



**elektroprojekt**

*Established 1949*

Consulting Engineers

**elektroprojekt**

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Established 70 years ago, in 1949, **Elektroprojekt** has since developed from a company specialized in design of hydroelectric and thermal power plants into a company unique in the region for its scope of activities in the fields of power generation, water and environmental management, and nature conservation. Such a development has been contributed by Elektroprojekt's experts and their broad experience in those fields. Fifty out of 100 employees are certified engineers, and a number of specialists on the **Elektroprojekt** staff are authorized for validation of foreign design documentation in all building sector segments. Many professionals have established traditionally strong partnerships with scientific, research and educational institutions, and external specialists covering the fields not in the narrow scope of the company's expertise (natural sciences, biotechnology, sociology). Elektroprojekt's experience and capacities for managing multidisciplinary projects should be particularly highlighted, as well as for elaborating and evaluating complex multipurpose infrastructure systems. All the projects are undertaken and implemented with full awareness of socio-economic requirements, considering their nature conservation and environmental protection aspects.

**Elektroprojekt** has been working for decades with strong sense of responsibility for the national interests. In international projects implemented in 28 countries on four continents - from the USA over the Mediterranean Africa to New Guinea - the company has always endeavoured to meet its clients' requirements while promoting responsibility towards local communities. Such an attitude enabled **Elektroprojekt** to achieve technically reliable, economically efficient and environmentally sustainable solutions. This attitude is reflected in the company's mission statement:

**creating reliable, efficient and sustainable  
harmony of construction and technology with mankind and nature  
for present and future generations.**

The mission has been an inspiration to previous generations and young people joining **Elektroprojekt** alike. The young are prepared from the early days to assume the role of their predecessors, whose aims and achievements are deeply embedded in the company's professional philosophy and daily practice. The company's products, the documentation developed during the past years, create a unique archive comprising tens of thousands of designs, studies, analyses, manuals, books, and hundreds of thousands of drawings.

As the turnover of employees is rather low, the currently employed have on average 16 years of service in **Elektroprojekt**. Masters and doctors of science and other Elektroprojekt specialists are lecturing at the University of Zagreb Faculty of Civil Engineering, Faculty of Science, and Zagreb Polytechnic, which grants Elektroprojekt the status of a scientific institution.

**Elektroprojekt** has had a long tradition in implementation of its in-house quality assurance and control policy, environmental protection and nature conservation, health and safety, as confirmed by recertification according to the quality control ISO standards - ISO 9001, the environmental protection ISO 14001, and the occupational health and safety OHSAS 18001 standard. Responsibility towards sustainability of the design solutions is confirmed by setting up a permanent team of experts in charge of the environmental and nature impacts assessment of the company's activities. Rendering consultancy services on projects funded by the World Bank, United Nations, various European banks and funds in the field of power generation, water management, environmental protection and nature conservation has given the company an opportunity to gain invaluable knowledge of procedures, guidelines and requirements faced with by consultants involved in implementation of projects funded by these institutions.

**Elektroprojekt** owns two companies: Nukel (Slovenia) and Harna (Croatia), and has had a registered office in Teheran (Iran) since 1964. Elektroprojekt is a private joint-stock company with about 280 shareholders according to data for 2015. Total property value amounts to 19,000,000, total assets and reserves to 17,000,000, and revenues to 7,000,000.

**Design, consulting and engineering  
of development, building and management  
in energy sector, water management,  
nature conservation, municipal services,  
public facilities and telecommunications**

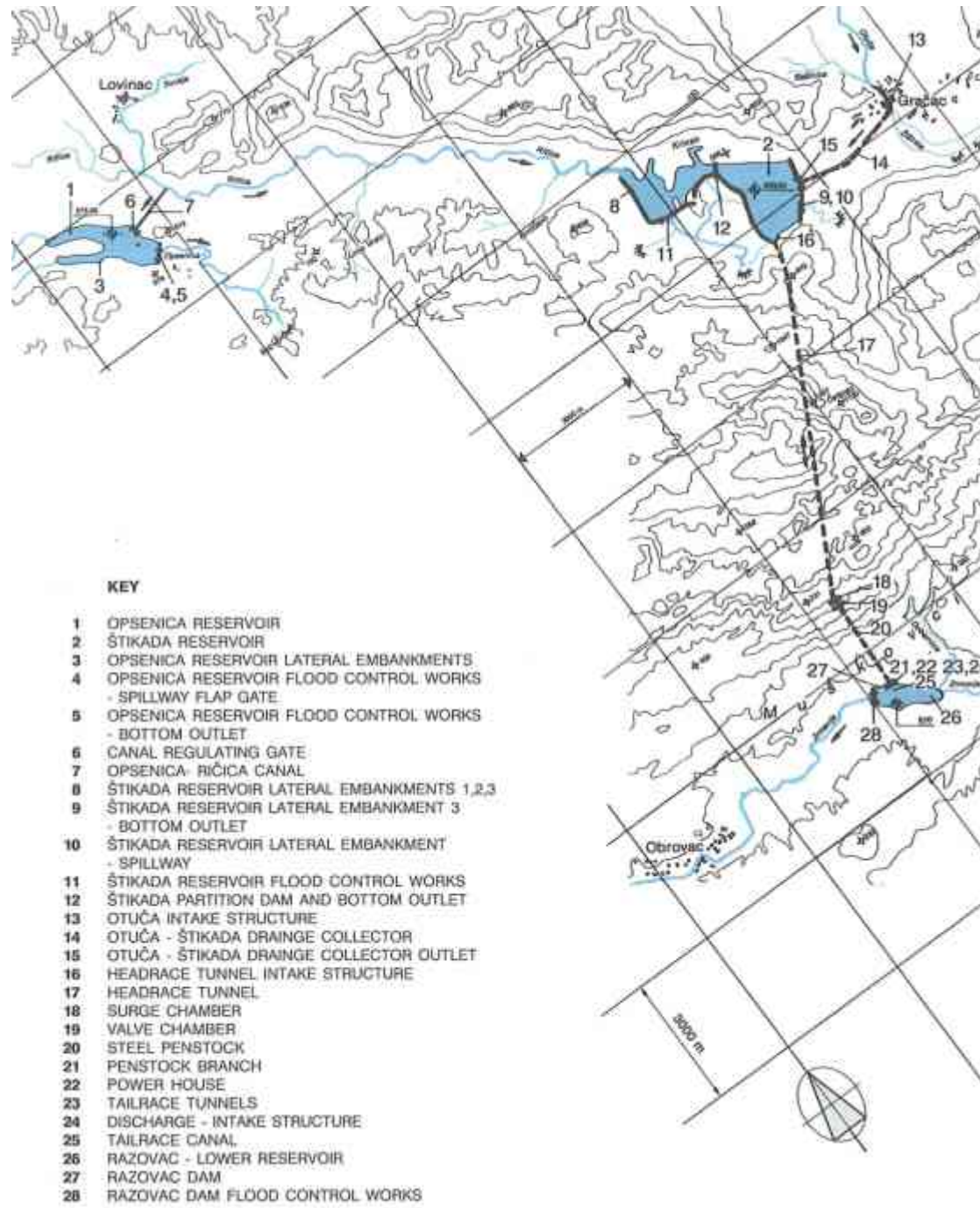


Construction and technology  
in harmony with mankind and nature  
for present and future generations

**Hydraulic Systems used for  
Water Supply in Croatia**

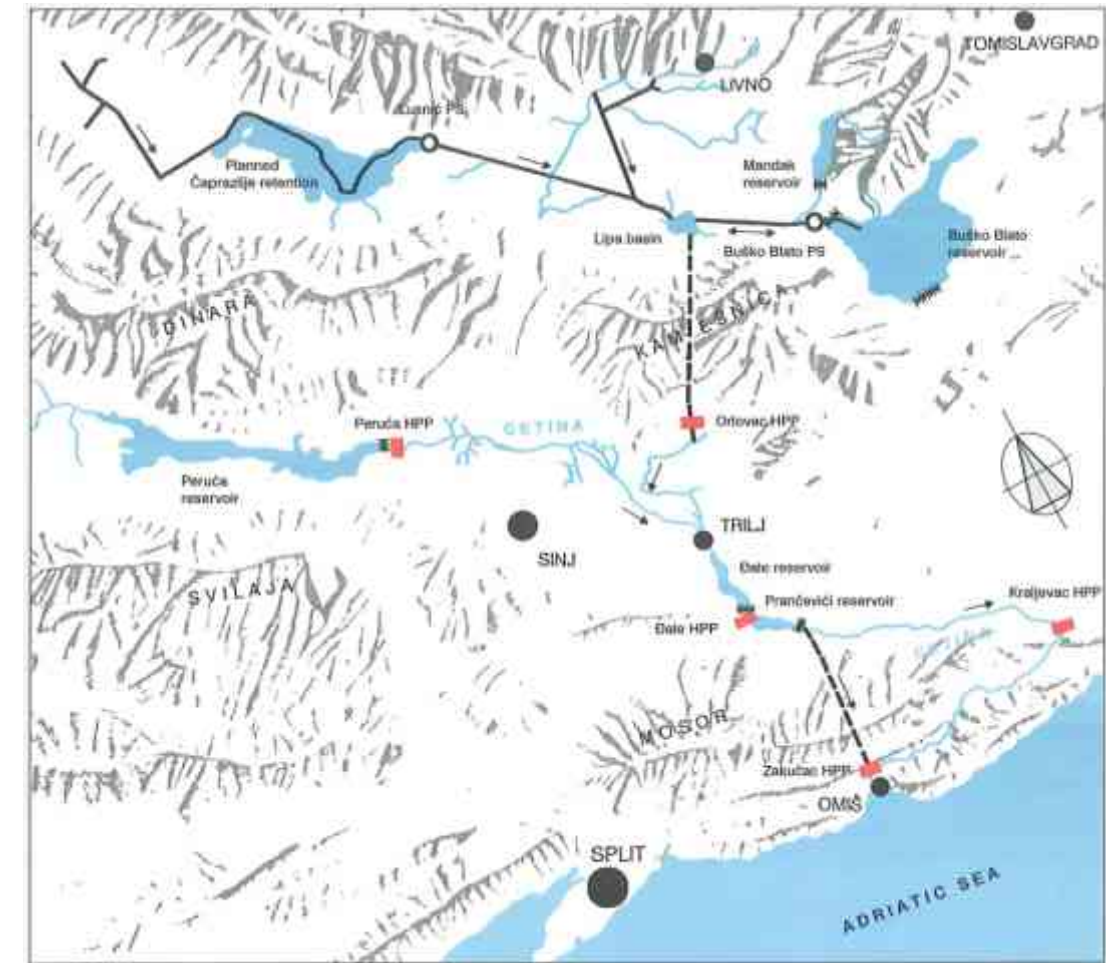


## VELEBIT PUMPED STORAGE POWER PLANT – ZADAR HINTERLAND WATER SUPPLY

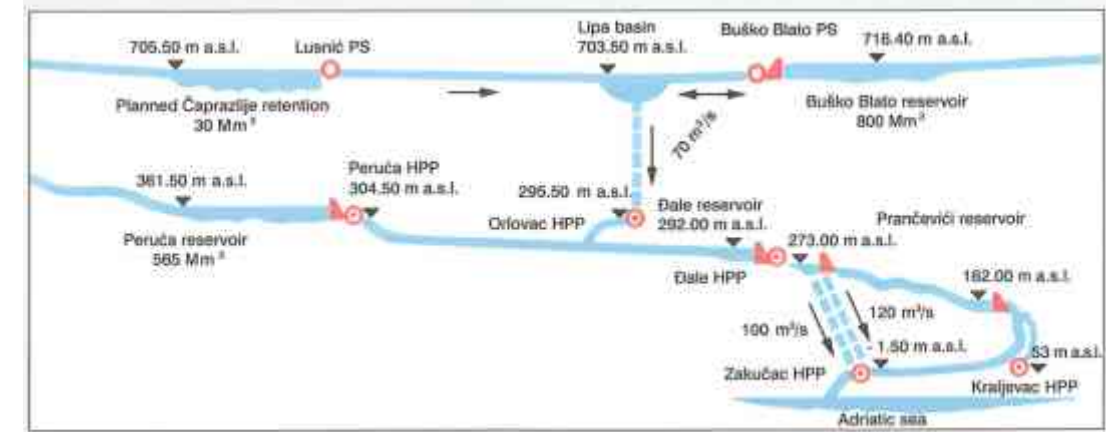


Velebit PSPP		Zadar hinterland water supply	
Headwater (upper) pond	Mm3	14.00	
Tailwater (lower) pond	Mm3	1.85	
Štikada Dam	type	embankment	
	height	m	10.00
Razovac Dam	type	embankment	
	height	m	9.00
Headrace tunnel	length	m	8,190.00
	diameter	m	4.60
	capacity	m3/s	60.00
	Penstock		
Penstock	length	m	2,100.00
	diameter	m	3.90
	capacity	m3/s	60.00

## ZAKUČAC HYDROELECTRIC POWER PLANT – WATER SUPPLY OF OMIŠ AND ITS HINTERLAND



CETINA HYDROPOWER SYSTEM GENERAL MAP

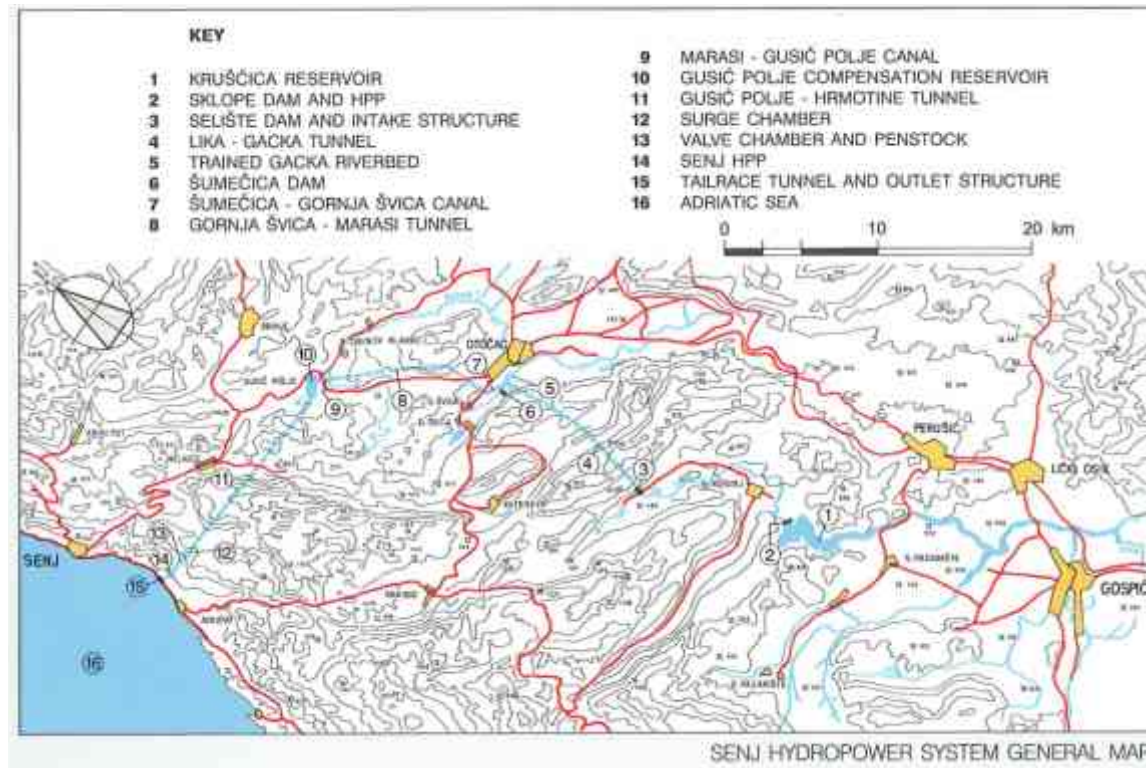


CETINA HYDROPOWER SYSTEM LONGITUDINAL SECTION

Zakučac HPP		Water supply of Omiš and its hinterland	
Prančevići Reservoir	Mm3	6.80	
	Prančevići Dam	type	concrete
Headrace tunnel 1	height	m	15.00
	length	m	9,890.00
Headrace tunnel 2	diameter	m	6.50
	capacity	m3/s	120.00
Headrace tunnel 2	length	m	9,890.00
	diameter	m	6.10
	capacity	m3/s	100.00



## SENJ HYDROELECTRIC POWER PLANT – WATER SUPPLY OF NORTHERN ADRIATIC

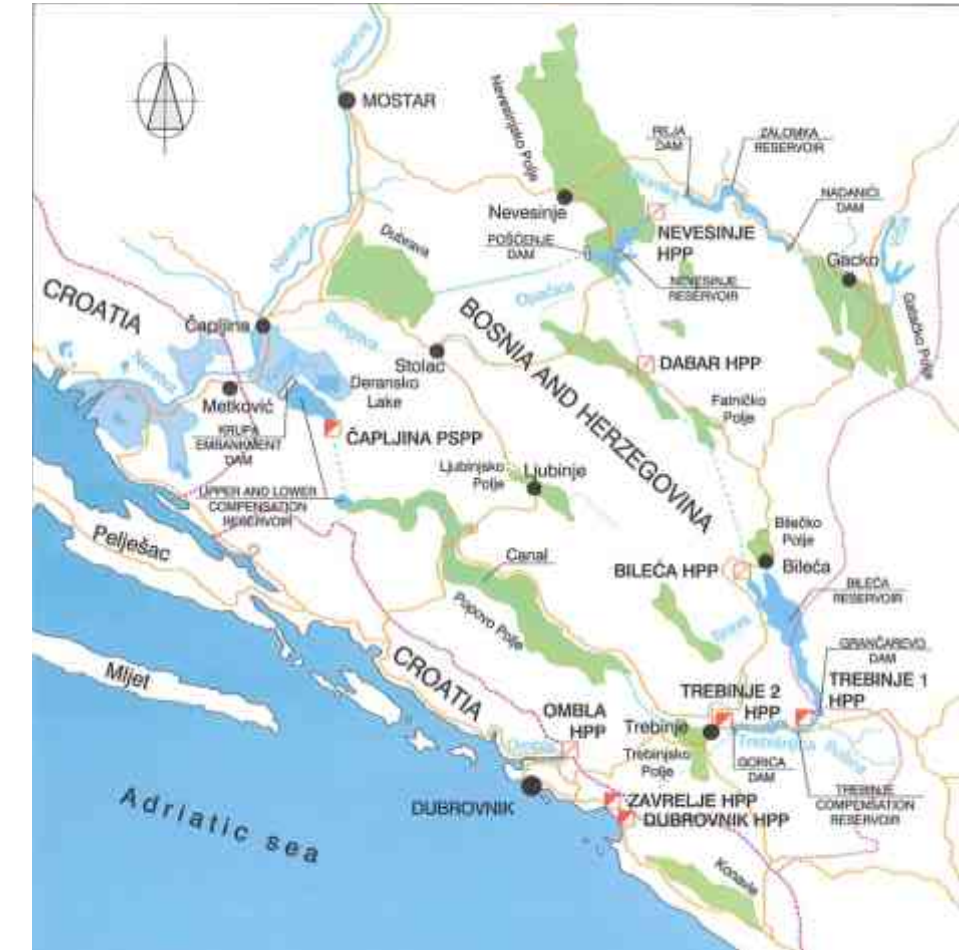


### Senj HPP

#### Northern Adriatic water supply

Kruščica Reservoir	Mm3	140.00
Sklope Dam		
type	embankment	
height	m	81.00
Lika - Gacka tunnel		
length	m	10,477.00
diameter	m	3.80
capacity	m3/s	49.00
Gornja Švica - Marasi tunnel		
length	m	9,216.00
diameter	m	4.70
capacity	m3/s	60.00
Gusić polje - Hrmotine tunnel		
length	m	13,570.00
diameter	m	5.00
capacity	m3/s	60.00

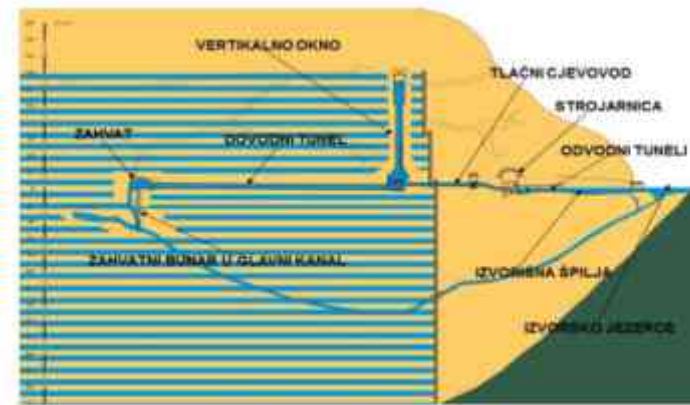
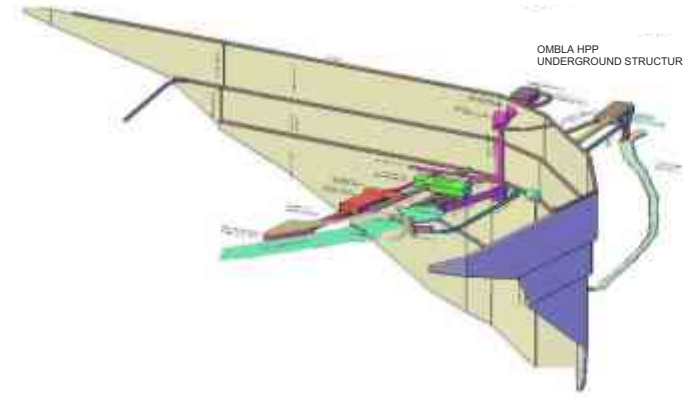
## DUBROVNIK HYDROELECTRIC POWER PLANT - MONTENEGRO COAST WATER SUPPLY



### Dubrovnik HPP

#### Montenegro coast water supply

Gorica Reservoir	Mm3	16.00
Gorica Dam		
type	concrete	
height	m	15.00
Headrace tunnel		
length	m	16,560.00
diameter	m	6.00
capacity	m3/s	90.00



Translation:

VERTIKALNO OKNO – VERTICAL SHAFT  
 ZAHVAT – INTAKE  
 DOVODNI TUNEL – HEADRACE TUNNEL  
 ZAHVATNI BUNAR U GLAVNI KANAL – MAIN CANAL INTAKE SHAFT  
 TLAČNI CJEVOVOD – PENSTOCK  
 STROJARNICA – POWER HOUSE  
 ODVODNI TUNELI – TAILRACE TUNNELS  
 IZVORIŠNA ŠPIIJA – SPRING CAVE  
 IZVORSKO JEZERCE – SPRING POND

Underground dam with grout curtain

grout curtain altitude 130 m a.s.l.

Annual export of drinking water to Mediterranean countries by super tankers 75 Mm<sup>3</sup> (about 2 m<sup>3</sup>/s)

Water supply line placed in a tunnel

length	m	525
pipeline diameter	m	1.60
capacity	m3/s	3.50

Headrace tunnel

length	m	600
diameter	m	8.60