical infrastructure elements determination being run by state administration is by process different from elements determination not being run by state. In this case it is necessary to use Act. No. 500/2004 Coll., administrative order.

CRISIS MANAGEMENT AUTHORITIES

GOVERNMENT

The Government in protection of critical infrastructure:

- determines cross-cutting and sectorial criteria to specify the element of critical infrastructure,
- decides on the basis of the list submitted by the Ministry of Interior on the elements of critical infrastructure and the elements of European critical infrastructure which are operated by the organizational unit of the state.

MINISTRY OF INTERIOR

The Ministry of Interior fulfills these tasks in critical infrastructure:

- offers cross-cutting criteria,
- processes the list, which is the basis for specification of the elements of critical infrastructure and the elements of European critical infrastructure,
- fulfils the tasks in the area of critical infrastructure resulting from the membership of the Czech Republic in the European Union, provides international exchange of information in this area, serves as the contact point of the Czech Republic in the frame of European
- critical infrastructure and submits the European Commission reports on tasks of implementation arising from the EU legislation in this area,
- annually informs the European Commission about the number of elements of European critical infrastructure per sector and about the number of member states of the European Union, that are dependent on individual elements of European critical infrastructure,

- biannually submits to the European Commission the summary report of general data about types of vulnerabilities, threats and risks discovered in various sectors of European critical infrastructure,

Plan of Crisis Preparedness of the Subject of Critical Infrastructure (act No. 240, § 29 b)

Potential threats of functioning of the subject of critical infrastructure and measures for its protection are determined in the *plan of crisis preparedness of the subject of critical infrastructure*.

In case the subject of critical infrastructure performs public legal obligation on the basis of which he/she keeps planning, organizational and technical documentation, it is possible to amend requirements into the content of the plan of crisis preparedness into this documentation. Providing conditions stated in the statutory legal regulation are fulfilled, the relevant parts of this documentation are considered to be a part of the crisis preparedness plan of the subject of critical infrastructure.

In case the element of critical infrastructure is divided into several separate units, it is possible, if appropriate, to process for each unit a partial plan of crisis preparedness of the subject of critical infrastructure, which forms a part of the crisis preparedness plan of the subject of critical infrastructure.

Entities of Critical Infrastructure (act No. 240, § 29 a)

Subject of critical infrastructure is responsible for protection of the critical infrastructure element. For this purpose he/she is obliged

- a. to process the plan of crisis preparedness of the subject of critical infrastructure within one year since the decision of the Government or since the day of coming into force of the measure of general nature, which designated the element of critical infrastructure [§ 4 clause 1 letter e) or § 9 clause 3 letter c)],
- b. to allow the competent Ministry or other central administrative authority the execution of control of the crisis preparedness plan of the critical infrastructure subject and protection of the element of critical infrastructure

including the entry permission on grounds and into premises where the element is located,

- c. to inform without undue delay the competent Ministry or other central administrative authority about organizational, production or other change, in case it is obvious that this change may affect determination of the element of critical infrastructure, in particular information about permanent shutdown, termination of business or restructuring.

Conclusion

Enforcing state security, functioning of economy counting productive and unproductive functioning of systems and services, functioning of public administration and availability of basic living needs for the population depends on infrastructures that are called due to their meaning as critical infrastructures (essential to living).

Its disruption impacts several levels – at state level it influences ensuring fundamental functions of the state and at the regional and municipal levels it impacts basis function of territory management.

Literature:

1. Act No. 240/2000 Coll., on Crises Management and on amendments of certain acts (Crisis Act) as amended by Act N. 320/2002 Coll., Act N. 127/2005 Coll., Act N. 112/2006 Coll., Act N. 267/2006 Coll., Act N. 110/2007 Coll., Act N. 306/2008 Coll., Act N. 153/2010 Coll. and Act N. 430/2010 Coll.
2. LUKAS, L., HROMADA M., Management of Protection of Czech Republic Critical Infrastructure Elements. Recent Researches in Automatic Control.
3. HROMADA, M. Critical Infrastructure Protection and Its Technological Aspects, Security Magazine, vol. XVII. No.1, 2010, pp. 21-24.

Self-assessment tasks:

1. Study

- Act No. 240/2000 Coll., *on crisis management*,
- The Council Directive 2008/114/EC *on the identification and designation of European critical infrastructures and the assessment of the need to improve their protection*.

2. Acknowledge – article „Protection of Critical infrastructure“, Prague: 2011, ISBN 978-80-260-1215-3.