



18th INPRO Dialogue
Forum on Partnerships for Nuclear Development and Deployment
virtually via Cisco WebEx from **18 to 21 May 2021**

Partnerships in NPP development and deployment - Experience from sharing of the Krško NPP between Croatia and Slovenia

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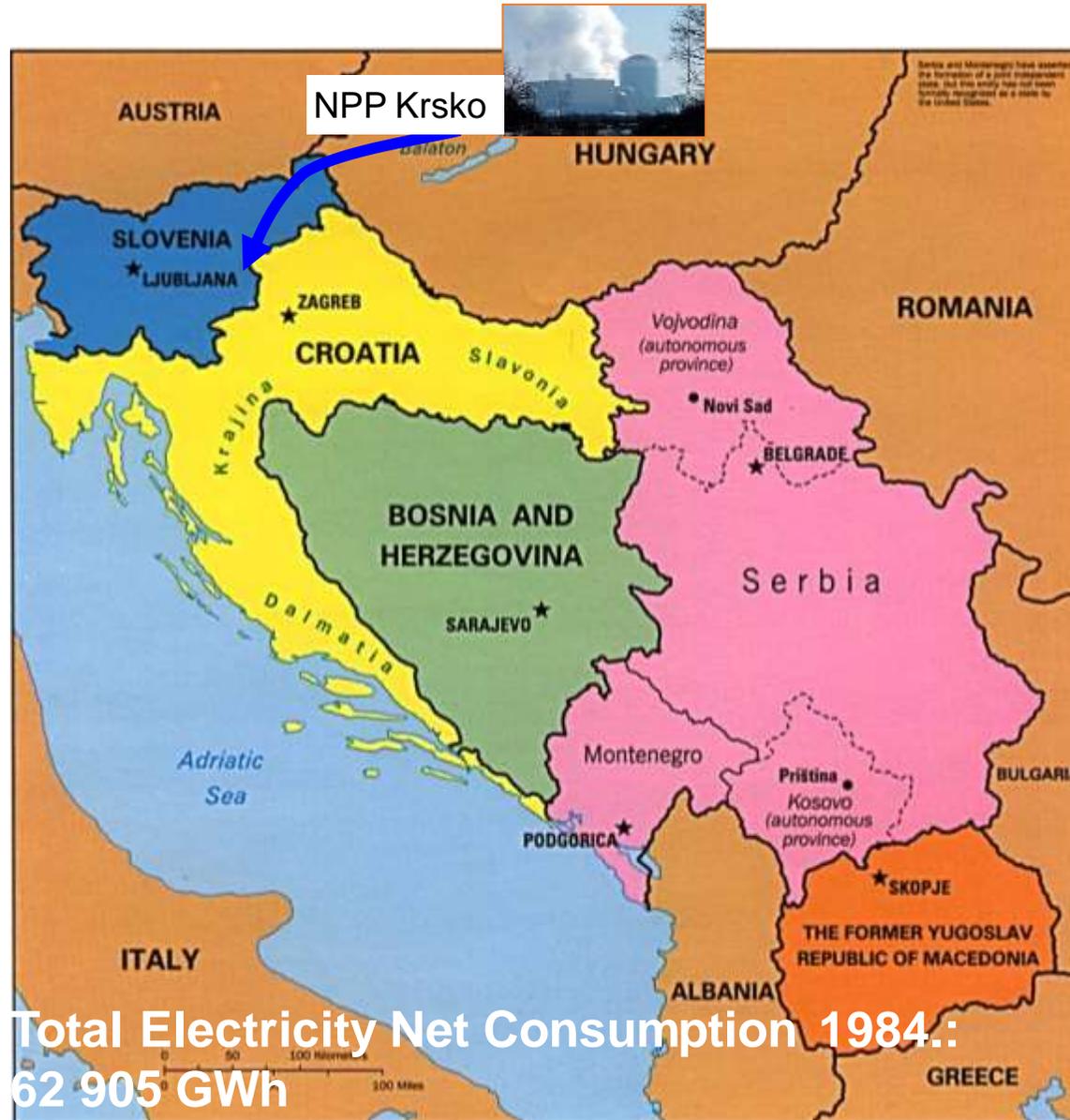


Former Yugoslavia

Socialist Federal Republic of Yugoslavia

- The Krško Nuclear Power Plant is located in [Slovenia](#).
- It was built as a joint venture of Slovenia and [Croatia](#)

Yugoslavia's population
23.4 million



Total Electricity Net Consumption 1984.:
62 905 GWh

Federal system in which federal government and **governments of six republics shared power and authority.**

Yugoslav system had developed into a unique, **highly decentralized, socially owned** market economy.

- The second NPP was to be built in Croatia.
- Chernobyl cancel that.

Joint ownership model of the Krško NPP – brief history

- **1981-1992: First Decade of Commercial Operation**
 - The Krško NPP was operating without serious problems, with full respect of the provisions from the Governing Agreements
- **1993-2002: Decade of Disputes**
 - Differences in the common **understanding of Governing Agreements produced numerous disputes between the Parties**
 - Due to Slovenian delay in the electricity resumption, in late 2005, HEP d.d. commenced **arbitration against Slovenian Government** before International Centre for Settlement of Investment Disputes (ICSID) in Washington seeking **compensation for the period of delay** (June 30, 2002 – April 19, 2003)
- **Current time: Decades of Good operation**
 - Current disputes arose from the past are expected to be solved (not yet)
 - The **Krško NPP** has been achieving **excellent business results** in last few years
 - **The Krško NPP is in very good financial health**
 - The Krško NPP is the **high profitable energy source for both co-owners today**
 - **The operator can operate!**
 - **Both owners can enjoy benefits of low cost electricity!**

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Joint ownership model of the Krško NPP

- Dealing with the **radioactive waste**, spent nuclear fuel and decommissioning issue
 - The Governing Agreements did not expressly deal with financing of decommissioning at the end of the Krško NPP useful life (2023)
 - Spent nuclear fuel and radioactive waste provisions:
 - *The Parties shall take all measures to provide, upon completion of construction of the Krško NPP, the security measures for prevention of possible adverse consequences for the human environment*
 - *The cost of performance of measures from the previous paragraph, together with **the cost arising from disposal of nuclear fuel and radioactive waste shall be borne by the Parties from each Republic in proportion 50:50.***

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Slovenian and Croatian Independence

1993-2002: Decade of Disputes

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1993-2002: Decade of Disputes

Differences in the common understanding of Governing Agreements produced numerous disputes between the Parties

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1993-2002: Decade of Disputes

Disputes culminated on July 30, 1998

- **The Government of Slovenia**, Slovenian transmission company ELES, and the Krško NPP **disconnected transmission lines from the Krško NPP to Croatia and terminated all deliveries of electricity from Krško NPP to HEP**
- The Government of Slovenia issued a **Decree on the Transformation of the Krško NPP** in line with Slovenia's new company laws.
- The **Decree** provided that it shall remain in force until the entry into force of a **new Bilateral Agreement** between Slovenia and Croatia.

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1993-2002: Decade of Disputes

Intensive negotiations

- Slovenian actions motivated two governments to start with a new set of negotiations on the new Bilateral Agreement
- Negotiations were carried out from **August 1998 to July 2001**
- The *new Agreement Between the Government of the Republic of Croatia and the Government of the Republic of Slovenia on Regulation of the Status and Other Legal Relations Regarding the Investment, Use and Dismantling of Nuclear Power Plant Krško* (2001 Agreement) was finally signed on **December 19, 2001**

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2001 Agreement

Entry into force

- The expectations on both sides were that the **ratifications** of the 2001 Agreement would be **not later than June 30, 2002**
- Unfortunately, **both Parliaments delayed with ratification:**
 - **Croatia** ratified the 2001 Agreement on **July 3, 2002** and **Slovenia** more than **7 months later**, on February 25, 2003
 - **The 2001 Agreement entered into force on March 11, 2003**
 - **The resumption of electricity deliveries from the Krško NPP occurred on April 19, 2003, almost 5 years after 1998's cut off.**

2001 Agreement

Most significant features

Governance of the Krško NPP

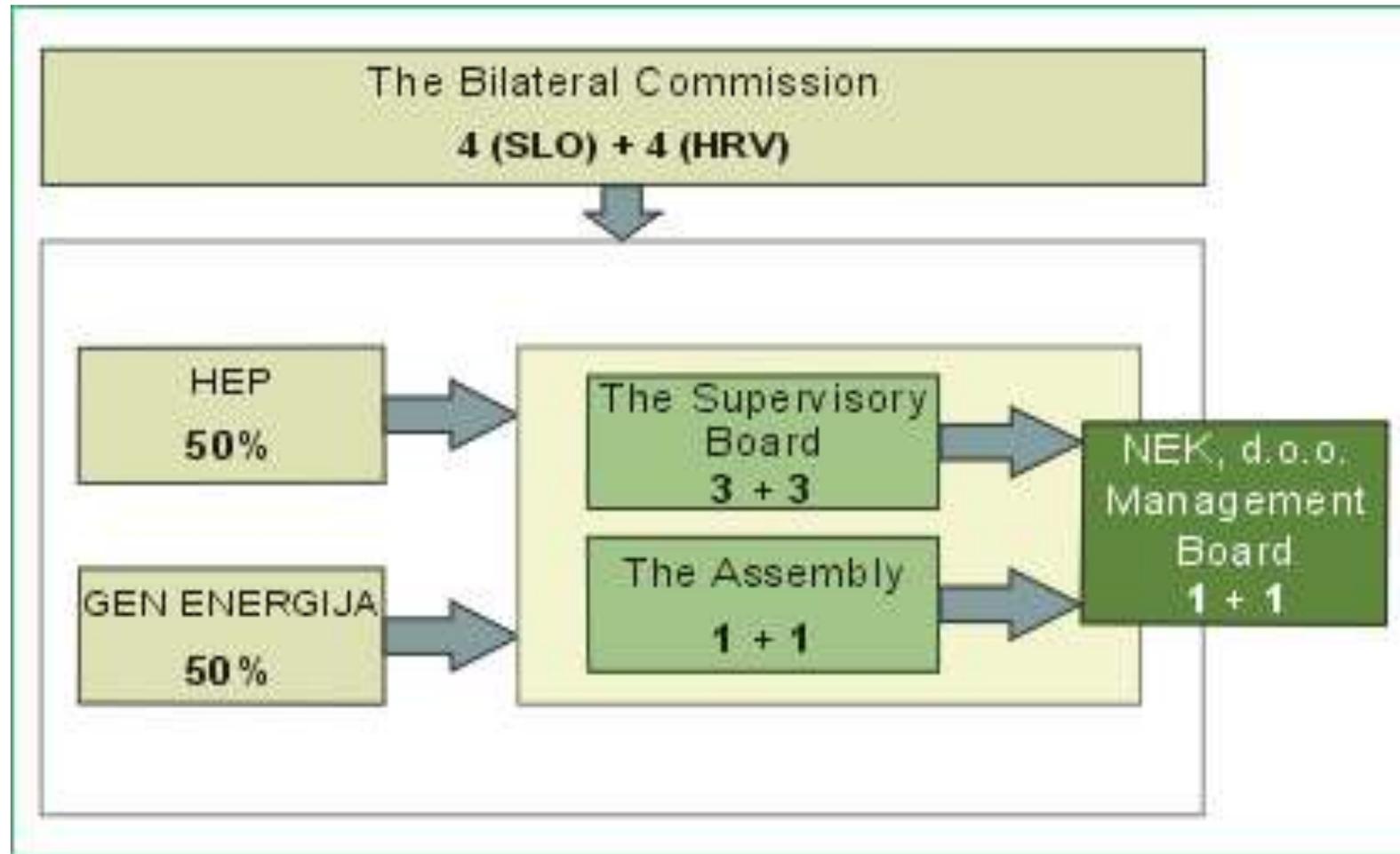
The designated "Company bodies" would be the Shareholders' Assembly, the Supervisory Board, and the Management Board, "all of which are composed on a parity basis."

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50:50 Rights to Total Power Output of the Krško NPP

The Krško NPP is required to deliver electricity produced at the Plant to the Shareholders in equal proportions.

2001 Agreement - Management



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2001 Agreement - Decommissioning program

- Disposal of radioactive waste and nuclear spent fuel from plant operation and decommissioning shall be carried out in accordance with the **Decommissioning program** of radioactive waste and nuclear spent fuel.
- Decommissioning program shall be developed in accordance with international standards and co-operation of NEK, d.o.o. by expert organizations, which shall be appointed by Contracting Parties
- 12 ▪ **Decommissioning program** shall include among other: proposal for **possible sharing** and acceptance of both radioactive waste and nuclear spent fuel, acceptance criteria for disposal, assessment of necessary funds, and completion dates.
- The parties agreed that **dismantling the Plant and disposal of radioactive waste and spent nuclear fuel would be joint liabilities** of both Slovenia and Croatia and would be **financed in equal proportions**

Decommissioning program

- If Contracting Parties fail to agree on a **common solution** about disposing radioactive waste and nuclear spent fuel until the end of plant lifetime, they are both bound to complete acceptance and transport of both radioactive waste and nuclear spent fuel from location of NEK, each half of it, in the period of two years following this time limit.
- **Croatian** current position is **to have own LILW storage and disposal**

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Arbitration against Slovenian Government

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HEP d.d. request compensation for delay in electricity delivery

Arbitration against Slovenian Government

- Since their respective **independence** in 1991, the Krško nuclear power plant has been **a continuous source of conflicts between both countries**.
- According to Slovenians, Croatians refuse to finance a fund for the disposal of nuclear wastes and for the retirement of the plant.
- As a consequence, the **nuclear plan did not supply electricity to Croatia for five years**.
- 15 ▪ **As a response, Croatians sued the Slovenians to receive damages in compensation of the one-year period during which Krško did not deliver the electricity.**
- Due to Slovenian delay in the electricity resumption, in late 2005, **HEP d.d.** commenced **arbitration against Slovenian Government before International Centre for Settlement of Investment Disputes (ICSID)** in Washington seeking **compensation for the period of delay** (June 30, 2002 – April 19, 2003)

Original Arbitration Proceeding

Date	Development
December 28, 2005	The Acting Secretary-General registers a request for the institution of arbitration proceedings.
April 20, 2006	The Tribunal is constituted. Its members are: David A.R. Williams (New Zealand), President; Charles N. Brower (U.S.); and Jan Paulsson (French).
July 03, 2006	The Tribunal holds its first session in London.
November 13, 2006	The Claimant files a memorial on the merits.
February 15, 2007	The Tribunal issues a decision joining jurisdiction to the merits.
April 21, 2008	The President of the Tribunal holds a pre-hearing conference with the parties by telephone.
May 05-16, 2008	The Tribunal holds a hearing on jurisdiction and the merits in Paris.
November 24, 2008 - November 25, 2008	The Tribunal holds a hearing in Paris on treaty interpretation.
July 27 - August 31, 2009	The Tribunal holds a hearing <i>on quantum</i> and certain merits issues in Paris.
October 05, 2009	The parties file post-hearing briefs.
November 06, 2009	The parties file reply post-hearing briefs.
November 13, 2009	The parties file statements of costs.
November 25, 2009	The Respondent files reply statement of costs. Waiting for decision

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Final judgment – after 10 years

- The Republic of Slovenia must pay to Hrvatska elektroprivreda (HEP) **more than 40 million euros** for undelivered electricity from the Krško Nuclear Power Plant (NE) in the period from July 1, 2002 to April 19, 2003, decided the International Centre for Settlement of Investment Disputes – ICSID with headquartered in Washington issued a judgment on 17 December 2015.
- In its decision, the Tribunal ruled that the Republic of Slovenia must pay HEP damages of approximately EUR 20 million, accrued interest (semi-annual EURIBOR + 2%) calculated from 1 July 2002 and **USD 10 million in legal and other expenses, and attorneys' fees** which HEP had in the legal process.

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Where we are now?

Both owners decided to extend life of NEK
for next 20 years

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Some remarks

Possible difficulties

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Some remarks on regional NPP projects

- Decommissioning
- Decommission Funds
- Waste storage
- Price of electricity
- Employment of personnel
- Compensations to local communities
- Does improve security of supply for not-host countries?
 - Cross-border capacities – auctions
 - Long term contracts and electricity markets?

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Decommissioning Funds and LILW disposal

- Funds in each country or one fund
 - Large amount of money for long period
 - Benefits from fund money – investment policy
- One waste disposal
 - Not only for specific NPP?
 - Costs?
 - Size?
 - Taxes?
 - Payment to local community?
 - VAT
- ◆ Or in each country – more expensive!?

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Compensations to local communities (CLC)

- In Slovenia, **direct financial compensations to local communities (CLC)** for hosting nuclear facilities as compensations for restricted land use are specified by a government regulation, which was first introduced in 2003 and later amended in 2008.
- Article 136 defines that the beneficiary of **compensations is the local community** where the area of limited land use is situated.
- The amounts of CLC for a particular nuclear facility, to be **paid by the manager of the facility**, are specified as a percentage of the basis.
- **The main feature of the 2008 amendments is that they have about doubled the previous amount of compensations for LILW and SF repositories.**

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Some remarks on regional NPP projects

- Need for **comprehensive and detailed** contracts because of **long operation time of NPP**
- Relatively well-balanced **obligations and benefits** for all sides
- Business model:
 - profit NPP or
 - non-profit for NPP

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What could be the indicators to measure benefits and disadvantages of cooperation with other countries in nuclear energy projects

- Share of “domestic” industry in construction of NPP
- Share of employed people
- Solution for Decommissioning
- Establishment of Funds
- Solution for Waste storage (common, separate)
- Price of electricity
- Balance of **obligations and benefits** for all sides
- Compensations to local communities (specially if close to border)

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NPP - vital component of the local economy

- **Economic output** - Plant generates low cost electricity and makes purchases of goods and services that have stimulated the local economy since the construction of the plant
- Jobs, labour incomes and tax revenue to the area
- Intangible benefits – charitable giving, recreational opportunities for workers, cleaner air, ...
- Local community (taxes, infrastructural projects, ...)
- Workers (salaries,...)
- Local and foreign companies
- Insurance companies, pension funds, health insurance institutes, educational institutions,...

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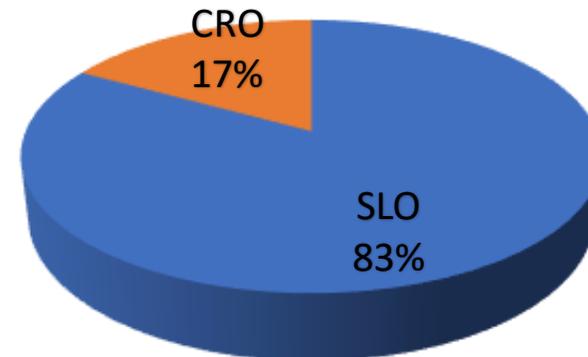
Direct financial benefits - Summary

	2014	1983-2014
Expense, million €	195,10	4.457,43
National portion	90,59	2.009,32
Benefit for SLO	76,32	1.670,02
Benefit for CRO	14,27	339,3

Million €

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Impact on national economies
(1983-2014) = **2 billion EUR**





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