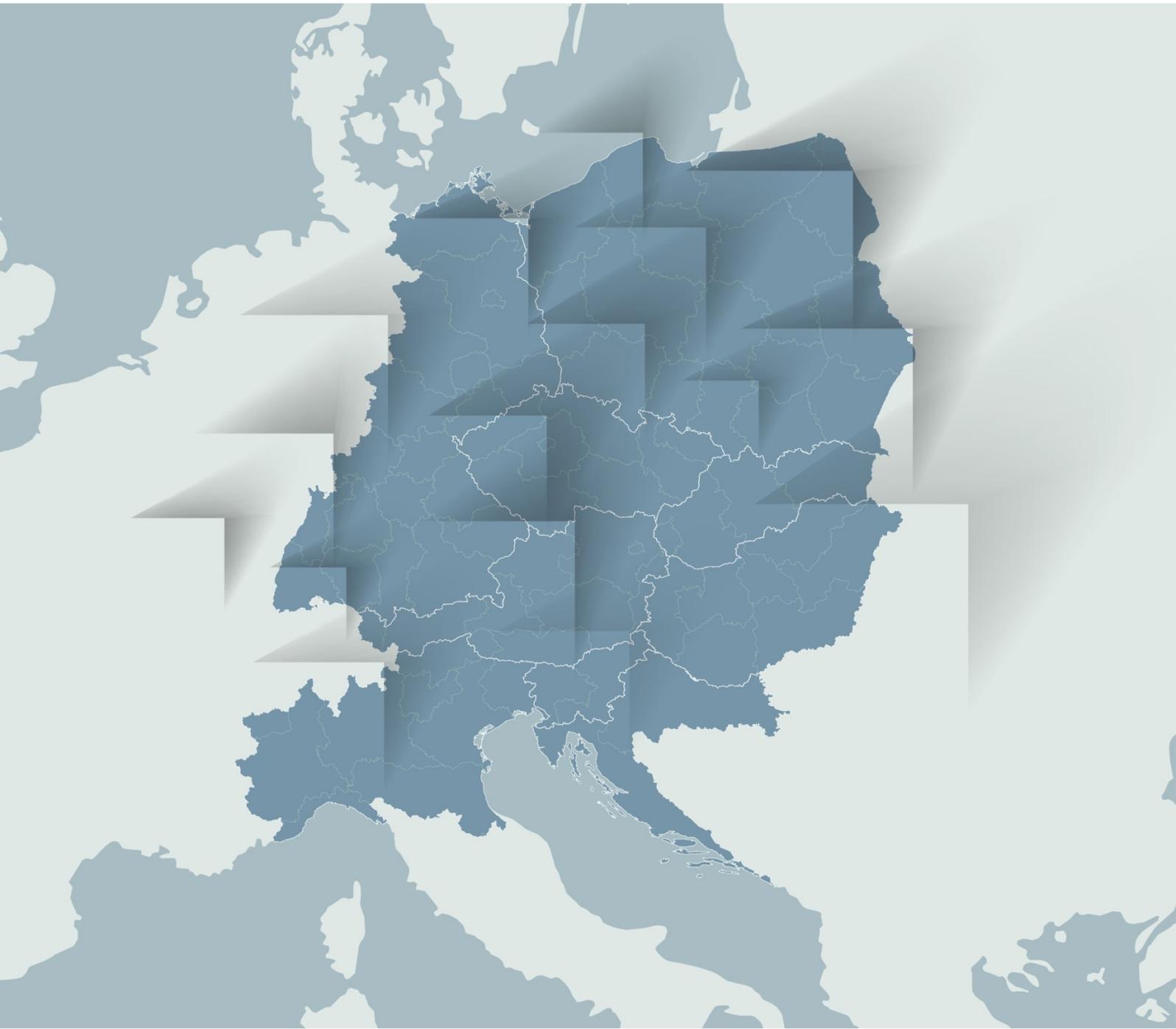


## D.T4.2.2 Analysis of the political and legal framework and the examples Country Report Croatia



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## A. General aspects concerning urban lighting

### I. Ownership, maintenance, and operation

#### Ownership

The owners of urban street lighting infrastructures in the Republic of Croatia are local municipalities and HEP Ltd (Croatian National Electricity Company). In the case of the Town of Čakovec, the owners of metal lighting pillars and the luminaries installed on them is the municipality. Concrete and wooden pillars on which a low-voltage grid is placed, are owned by HEP Ltd. Luminaries installed on such pillars are owned by local municipality.

#### Maintenance

Maintenance of urban lighting in the administrative area for the Town of Čakovec is provided by KABEL-MONT Ltd., a private company, which is subcontracted by the Town of Čakovec

#### Operation

HEP Ltd. operates urban lighting as well as Elektra Čakovec. Elektra Čakovec operates urban lighting in all areas of Medjmurje County including the administrative areas of Čakovec, which is the center of Medjmurje County. Elektra Čakovec operates urban lighting in the town of Čakovec based on regimes previously defined by the municipality of Čakovec.

### II. Political strategies and targets

Political strategies, programs, and action plans for making urban lighting more energy efficient and climate friendly in Croatia include The Third National Energy Efficiency Plan of the Republic of Croatia for the period for 2014 - 2016, Energy Efficiency Action Plan for Medjmurje County for 2017 – 2019, Annual Plans for Energy Efficiency for Medjmurje county, Sustainable Energy Action Plan for the City of Čakovec (SEAP), and the Energy Audit of Public Lighting for the City of Čakovec – 2015.

The Sustainable Energy Action Plan for the City of Čakovec (SEAP) is the only measure dedicated to the modernization of public lighting. The estimated savings are shown in the different measures, but strategies for modernization are not described. The Energy Audit of Public Lighting for the City of Čakovec (2015) shows the current state of public lighting, energy consumption for public lighting, and critical areas that would be prioritized once initiated. These programs express certain targets to be reached based on a timeline, but as mentioned, there is no strategy for the modernization of urban lighting.



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### III. Actors and Stakeholders

In Croatia, the main actors and stakeholders in the field of dynamic public lighting are Ministries, Regulatory Agencies, Manufacturers and Suppliers, Operators and Owners, as well as others that fall into varying categories. The following subsections below list and detail how the implementation of dynamic public lighting in Croatia would affect the various actors and stakeholders involved, as well as the respective attitudes towards

#### Ministries

**Ministry of Environment and Energy** - The focus of the work carried out by the Ministry of Environment and Energy is to create conditions for sustainable development – development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

\*The Ministry of Economy is listed as a central government authority in the Annex 1 to EU Directive 2014/24/EU.

#### Regulatory Agencies

The implementation of dynamic lighting would contribute to promoting a new wave of public lighting across the Republic of Croatia. New luminaries with LED technology can contribute to the lowering of energy consumption and ultimately the reduction of light pollution. New control strategies could additionally contribute to reduction of energy costs.

\*No regulatory agencies and affected authorities are listed in the Annex 1 to EU Directive 2014/24/EU.

#### Operators/Owners

The implementation of dynamic lighting will reduce energy consumption which is not currently achievable with the outdated technologies in place. In addition to potentially reducing crime rates, the overall attractiveness of the city would also increase with the installations of dynamic public lighting, which could then create a boost in the desirability for tourists to visit.

#### Manufacturers/Suppliers

The introduction of new, energy efficient luminaries along with new management technology can provide for the additional reduction of energy consumption and reduce light pollution. Additionally, manufacturers and suppliers, including industry interest organizations, have the possibility of being involved with the modernization of public lighting and have a large impact on how technical solutions are provided to investors and consumers.

#### Other Actors/Stakeholders

The modernization of public lighting and the implementation of dynamic public lighting would reduce the unnecessary illumination of town roads that aren't heavily travelled or used during certain times of the day. Additionally, implementation and improvement of dynamic lighting in



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more populated areas could ultimately contribute to reducing crime rates and improve the quality and safety of living for citizens.

### Attitude towards grid development

There is no need for additional grid development because new dynamic lighting system would be installed on existing steel pillars in pilot area in Town of Čakovec where electric grid is already developed. Based on the previous calculations, new lighting will meet all standards with existing pillars.

## IV. General Legal Background

This section details the general legal background in Croatia and the relevant guidelines referring to dynamic public lighting.

### Road Traffic Law

- Law on the Protection from light pollution (NN 114/11)
- Standard: HRN EN 13201-2:2008 Road lighting – part 2: Demanding features (EN 13201-2:2008)

### Criminal Law

- Law on State Inspectorate (NN 116/2008, 96/03, 151/03, 160/04, 174/04, 33/05, 48/05, 129/05, 140/05, 138/06);
- Law on Non-Ionizing Radiation (NN 91/10)

### Civil Law

- Law on Construction (NN 153/13);
- Law on Physical Planning and building tasks and activities (NN 152/08, 124/09, 49/11, 25/13);
- Law on Amendments to the Physical Planning and building tasks and activities (NN 25/13);
- Law on Measurement Units (NN 58/93);
- Law on Telecommunications (NN 122/03);
- Regulation on Technical Requirements and Conditions of use for Optical Distribution Networks (NN 155/09);
- Ordinance on technical conditions of construction and use of telecommunications infrastructure (NN 88/01);
- Technical regulation for protection systems against effects of lighting on construction works (NN 87/08, 33/10);
- Regulation on fire protection of Accommodation Facilities (NN 100/99);
- Regulation on ensuring accessibility to the disabled and to persons with reduced mobility (NN 78/13);
- Regulation on technical requirements for electricity plant nominal alternating voltages above 1 KV (NN 105/10);
- Regulation on the Protection from the electromagnetic field (NN 146/14);



### Standards:

- HRN N.B2.730, HRN N.B2.741, HRN N.B2.742, HRN N.B2.743, HRN N.B2.751, HRN N.B2.754, HRN N.B2.771;
- HRN HD 60364-4-41 Low voltage electrical installations – part 4-41: safety protection
- Protection against electric shock ( IEC 60364-4-41:2005,MOD;HD 60364-4-41:2007);
- HRN HD 384-4-43 – Low voltage electrical installations. Security protection – Overload protection;
- HRN HD 60364-5-54 - Low voltage electrical installations. Selection and installation of electrical equipment - Installation of grounding, protective conductors and protective conductors of equipotential bonding.

### Public Law

- Law on Physical Planning (NN 153/13);
- Law on Occupational Health and Safety (NN 59/96, 94/96, 114/03, 100/04, 86/08, 116/08, 75/09, 71/14);
- Law on Fire Protection (and Prevention) (NN 92/10);
- Regulation on safety at work for working and auxiliary rooms and spaces (NN 6/84, 42/05, 113/06);
- Technical regulation on low-voltage electrical installations (NN 5/10);
- Law on Standardization (NN 080/2013);
- Law on the Takeover of the Law on Standardization, which is in Croatia applied as republic law (NN 53/91);
- Regulation on the type of objects intended for work where the inspection of work participates in issuing building permits and in technical inspections of constructed facilities (NN 48/97)



## B. Public and Private Procurement

The following sections on public and private procurement describe the various aspects involved with the procurement of dynamic public lighting facilities in Croatia on international and national levels, as well as green procurement. Topics addressed are the currency used in the country, general legal aspects ranging from the EU level to the national level, national thresholds, central databases utilized and the methods in which lighting systems are acquired.

### I. National Public Procurement

#### Currency

Croatia does not use the Euro. The national currency in Croatia is the Kuna (HRK).

#### General Aspects

Laws in Croatia regarding urban lighting that have been implemented due to a legal act on an EU level include Directive 2014/23/EU – on the award of concession contracts, Directive 2014/24/EU – on public procurement, and Directive 2014/25/EU – on procurement by entities operating in the water, energy, transport and postal services sectors.

The nationally implemented laws regarding urban lighting include the law on concessions (NN 143/12), the law on public procurement (NN 90/11, 83/13, 143/13, 13/14), and the law on public-private partnership (NN 78/2012, 152/2014).

#### National Public Procurement rules for values above the EU thresholds

The procurements for values above the EU thresholds is by Croatian law considered as the procurement of high value. The procurement documentation must be delivered to both the national Electronic Public Procurement Advertiser (EOJN - <https://eojn.nn.hr/Oglasnik/>) as well as in the Tenders Electronic Daily (TED). In open procurement procedures and in restricted procurement procedures, the deadline for the application delivery is 40 days from the delivery of the procurement documentation to the EOJN and TED. In negotiation procedures with prior notion and competitive dialogue, the deadline for the delivery of an application is 30 days from the delivery of the procurement documentation to the EOJN and TED.

#### National Public Procurement rules for values below the EU thresholds

Procurements of a low value are all those which amount from 26,489 EUR (200,000 HRK) for goods and services and from 66,224 EUR (500,000 HRK) for works. The procurement documentation must be delivered only to the EOJN. In open procurement procedures and in restricted procurement procedures, the deadline for the application delivery is 20 days from the delivery of the procurement documentation to the EOJN. In negotiation procedures with prior notion and competitive dialogue, the deadline for the application delivery is also 20 days from the delivery of the procurement documentation to the EOJN.



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## Relevant National Laws in regard to general obligations and procurement

- The decision of the Constitutional Court of the Republic of Croatia no. U-I-1678/2013 from December 19<sup>th</sup>, 2013. (NN 13/2014)
- The law on Concessions (NN143/2012)
- The law on Public-Private Partnership (NN78/2012, 152/2014)
- The law on state commission for the control of public procurement procedures (NN 152/2014, 127/2013, 74/2014)
- Regulation on the methodology of making and the treatment of procurement documentation and tenders (NN 10/2012)
- Regulation on the announcement of the public procurement (NN 10/2012)
- Regulation on the supervision of the implementation of the Law on public procurement (NN10/2012)
- Regulation on public procurement for the purpose of defense and security (NN 89/2012, 145/2014)
- Rulebook on education in the public procurement sector (NN 06/2012, 125/2014)
- Rulebook on application of Common procurement vocabulary (CPV) (NN 06/2012)
- Rulebook on public procurement in diplomatic missions and consulate offices in the Republic of Croatia (NN 22/2012, 28/2014)
- Rulebook on standards used in public procurement procedures for the purchase of the road transportation vehicles (NN 11/2014)
- Instruction on public procurement procedures in case Electronic Public Procurement Advertiser of Republic of Croatia is inaccessible (NN 88/2016)

## Legal protection below threshold values

The law does not recognize small claim purchases. Every contracting authority must make its own procurement rules for procurement below national threshold values, and they are responsible for implementing them accordingly.

## National Thresholds

National thresholds are the same throughout all of Croatia and they amount to 26,489 EUR (200,000 HRK) for goods and services and to 66,224 EUR (500,000 HRK) for works.

## Central, National, and Regional Databases for Public Procurement

The national database for public procurement is the Electronic Public Procurement Advertiser: EOJN – <https://eojn.nn.hr/oglasnik>

Publishing procurements through EOJN is obligatory for low value procurements, while high value procurements must be published on EOJN as well as on TED. Each authority also has the ability to publish the procurements on their own respective websites.

## Method of Lighting System Acquisition



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Concessions are rare in Croatia in regards to public lighting. More commonly, public lighting is acquired via public-private partnership (PPP) or ESC (ESCO). Public procurement is also the commonly used method of system refurbishments and repairs.

## II. Regional Procurement

In Croatia, no separate regional rules for public procurement exist beyond the national laws on procurement. Every public procurement obligor must make its own procurement rules for any procurement beneath the national threshold values, and they must implement them accordingly.

## III. International Procurement

Croatia, as a member of the World Trade Organization (WTO), ratified the Agreement on Government Procurement (GPA) and has also ratified the revised version of the agreement. The main impacts were recognizing the importance of transparent measures regarding government procurement, carrying out procurements in a transparent and impartial manner, and avoiding conflicts of interest and corrupt practices while recognizing the importance of using and setting the base for the use of electronic means for procurement.

## IV. Private Procurement

Private companies are not subjected to separate procurement laws in Croatia.

## V. Green Procurement

In Croatia, the National Action Plan for Green Public Procurement for the period 2015 – 2017, with 2020 in view. Public procurement does not have to follow the principles of green procurement; it is strictly on the voluntary basis. There are a few projects in Croatia that deal with green public procurement, which aim to reassure responsible institutions to include green public procurement in laws. There are workshops and seminars on green public procurement organized by organizations that are implementing those projects, and different papers and strategies have been made on how to best implement the principle in everyday procurements.



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## c. Development of Lighting Facilities

The following section and its subsections on planning and authorization, refinancing sources/mechanisms, construction, and cost relevant aspects with regard to dynamic public lighting in Croatia describes the relevant aspects in respect of law, the general planning process before official administrative processes begin, technical standards, the authorization process, the role of land use plans, opportunities for public, civil and other stakeholders' participation in administrative processes, and the possibilities to review authorizations once they have been granted.

### I. Planning and authorization

#### Relevant aspects in respect of law

The lists of applicable national laws in Croatia regarding the development of public lighting facility are:

#### Acts:

- Law on Physical Planning (NN 153/13)
- Law on Construction (NN 153/13)
- Law on Occupational Health and Safety (NN 59/96, 94/96, 114/03, 100/04, 86/08, 116/08, 75/09, 71/14)
- Law on Fire Protection (and Prevention) (NN 92/10)
- Regulation on safety at work for working and auxiliary rooms and spaces (NN 6/84, 42/05, 113/06)
- Technical regulation on low-voltage electrical installations (NN 5/10)
- Law on Physical Planning and building tasks and activities (NN 152/08, 124/09, 49/11, 25/13)
- Law on Amendments to the Physical Planning and building tasks and activities (NN 25/13)
- Law on Standardization (NN 080/2013)
- Law on State Inspectorate (NN 116/2008, 96/03, 151/03, 160/04, 174/04, 33/05, 48/05, 129/05, 140/05, 138/06)
- Law on the Takeover of the Law on Standardization, which is in Croatia applied as republic law (NN 53/91)
- Law on Measurement Units (NN 58/93)
- Law on Telecommunications (NN 122/03)
- Regulation on Technical Requirements and Conditions of use for Optical Distribution Networks (NN 155/09)
- Ordinance on technical conditions of construction and use of telecommunications infrastructure (NN 88/01)
- Technical regulation for protection systems against effects of lighting on construction works (NN 87/08, 33/10)
- Regulation on fire protection of Accommodation Facilities (NN 100/99)



- Regulation on ensuring accessibility to the disabled and to persons with reduced mobility (NN 78/13)
- Regulation on the type of objects intended for work where the inspection of work participates in issuing building permits and in technical inspections of constructed facilities (NN 48/97)
- Regulation on technical requirements for electricity plant nominal alternating voltages above 1 KV (NN 105/10)
- Law on Non-Ionizing Radiation (NN 91/10)
- Regulation on the Protection from the electromagnetic field (NN 146/14)
- Law on the Protection from light pollution (NN 114/11)

#### Standards:

- HRN N.B2.730, HRN N.B2.741, HRN N.B2.742, HRN N.B2.743, HRN N.B2.751, HRN N.B2.754, HRN N.B2.771
- HRN HD 60364-4-41 Low voltage electrical installations - part 4-41
- HRN HD 384-4-43 - Low voltage electrical installations
- HRN HD 60364-5-54 - Low voltage electrical installations
- HRN EN 13201-2:2008 - Road lighting – part 2

#### General planning process before the official administrative processes

The Department of Municipal Services and the Department of Planning and European Funds are the responsible parties for the development of urban lighting, in accordance with professional standards and in accordance with legal regulations. The Administrative Department for Economy deals with development in terms of the technical improvements for existing urban lighting, and the Administrative Department for Planning is in charge of planning new public lighting in empty construction areas. The location of urban lighting infrastructure is determined by the urban plan and the costs associated with urban planning are absorbed in the town's budget.

#### Technical standards

Access and capacity of existing electrical networks largely define the planning process. It would be most beneficial for a city or national firm when developing new infrastructure to use land which is already owned by them rather than using privately owned land for which compensation for expropriation would have to be paid. Technical standards insist that lighting conditions should ensure energy efficiency and satisfy environmental protection criteria. HRN EN 13201 is the EU norm that has been fully adopted in Croatia.

#### Authorization

Before obtaining a building permit for public lighting, it is necessary to obtain an opinion on the acceptability of the ecological network and the confirmation of the project. In regard to public lighting, it is only necessary to obtain a single building permit. A building permit is valid for three years and if construction does not begin within this allotted time, the permit will expire and an additional one would need to be obtained again to continue. The municipality is the responsible



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party for issuing building permits within its jurisdiction; the exception would be for larger projects which are in the greater interest of the Republic of Croatia, for which permits would then need to be issued by the Ministry for Construction. For the reconstruction of existing infrastructures, it is necessary to obtain an electric power permit as well as a building permit.

### **Land use**

General land use plans define areas that are consistent with the economic, social, and environmental standards in a county or country. Also within the defined areas of a land use plan would be designated areas for grid development. If infrastructure is to be built on an area that is not already clearly defined in a land use plan, the necessary steps must be taken to change the plan to adapt to this.

For the usage of private property, however, land use plans do not need to be changed. Private property is also susceptible to expropriation in cases where there a need for construction which is in the interest of the Republic of Croatia. In these instances, property owners are reimbursed for the actual value of the land. The main financial risk involved with settling claims is the compensation of expropriated land.

### **Opportunities for public civil and other stakeholders' participation in the administrative process**

Public participation is determined in the Law on Physical Planning (NN 153/13). All interested citizens, groups, or entities may be included in the planning process through the institution of a public debate on the draft of the physical plan. The department of physical planning, environmental protection and construction of the municipality is responsible for ensuring participation. The goal of encouraging participation is to create a better quality of physical plans that meet the interests of the wider circle of society. The main instrument in place that facilitates participation is public debates.

### **Possibilities to review the once granted authorization**

It is possible to review an authorization through inspection and supervision and this activity is entitled to the Ministry of Construction and Physical Planning. The main reasons that motivate parties to challenge permits and decisions are the disputes over the ownership of plots on which construction is being performed, when they feel that construction is a disturbance to their property, and or when they feel their rights or interests are being violated.

New applications are required to have the possibility to amend the content of a granted authorization. Prerequisites for being able to review and or challenge an authorization are regulated by the Law on Construction. If amendments of a permit are consistent with the technical regulations and legal provisions, it can be obtained. The deadline for reviewing is one year from its finality. If the result of the supervision is the cancellation of a permit, all of the works are being suspended until the new permit is issued. The entirety of this process prolongs construction.



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## II. Refinancing sources/mechanisms

Costs are not directly passed on to consumers. Costs arising from the construction of permitted facilities are generally upon the investor, if it is not possible to prove the guilt or responsibility of the other parties involved in the construction. The other ways of providing incentives for investments into urban lighting projects include loans under favorable conditions and subsidies.

## III. Construction

The main obstacle encountered in regard to construction is resolving the issue of legal property relations. There is generally a timeframe set by investors for works to be executed. Permits to be issued are also time sensitive in regard to construction.

The control and supervision mechanisms in place to ensure the compliance with terms and conditions of the authorizations in execution are taken on by the authorized engineers who control the quality and quantity of works. Legislation requires supervision, and the party responsible for providing surveillance and the reporting of execution is the investor.

## IV. Cost relevant aspects

Regulatory frameworks regulate the construction of public lighting through the law and via other regulations. Moreover, the Law on Concessions, the law on public-private partnership and the law on public procurement somewhat regulate the size and the manner in which investments are implemented.

The consequences for missing deadlines in the context of construction are defined by the contract signed between an investor and the constructor, and there are monetary impacts for missing deadlines. Claims to compensation or damages are defined within the agreements negotiated in the contract, and are quoted as a percentage of the total investment per day of delay. Claims are also, according to law, limited to a given amount per case. The financial damages are also often divided between parties based upon what is agreed on within a contract. When technical standards are not met, the financial risks are carried by the design engineer, the contractor, and the authorized supervising engineer.

When the lighting facility shows technical defects during its service with regard to the connection point, it is necessary to identify and prove who the guilt for the malfunction belongs to; it is common that it belongs to an independent professional authority or person. If dismantling of lighting facilities are not executed according to the legal and contractual standards, the contractor is responsible.

Regarding insurance, it is obligatory for contracting parties to be insured; it can be a matter of contract, but in some cases it is required according to legislation.



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