

## **AMENDMENT No. 2**

to the

**Contract Agreement No BIDSF-020-04-01-00**  
Double 400 kV OHL Križovany – Bystričany

**Financed by**

**Bohunice International Decommissioning Support Fund (BIDSF),  
administered by the European Bank for Reconstruction and Development  
(EBRD)**

This Amendment No. 2 to the Contract is made between:

### **Slovenská elektrizačná prenosová sústava, a.s.**

*Mlynské nivy 59/A,  
824 84 Bratislava,  
Slovak Republic*

IČO: 35 829 141  
Tax-No.: 2020261342  
VAT reg. No.: SK2020261342  
Bank: Tatra banka, a.s., IBAN: SK30 1100 0000 0026 2019 1900  
SWIFT: TATRSKBX  
Statutory body: Board of Directors, represented by:  
Ing. Peter Dovhun, Chairman of the Board of Directors  
Marián Širanec, MBA, Vice-chairman of the Board of Directors  
Registered: in the Commercial Register of Bratislava I District Court, Section:  
Sa, Insert No.: 2906/B

Person responsible to negotiate the technical issues: Mr. Marián Sabol  
Person responsible to negotiate the contractual issues: Mrs. Monika Božíková

(hereinafter called "the Employer") of the one part

and

### **JVC VUJE – ELCON – Alter Energo**

Head of the Association:

*VUJE, a.s.  
Okružná 5,  
918 64 Trnava,  
Slovak Republic*

IČO: 31 450 474  
Tax-No.: 2020392539  
VAT reg. No.: SK2020392539  
Bank: Slovenská sporiteľňa, a.s., IBAN: SK76 0900 0000 0051 5153 0992

Statutory body: Ing. Zoltán Harsányi, PhD., Chairman of the Board  
Ing. Alexander Kšiňan, Member of the Board

Registered: in the Business Register of the Municipal Court Trnava,  
Section: Sa, File No.: 164/T

(hereinafter called "the Contractor") of the other part.

**Whereas:**

- (A) The Employer and the European Bank for Reconstruction and Development signed on 29 August 2019 the amended and restated BIDSF Grant Agreement No. 020B
- (B) Amendment no. 1 to the Contract, signed on 25 March 2020 has brought this contract in line with the amended and restated GA 020B.
- (C) The Employer and the Contractor agreed: (i) to reduce the total contract price by EUR 800,000 due to cancellation of destructive testing of OHL towers as relevant inspection data is available and therefore testing is not necessary and (ii) to increase the total contract price with EUR 42.460,32 due to relocation of the OHL towers Nos: 35 – 39 locations to ensure undisturbed continuation of construction activities bringing the total contract price to EUR 38 122 460,26.

**The Employer and the Contractor agree to amend the Contract through the Amendment No. 2 as follows:**

- 1. In this Amendment No. 2 words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
- 2. This Amendment No. 2 shall supersede the Amendment No. 1 and the Contract Agreement.
- 3. The Contract Agreement shall be amended as follows:
  - 3.1 In article 2 delete the words:
    - (a) *The Amendment No.1*
    - (b) *The Form of Contract Agreement,*
    - (c) *The Letter of Acceptance dated 12 December 2018,*
    - (d) *The Letter of Tender, dated 16 July 2018,*
    - (e) *The Particular Conditions of Contract,*
    - (f) *The General Conditions of Contract,*
    - (g) *The Employer's Requirements,*
    - (h) *The completed Price Schedules, Data Sheets and Schedules of Requirements*

(i) *The Contractors Tender with Appendices.*

*Addenda shall have the order of precedence of the document they are modifying.”*

and replace them with words:

- “(a) Amendment No. 2 including Annex 1, Annex 2, Annex 3 and Annex 4 to Amendment No. 2*
- (b) The Amendment No.1*
- (c) The Form of Contract Agreement,*
- (d) The Letter of Acceptance dated 12 December 2018,*
- (e) The Letter of Tender, dated 16 July 2018,*
- (f) The Particular Conditions of Contract,*
- (g) The General Conditions of Contract,*
- (h) The Employer's Requirements,*
- (i) The completed Price Schedules, Data Sheets and Schedules of Requirements*
- (j) The Contractors Tender with Appendices.*

*Addenda shall have the order of precedence of the document they are modifying.”*

3.2 Delete text of article 4 and replace with the following text:

*“The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the amount of:*

***EUR 38 122 460,26  
(Thirty eight million one hundred and twenty two thousand four hundred and sixty EUR and twenty six Cents)***

*or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract. VAT and other taxes shall not be paid on the funds originating from BIDSF funds.”*

5. Since Slovenská elektrizačná prenosová sústava, a.s. is a liable person within the meaning of Act no. 211/2000 Coll. on Free Access to Information and Amendments to certain Acts (Freedom of Information Act) as amended (hereinafter referred to as the “Freedom of Information Act”), the Parties are aware that the Amendment No. 2 and tax documents related to the Amendment No. 2 will be published in such a way, which imposes the Act on Freedom of Information in its statute for compulsorily published contracts, orders and invoices pursuant to § 5a and § 5b.
6. All other terms and conditions unaffected by this Amendment No. 2 shall remain unchanged.
7. This Amendment No. 2 is made in four counterpart originals, two of them for each

part of the Contract Agreement.

**In Witness** whereof the parties hereto have caused the Amendment No. 2. This Amendment No. 2 becomes valid and legally binding from the day of the last party has signed it and effective from the day following the day of the publication of this Amendment No. 2 pursuant to § 47a section 1 of the Act No. 40/1964 Coll. (Civil Code).

**For and on behalf of the Employer:**

**For and on behalf of the Contractor:**

SIGNED by: \_\_\_\_\_

SIGNED by: \_\_\_\_\_

\_\_\_\_\_  
Ing. Peter Dovhun  
Chairman of the Board of Directors  
Slovenská elektrizačná prenosová sústava,  
a.s.

\_\_\_\_\_  
Ing. Zoltán Harsányi, PhD.  
Chairman of the Board  
VUJE, a.s.

SIGNED by: \_\_\_\_\_

SIGNED by: \_\_\_\_\_

\_\_\_\_\_  
Marián Širánec, MBA  
Vice-chairman of the Board of Directors  
Slovenská elektrizačná prenosová sústava,  
a.s.

\_\_\_\_\_  
Ing. Alexander Kšiňan  
Member of the Board  
VUJE, a.s.

Date: \_\_\_\_\_

SIGNED by: \_\_\_\_\_

\_\_\_\_\_  
Ing. Peter Obert  
Chairman of the Board  
Alter Energo, a.s.

SIGNED by: \_\_\_\_\_

\_\_\_\_\_  
Jozef Szombath  
Member of the Board  
Alter Energo, a.s.

SIGNED by: \_\_\_\_\_

\_\_\_\_\_  
Ing. Marián Mašaja  
Member of the Board  
ELCON Bratislava, a.s.

Date: \_\_\_\_\_

**Annex 1 to Amendment No. 2**

**The Engineer's Determinations of the Approved Variations to the Contract, series I (consisting of Variation Orders No. 1 and No. 2)**

Date: 25 March 2020

**ENGINEER'S DETERMINATION**

**Project:** Complex ES Bystričany - Transformation 400/110 kV  
Double 400 kV OHL Križovany – Bystričany (Project 2, Phase 4)

**Engineer's Determination on Contractor's Proposal for the Variation Order No. 1**

**Subject:** Structure object SO01 – Cancellation of Static Test of Towers

**Contract Reference:** GCC Clause13 [Variations and Adjustments] as amended by PCC Clauses 13.1 and 13.3.

**Variation Classification:** Contractors proposal according to GCC13.2 [Value Engineering]

**Reason:** To reduce the cost to the Employer of executing the works (GCC 13.2 (ii))

**Rationale/Brief Description:**

During the implementation of the project, the Contractor, on the Technical Meeting held in SEPS premises in Bratislava on 18<sup>th</sup> February 2019, suggested a reduction in the Scope of Works by cancellation of the static (load) test of the selected towers "DONAU" type N+6 and I+3, "SÚDOK" type N+6 and II+6 (see Attachment 2 - Minutes of the Technical Meeting dated 18<sup>th</sup> February 2019). The static tests of the selected towers "DONAU" type N+6 and I+3, "SÚDOK" type N+6 and II+6 were requested under the Employer's Requirements.

The Contractor's written proposal highlighted that the performance of such a static test is not essential since the Employer has successfully tested identical "DONAU" and "SÚDOK" type towers and applies them in its transmission network. The proposal was supported by the opinion of the structural designer of the towers and the design supervisor obtained by the Contractor, confirming that the implementation of the static tests would not lead to substantially different verification results of tower parameters, since identical tower configuration, steel elements, as well as material quality, were used for the types of towers that had already been tested before (See Attachment 1 - Variation Order No 1, Annex 4).

Having considered that the towers with identical tower configuration, steel elements and quality of the materials, have already been tested by the Employer, and the relevant test certificates and test reports are available, Employer accepted the Contractor's proposal to remove the static test of the selected towers from the Scope of Works (see Attachment 3 – Employer's letter PS/2019/005424 dated 02<sup>nd</sup> April 2019).

Accordingly, during the meeting held at Employer's premises in Bratislava on 23<sup>rd</sup> October 2019, the Engineer instructed a Variation requesting the Contractor to prepare a proposal for negative variation due to the cancellation of the static test of towers (see Attachment 4 - Minutes of the Meeting regarding Variation Orders dated 23<sup>rd</sup> October 2019).

The Contractor presented the initial draft of his Proposal for Variation (Variation Order No.1), on 26<sup>th</sup> November 2019. Following the review of the Proposal by the Employer/Engineer and subsequent discussions with the Contractor under the provisions of PCC 13.3, the Contractor submitted two revisions of the Proposal on 15<sup>th</sup> January 2019 and 06<sup>th</sup> February 2020, accordingly. The final version of

the Proposal incorporating all comments of the Employer/Engineer was submitted on 04<sup>th</sup> March 2020 (see Attachment 1 - Variation Order No.1) for final review and approval.

The price under the Contract for the originally envisaged scope for system object SO 01 was € 37,685,742.07 (see Attachment 1 - Variation Order No.1, Annex 1), including the item "Tower Static Testing" with the value of EUR 800,000.00 without VAT (please, refer to the contract price for SO 01 structure, page 00-01, "General contract price", point 11, "Indirect Costs of the Construction" from this annex).

The revised estimate as per the Contractor's Proposal is € 36,885,742.07 (see Attachment 1 - Variation Order No.1, Annex 2).

The decrease in the total Contract Price is € 800,000.00 (see Attachment 1 - Variation Order No.1, Annex 3).

#### Eligibility:

The Engineer concluded that the variation is eligible for application under GCC clause 13 [Variations and Adjustments] since this proposal does not pose a risk and ensures the Employer's compliance with the power system requirements and falls within the provisions of GCC clause 13.2, namely item (ii) reduces the costs to the Employer of executing the works.

The presented and chosen solution has no known or identified disadvantages.

#### Calculations for Variation Order No.1:

##### Contract Price SO 01

Contract price SO 01	Variation cost	New contract price SO 01
Eur excl. VAT	Eur excl. VAT	Eur excl. VAT
37,685,742.07	- 800,000.00	36,885,742.07

##### Contract price - Total

Contract price	Variation cost	New contract price
Eur excl. VAT	Eur excl. VAT	Eur excl. VAT
38,879,999.94	- 800,000.00	38,079,999.94

#### Conclusion / Recommendation:

The Contractor's Proposal for Variation Order No.1 has been checked, approved and found eligible under GCC Clause 13 [Variations and Adjustments] by the Employer/Engineer.

The cost proposal submitted by the Contractor was valued at the rates and prices set out in the Contract (Price Schedules).

The Engineer considers that the price adjustment agreed between the Contractor and Employer is adequate, and the Engineer, therefore, recommends acceptance of the Proposal for Variation Order No.1 as eligible, to reduce the Contract price in the amount of **€ - 800,000,00**.

Nenad Sretenović  
GOPA-intec  
Deputy Project Manager  
DC 400kV OHL Križovany – Bystričany

#### Attachment:

1. Variation order No.1
2. Minutes of the Technical Meeting dated 18<sup>th</sup> February 2019
3. Employer's acceptance letter PS/2019/005424 dated 02<sup>nd</sup> April 2019.
4. Minutes of the Meeting regarding Variation Orders dated 23<sup>rd</sup> October 2019

## **ENGINEER'S DETERMINATION**

**Project: Complex ES Bystričany - Transformation 400/110 kV  
Double 400 kV OHL Križovany – Bystričany (Project 2, Phase 4)**

**Engineer's Determination on Contractor's Proposal for the Variation Order No. 2**

**Subject: System object SO 01 – Change of Location of Towers Nos: 35–39 in Vineyard**

**Contract Reference:** GCC Sub-Clause 13 [Variations and Adjustments] as amended by PCC Sub-Clauses 13.1 and 13.3.

**Variation Classification:** Contractor's Proposal according to Sub-Clause 13.2 [Value Engineering]

**Reason:** To accelerate the completion of the Works (GCC 13.2(i), to reduce the cost to the Employer of executing, future maintaining and operation of the Works (GCC 13.2(ii)) and to improve efficiency to the Employer of the completed Works (GCC 13.2 (iii)).

### **Rationale/Brief Description:**

In order to ensure undisturbed continuation of construction activities with acceleration of completion of the works due to operational reasons in the project Double 400kV OHL Križovany – Bystričany and to reduce future maintenance and operating costs, the towers Nos: 35–39 locations in Vineyard were adjusted.

The importance of the continuity of works and the completion of works in shortened period for implementation of works due to operational reasons are as following:

- Temporary operation of Double 400 kV OHL Križovany – Bystričany under 220kV voltage for 7 weeks in line with the outage plan is essentially important for safe and reliable operation of the substations Bystričany, Považská Bystrica, Sučany. Without the temporary operation of the OHL V274 Križovany - Bystričany line, the reconstruction of Substation R220kV Sučany would have to be postponed. In the event of the postponement of the Substation R220 kV Sučany reconstruction, the operation of the 220 kV Transmission net in the Sučany area would be seriously endangered. This, due to the critical condition of the equipment in Sučany, continuation of supply of electricity is endangered.
- To ensure completion of the Works five months before the contractual completion date of 22 April 2021 ensuring that the related projects from the Complex ES Bystričany – Transformation 400/110kV can be completed on-time (Finalization of the tests of the completion for the projects Transformation 400/110kV in ES Bystričany and Enlargement of 400kV substation in ES Križovany, for which completion Double 400 kV OHL Križovany – Bystričany is mandatory).



Subsequently, to fulfil the above the Contractor has proposed an alternative technical solution for changing the location of towers and the Engineer/Employer has requested to submit officially this technical solution for review (see Attachment 2 - Minutes of 6<sup>th</sup> Monthly Progress Meeting dated 18<sup>th</sup> July 2019).

Subject to the foregoing, the Contractor updated the DDI in line with his proposed technical solution using the existing 220kV tower locations and submitted it for approval to the Engineer/Employer on 20 August 2019.

Subsequently, the Engineer/Employer has approved Contractor's proposal on 28 August 2019, as this approach would avoid substantial delay in the construction of the double 400 kV OHL Križovany – Bystričany, enables temporary operation of Double 400 kV OHL Križovany – Bystričany under 220kV voltage for 7 weeks and will improve the efficiency of the Employer during the future maintenance and operation of the power line.

The Contractor presented his initial draft of his Proposal for Variation (Variation Order No.2), on 26<sup>th</sup> November 2019. Following the review of the Proposal by the Employer/Engineer and subsequent discussions with the Contractor following the provisions of PCC 13.3, the Contractor submitted four revisions of the Proposal on 15 January 2019, 11 February 2020 and 09 March 2020, 21 April 2020 accordingly. After several consultation meetings between Employer/Engineer and the Contractor, the Contractor submitted the final version of the Proposal incorporating all comments of the Employer/Engineer (see Attachment 1 - Variation order No.2) for final review, determination and approval 2 (see Attachment 1 - Variation Order No. 2).

All details regarding the relocation of the subject OHL towers (update of DDI, additional material and work) are described in the details in item 3 of Variation Order No.2 (see Attachment 1 - Variation Order No. 2).

The new 400kV tower locations (and the locations of the existing 220kV towers) are depicted in the attached part of the cadastral map in Annex 4 of Variation Order No.2.

Calculation and comparison of the affected weights of steel structures of the foundation parts and towers under the DDI documentation are provided in Annex 5 of Variation Order No.2 (see Attachment 1 - Variation Order No. 2).

Annex 6 of Variation Order No.2 (see Attachment 1 - Variation Order No. 2) provides changes in the soil excavation volume caused by the tower relocations.

Calculation and comparison of the affected volume of concrete consumption as well as calculation and comparison of the affected volume of excavations, backfilling and removal of soil under DDI documentation are provided in Annex 7 of Variation Order No.2 (see Attachment 1 - Variation Order No. 2).

Calculation and comparison of the affected volume of demolished concrete and soil from existing 220kV towers that shall be removed are provided in Annex 8 of Variation Order No.2 (see Attachment 1 - Variation Order No. 2).

Calculation of cost reductions due to the fact that no new access roads have been built are provided in Annex 11 of Variation Order No.2 (see Attachment 1 - Variation Order No. 2)

The price under the Contract for the original price schedule of the system object SO 01 was € 37,685,742.07 as stated in Annex 1 of Variation Order No.2 (see Attachment 1 - Variation Order No. 2). The revised estimate as per the Contractor's Proposal is € 37,728,202.39 as stated in Annex 2 of Variation Order No.2 (see Attachment 1 - Variation Order No. 2).

The increase in the total Contract Price is € 42,460.32 as stated in Annex 3 of Variation Order No.2 (see Attachment 1 - Variation Order No. 2).

#### **Eligibility:**

The Engineer concluded that the variation is eligible for application under GCC Sub-Clause 13 [Variations and Adjustments] since this solution falls within the provisions of GCC Sub-Clause 13.2, namely

SVK 2060: Double 400 kV OHL Križovany – Bystričany (Project 2, Phase 4)  
Engineer's Determination to Request for Variation Order No. 2

item (i) accelerate the completion of the Works, item (ii) reduces the costs to the Employer of executing, future maintaining and operation of the Works, and item (iii) improve the efficiency to the Employer of the completed Works as follows:

- This proposal ensures early completion of the first phase of the Works (item (i)) and ensure no endangering of the power supply in the transmission system.
- This proposal ensures completion of the Works five months before the contractual completion date of 22 April 2021 (item (i)) and ensure that the related projects from the Complex ES Bystričany – Transformation 400/110kV can be completed on-time (Finalization of the tests of the completion for the projects Transformation 400/110kV in ES Bystričany and Enlargement of 400kV substation in ES Križovany, for which completion Double 400 kV OHL Križovany – Bystričany is mandatory).
- This proposal improves to the Employer the efficiency of completed Works (item (ii)), with reduced risks for further complications and related possible costs. This is reflected by the earlier inclusion of the facility in the transmission network, which will at an earliest stage improves the security of the overall transmission system.
- This proposal is lowering operation and maintenance costs in the future for the overall period of exploitation of the OHL (item (ii)).
- This proposal optimizes the overall value of the project in the project management endeavour (item (iii)).

The presented and chosen solution has no known or identified disadvantages.

## Calculations for Variation Order No.2:

A detailed breakdown of all additional cost (Engineering, additional material, etc.) is presented in the following table 4:

<b>Price Schedule 01-00</b>		
<b>Structure: Double 400kV OHL Križovany – Bystričany</b>		
<b>Construction item: E1. SO01: Double 400kV OHL</b>		
<b>Item No</b>	<b>Item description</b>	<b>Item Price</b>
<b>01</b>	<b>Foundations</b>	<b>6,680,10 €</b>
	Assembly (Total 01-01)	2,144,87 €
	Material (Total 01-02)	4,535.23 €
<b>02</b>	<b>Towers</b>	<b>19,688.56 €</b>
	Assembly (Total 01-03)	7,240.72 €
	Material (Total 01-04)	12,447.84
<b>09</b>	<b>Disassembly</b>	<b>11,725.34</b>
	Disassembly (Total 01-16)	11,725.34
<b>10</b>	<b>Direct costs of the construction item E1. SO01 (Total rows 01, 02, 09)</b>	<b>38,094.00</b>
	In that: Assemblies (Dis-) (Totals 01-01, 01-03, 01-16)	21,110.93 €
	In that: Material (Totals 01-02, 01-04)	16,983.07€
<b>11</b>	<b>Indirect costs of the construction item E1. SO01</b>	<b>2,500.00 €</b>
	Induced engineering works	
in that	Ensuring engineering activities in the context of replacing the installation of poles in vineyards, (rebuilding before completion), negotiating and securing the relevant permits of state authorities and landowners concerned (Price reference - Proposal of Subcontractor, Annex 10 of Variation Order No.2)	2,500.00 €
<b>13</b>	<b>Construction of access roads and consequent reinstatement of all new-built or other utilized access roads in terms of user's conditions</b>	<b>-155.60 €</b>
	In that: Ground works (Total 01-17)	-131.87€
	In that: Transport of material (Total 01-23)	-23,73
	<b>Total: Direct costs of the construction item E1. SO01 (Total rows 01, 02, 09) + Indirect costs of the construction item E1. SO01 (Total row 11)</b>	<b>40,438.40 €</b>
	<b>Reasonable profit / Profit according to 13.3 GCC and 1.1.4.13 PCC (5%)</b>	<b>2,021.92</b>
	<b>Total cost of the Variation Order No.2 including a reasonable profit</b>	<b>42,460.32 €</b>

## Recapitulation for Variation Order No.2:

## Contract Price SO 01

<b>Contract price SO 01</b>	<b>Variation cost</b>	<b>New contract price SO 01</b>
<b>Eur excl. VAT</b>	<b>Eur excl. VAT</b>	<b>Eur excl. VAT</b>
<b>37,685,742.07</b>	<b>42,460.32</b>	<b>37,728,202.39</b>

## Contract price - Total

<b>Contract price</b>	<b>Variation cost</b>	<b>New contract price</b>
<b>Eur excl. VAT</b>	<b>Eur excl. VAT</b>	<b>Eur excl. VAT</b>
<b>38,879,999.94</b>	<b>42,460.32</b>	<b>38,922,460.26</b>

**Conclusion / Recommendation:**

The Contractor's Proposal for Variation Order No.2 has been checked, approved, and found eligible under GCC Sub-Clause 13 [Variations and Adjustments] by the Employer/Engineer.

The cost proposal submitted by the Contractor was valued at the rates and prices set out in the Contract (Price Schedules).

Only induced engineering works described by the Contractor as: "ensuring engineering activities in the context of replacing the installation of towers in vineyards, (rebuilding before completion), negotiating and securing the relevant permits of state authorities and landowners concerned" is the new item in the Price Schedules (the last row of item 11: Indirect costs of the construction).

The price reference for that item is the designer's price offer as stated in Annex 10 of Variation Order No.2 (see Attachment 1 - Variation Order No. 2).

The Engineer considers that price for induced engineering works in the amount of €2500.00 is reasonable and adequate.

The Contractor has valued a reasonable profit at the rate of 5% in accordance with PCC Sub-Clause 1.1.4.13.

The Engineer considers that the price adjustment agreed between the Contractor and Employer is adequate, and, as the proposed technical solution will ensure early completion of the Works, reduce the cost to the Employer of executing, future maintaining and operation of the Works and provide improvement of efficiency to the Employer of the completed facility, the Engineer, therefore, recommends acceptance of the Proposal for Variation Order No.2 as eligible, with the total additional value of €42,460.32.

Nenad Sretenović  
GOPA-intec  
Deputy Project Manager  
DC 400kV OHL Križovany – Bystričany

**Attachments:**

Attachment 1: Variation order No.2 with Annexes 1-11

Attachment 2: Minutes of 6<sup>th</sup> Monthly Progress Meeting dated 18<sup>th</sup> July 2019

**Annex 2 to Amendment No. 2**  
**Table of the Approved Variations to the Contract, series I**  
**(consisting of Variation Orders No. 1 and No. 2)**



## Annex 2 to Amendment No. 2

Project: Double 400 kV OHL Križovany - Bystričany

**Table of the Approved Variations to the Contract, series I/  
Tabuľka schválených zmenových návrhov, séria I**

No. / č.	Title / Názov	Price / Cena
		EUR
Variation No. 1	Structure SO 01 Cancellation of Static Tests of Towers / SO 01 Zrušenie statických skúšok stožiarov	-800 000,00
Variation No. 2	Structure SO 01 Change of location of towers no. 35 – 39 in vineyards / SO 01 Zmena umiestnenia stožiarov č. 35 – 39 vo viniciach	42 460,32
<b>Total – Approved Variations to the Contract, series I / Spolu – Schválené Zmenové návrhy, séria I</b>		<b>-757 539,68 €</b>



**Annex 3 to Amendment No. 2**  
**The Approved Variations to the contract, series I (consisting of**  
**Variation Orders No. 1 and No. 2)**



**Project group: Transformation 400/110 kV Bystričany – 1<sup>st</sup> part**  
**Project 4: Double 400 kV OHL Križovany – Bystričany**

**Variation Order No. 1**

**Structure SO01 – Cancellation of Static Test of Towers**

**Drawn up by:** Ing. Štefan Őlvecký

**Controlled by:** Ing. Matúš Ádám

**Approved by:** Ing. Marián Mašeja

**Contract No.**

SEPS 2018-0149-1177501 / VUJE 1222818/00/00

**Designation**

**Date**

26.02.2020

**Inspection**

**Status**

**Copy**

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## Table of Contents

1. Identification Data .....	3
2. Objective of Variation .....	3
3. Reason for Variation .....	3
4. Description of the Variation.....	4
5. Financial detail of the Variation.....	4
6. Influence on the Date of Completion .....	4
7. Annexes .....	4

## 1. Identification Data

**Name of Construction:** Complex of Projects: ES Bystričany - Transformation  
400/110 kV – 4<sup>th</sup> project  
Construction – Double 400 kV OHL Križovany –  
Bystričany (Project 2, Phase 4)

**Location of Construction:** Route and protection zone of the power line including  
access roads  
Trnava Region, District: Trnava, Hlohovec  
Nitra Region, District: Nitra, Topoľčany  
Trenčín Region, District: Partizánske, Prievidza  
Slovak Republic

**Investor:** Slovenská elektrizačná prenosová sústava, a. s.  
Mlynské Nivy 59/A  
824 84 Bratislava  
Slovak Republic

**Future Operator:** Slovenská elektrizačná prenosová sústava, a. s.  
Mlynské Nivy 59/A  
824 84 Bratislava  
Slovak Republic

## 2. Objective of Variation

Change in Scope of Work: not performing static mechanical testing of the towers "DONAU" type N+6 and I+3, "SÚDOK" type N+6 and II+6.

## 3. Reason for Variation

The Contract for construction of Double 400 kV OHL Križovany – Bystričany (hereinafter referred as "Contract") comprises "DONAU" and "SÚDOK" type towers. SEPS has identical "DONAU" and "SÚDOK" type towers successfully tested and applied in its network. Consequently, test data is available. On this basis, joint venture of contractors proposes to the investor on 22.02.2019 to cancel the static test of the selected towers "DONAU" type N+6 and I+3, "SÚDOK" type N+6 and II+6.

SEPS accepted the Contractor's proposal to cancel the static test of the selected towers (see letter PS/2019/005424 dated 02<sup>nd</sup> April 2019).

#### 4. Description of the Variation

The static tests of the selected towers "DONAU" type N+6 and I+3, "SÚDOK" type N+6 and II+6 are included in the scope of work as described in the contract. The objective of the test is to test the static characteristics and calculation parameters. As identical towers have been tested (tower configuration, crossbars and materials) and inspection data is available, it was concluded that this test can be excluded from the scope of work. (see SO 01 structure, page 00-01, named "General contract price", point 11, "Indirect Costs of the Construction" **EUR 800,000.00** without VAT).

#### 5. Financial detail of the Variation

Financial calculation of the Variation, "cancellation of tower static testing" is provided in the Annexes hereto.

In Annex 1 is the cost breakdown of the original Contract price attached "Contractual summary budget SO01".

In Annex 2 is the cost breakdown of the adjusted Contract price SO 01 attached "New contractual summary budget SO01".

In Annex 3 is the cost breakdown of the decrease SO 01 attached "Variation summary budget SO01".

Original Contract price as per signing date	Variation cost	New contract price
<b>Eur excl. VAT</b>	<b>Eur excl. VAT</b>	<b>Eur excl. VAT</b>
<b>37,685,742.07</b>	<b>- 800,000.00</b>	<b>36,885,742.07</b>

#### 6. Influence on the Date of Completion

This Variation does not affect the commissioning of the Double 400 kV OHL Križovany-Bystričany.

#### 7. Annexes

- Annex 1 – Contractual summary budget SO01
- Annex 2 – New contractual summary budget SO01
- Annex 3 – Variation summary budget SO01
- Annex 4 – Statement of design supervisor and tower structural analyst

**Cenová tabuľka 01-00**

**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

1

**ZMLUVNÝ SÚHRNNÝ ROZPOČET SO 01**

**Contractual summary budget SO01**

<b>01 Základy</b> <b>Foundations</b>	<b>4 981 734,45 €</b>
Montáž (Spolu 01-01) <i>Assembly (Total 01-01)</i>	2 094 108,59 €
Materiál (Spolu 01-02) <i>Material (Total 01-02)</i>	2 887 625,86 €
<b>02 Stožiare</b> <b>Towers</b>	<b>13 170 086,64 €</b>
Montáž (Spolu 01-03) <i>Assembly (Total 01-03)</i>	5 093 784,42 €
Materiál (Spolu 01-04) <i>Material (Total 01-04)</i>	8 076 302,22 €
<b>03 Vodiče</b> <b>Phase conductors</b>	<b>8 785 114,20 €</b>
Montáž (Spolu 01-05) <i>Assembly (Total 01-05)</i>	1 510 094,80 €
Materiál (Spolu 01-06) <i>Material (Total 01-06)</i>	7 275 019,40 €
<b>04 Izolátorové závesy</b> <b>Insulator sets</b>	<b>4 004 667,55 €</b>
Montáž (Spolu 01-07) <i>Assembly (Total 01-07)</i>	1 008 089,85 €
Materiál (Spolu 01-08) <i>Material (Total 01-08)</i>	2 996 577,70 €
<b>05 KZL</b> <b>OPGW</b>	<b>1 354 410,11 €</b>
Montáž (Spolu 01-09) <i>Assembly (Total 01-09)</i>	410 061,60 €
Materiál (Spolu 01-10) <i>Material (Total 01-10)</i>	944 348,51 €
<b>06 ZL</b> <b>GW</b>	<b>8 372,30 €</b>
Montáž (Spolu 01-11) <i>Assembly (Total 01-11)</i>	2 470,90 €
Materiál (Spolu 01-12) <i>Material (Total 01-12)</i>	5 901,40 €
<b>07 Dočasné úpravy križovaných elektrických vedení</b> <b>Temporary modifications of power lines crossings</b>	<b>297 712,65 €</b>
Montáž (Spolu 01-13) <i>Assembly (Total 01-13)</i>	297 712,65 €
<b>08 Tabuľky a doplnky</b> <b>Miscellaneous</b>	<b>131 616,58 €</b>
Montáž (Spolu 01-14) <i>Assembly (Total 01-14)</i>	73 694,10 €
Materiál (Spolu 01-15) <i>Material (Total 01-15)</i>	57 922,48 €

**Cenová tabuľka 01-00**  
**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

2

<b>ZMLUVNÝ SÚHRNNÝ ROZPOČET SO 01</b>	
<i>Contractual summary budget SO01</i>	
<b>09 Demontáže</b> <b>Disassembly</b>	<b>1 519 256,19 €</b>
Demontáž (Spolu 01-16) <i>Disassembly (Total 01-16)</i>	1 519 256,19 €
<b>Priame náklady stavebného objektu (Spolu riadky 01, 02, 03, 04, 05, 06, 07, 08, 09)</b> <b>Direct costs of the construction item (Total rows 01, 02, 03, 04, 05, 06, 07, 08, 09)</b>	<b>34 252 970,67 €</b>
v tom <i>in that</i>	12 009 273,10 €
Montáže (De-) (Spolu 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16) <i>Assemblies (Dis-) (Totals 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16)</i>	12 009 273,10 €
v tom <i>in that</i>	22 243 697,57 €
Materiál (Spolu 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15) <i>Material (Totals 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15)</i>	22 243 697,57 €
<b>10 Projekčné a prieskumné práce</b> <b>Design and survey works</b>	<b>826 000,00 €</b>
v tom	550 000,00 €
<u>Dokumentácia pre realizáciu stavby</u> 10 ks Dokumentácia, jej prerokovanie v priebehu a v závere prác s dotknutými orgánmi a organizáciami vrátane úradného overenia oprávnenou právnickou osobou v SR (napr. Technická inšpekcia)	550 000,00 €
<i>in that</i>	
<u>Detail implementation design</u> 10 pcs. Documentation and its negotiation with the concerned authorities and organizations during and at the end of design works including legalization by authorised organization in Slovakia (e.g. Technická inšpekcia)	
v tom	190 000,00 €
<u>Výrobno-montážna dokumentácia</u> 1 ks Dielenská dokumentácia základových dielov a stožiarov, so zapracovanými pripomienkami z kontrolnej montáže vrátane návrhu montážnych rámov a predloženie protokolov z kontrolnej montáže stožiarov	190 000,00 €
<i>in that</i>	
<u>Workshop and assembly drawings</u> 1 pc. Workshop and assembly drawings of embedded parts and towers, including incorporation of comments from test assembly including the design of mounting frames and submission of certificates from test assembly of towers	
v tom	56 000,00 €
<u>Porealizačné zameranie</u> 5 ks Protokol o zameraní súradníc stredov stožiarov a rohov stožiarov, pozdĺžneho profilu vodičov, zemného lana a kombinovaného zemného lana	56 000,00 €
<i>in that</i>	
<u>As built survey</u> 5 pcs. Certificate of measurement of towers centre coordinates and foundation corners, longitudinal profile of phase conductors, ground wire and combined ground wire	
v tom	30 000,00 €
<u>Dokumentácia skutočného vyhotovenia</u> 5 ks Vrátane výrobné - montážnej dokumentácie	30 000,00 €
<i>in that</i>	
<u>As built documentation</u> 5 pcs. Including workshop and assembly drawings	

**Cenová tabuľka 01-00**  
**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

3

<b>ZMLUVNÝ SÚHRNNÝ ROZPOČET SO 01</b>		
<b>Contractual summary budget SO01</b>		
<b>11</b>	<b>Nepriame náklady stavebného objektu</b> <b>Indirect costs of the construction item</b>	<b>1 042 000,00 €</b>
v tom	<u>Zaistenie a vypínanie vedení</u> Náklady na realizáciu vypínania križovaných vedení, železníc a nadzemných sietí	50 000,00 €
in that	<u>Switching-off and securing of crossed lines</u> Costs of switching-off of crossed lines, railways and facilities	
v tom	<u>Skúšky izolátorových závesov</u> Náklady na zabezpečenie všetkých potrebných skúšok pre jednotlivé typy izolátorových závesov - skratových a napäťových skúšok	30 000,00 €
in that	<u>Insulator sets tests</u> Costs of all necessary tests for individual insulator sets - power arc and voltage tests	
v tom	<u>Statické skúšky stožiarov</u> Náklady na zabezpečenie statických skúšok stožiarov typu: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)	<b>800 000,00 €</b>
in that	<u>Tower tests</u> costs for realization of static tower tests types: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)	
v tom	<u>Geodetická činnosť pri výstavbe</u> Vytýčenie všetkých priesekov a výrubov v trase vedenia - lesné pozemky vrátane poľnohospodárskych pozemkov, kontrola základov po ukončení betonáže	12 000,00 €
in that	<u>Geodetical works for construction</u> Staking-out of all cuts and fellings in the line route - forrest land, agricultural land, checks of foundations after concreting	
v tom	<u>Priama inžinierska činnosť</u> Prejednanie vypínania križovaných vedení nn, vn, vvn, zvn a výluky železníc, vytýčenie všetkých podzemných sietí, zabezpečenie dohody o vstupe na pozemky s užívateľmi alebo majiteľmi, zabezpečenie výrubov na poľnohospodárskej pôde, náklady spojené s uvedením do prevádzky: napr. revízná správa, úradná skúška, nastavenie elektrických ochrán v Est	150 000,00 €
in that	<u>Direct engineering works</u> Seek an agreement with the operators of low voltage, medium voltage, very high voltage, ex-tra high voltage and railway traction system lines and highways to be crossed, and ensurance their switching-off or closure, staking-out of all underground facilities, provision of right-of-way agreements with land owners or users, securing of fellings on agricultural land, costs related to commissioning, e.g. revision report, official examination, line protection settins in Substations	

**Cenová tabuľka 01-00****Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

4

**ZMLUVNÝ SÚHRNNÝ ROZPOČET SO 01****Contractual summary budget SO01**

<b>12 Vedľajšie rozpočtové náklady</b> <b>Side budget costs</b>	<b>823 656,90 €</b>
v tom <u>Zariadenie staveniska</u> Náklady na zariadenie staveniska vrátane jeho demontáže s uvedením staveniska do pôvodného stavu	<b>823 656,90 €</b>
in that <u>Construction site</u> Costs of construction site facilities including their dismantling and restoration of the construction site to its original state	
<b>13 Realizácia prístupových ciest vrátane uvedenia všetkých budovaných a používaných ciest do pôvodného stavu v zmysle podmienok užívateľov</b> <b>Construction of access roads and consequent reinstatement of all new-built or other utilized acces roads in terms of user's conditions</b>	<b>324 986,03 €</b>
1 - Zemné práce (Spolu 01-17) 1 - Ground works (Total 01-17)	94 229,41 €
3 - Zvislé konštrukcie (Spolu 01-18) 3 - Vertical constructions (Total 01-18)	4 614,70 €
4 - Vodorovné konštrukcie (Spolu 01-19) 4 - Horizontal constructions (Total 01-19)	115,99 €
5 - Spevnené plochy (Spolu 01-20) 5 - Hardened platforms (Spolu 01-20)	123 151,25 €
8 - Potrubné rozvody (Spolu 01-21) 8 - Pipelines (Total 01-21)	9 548,20 €
9 - Ostatné práce (Spolu 01-22) 9 - Other works (Total 01-22)	52 116,02 €
99 - Presuny hmôt (Spolu 01-23) 99 - Transport of material (Total 01-23)	11 588,15 €
991 - Dodávky materiálu (Spolu 01-24) 991 - Supply of the material (Total 01-24)	29 622,31 €
<b>14 Realizácia výrubov na poľnohospodárskej pôde vrátane rekultivácie všetkých pôch po výrube</b> <b>Cutting of trees on an agricultural land including recultivation of the areas after cutting</b>	<b>203 874,00 €</b>
(Spolu 01-25) (Total 01-25)	203 874,00 €
<b>15 Realizácia revitalizačných opatrení</b> <b>Implementation of re-vitalization measures</b>	<b>212 254,47 €</b>
(Spolu 01-26) (Total 01-26)	212 254,47 €
<b>Celkom (riadky 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15)</b>	<b>37 685 742,07 €</b>
<b>Total (rows 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15)</b>	<b>37 685 742,07 €</b>

**Cenová tabuľka 01-00**  
**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

1

**ZMENOVÝ SÚHRNNÝ ROZPOČET SO 01**  
**New contractual summary budget SO01**

<b>01 Základy</b> <b>Foundations</b>	<b>4 981 734,45 €</b>
Montáž (Spolu 01-01) Assembly (Total 01-01)	2 094 108,59 €
Materiál (Spolu 01-02) Material (Total 01-02)	2 887 625,86 €
<b>02 Stožiare</b> <b>Towers</b>	<b>13 170 086,64 €</b>
Montáž (Spolu 01-03) Assembly (Total 01-03)	5 093 784,40 €
Materiál (Spolu 01-04) Material (Total 01-04)	8 076 302,22 €
<b>03 Vodiče</b> <b>Phase conductors</b>	<b>8 785 114,20 €</b>
Montáž (Spolu 01-05) Assembly (Total 01-05)	1 510 094,80 €
Materiál (Spolu 01-06) Material (Total 01-06)	7 275 019,40 €
<b>04 Izolátorové závesy</b> <b>Insulator sets</b>	<b>4 004 667,55 €</b>
Montáž (Spolu 01-07) Assembly (Total 01-07)	1 008 089,85 €
Materiál (Spolu 01-08) Material (Total 01-08)	2 996 577,70 €
<b>05 KZL</b> <b>OPGW</b>	<b>1 354 410,11 €</b>
Montáž (Spolu 01-09) Assembly (Total 01-09)	410 061,60 €
Materiál (Spolu 01-10) Material (Total 01-10)	944 348,51 €
<b>06 ZL</b> <b>GW</b>	<b>8 372,30 €</b>
Montáž (Spolu 01-11) Assembly (Total 01-11)	2 470,90 €
Materiál (Spolu 01-12) Material (Total 01-12)	5 901,40 €
<b>07 Dočasné úpravy križovaných elektrických vedení</b> <b>Temporary modifications of power lines crossings</b>	<b>297 712,65 €</b>
Montáž (Spolu 01-13) Assembly (Total 01-13)	297 712,65 €
<b>08 Tabuľky a doplnky</b> <b>Miscellaneous</b>	<b>131 616,58 €</b>
Montáž (Spolu 01-14) Assembly (Total 01-14)	73 694,10 €
Materiál (Spolu 01-15) Material (Total 01-15)	57 922,48 €



**Cenová tabuľka 01-00**

**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

2

<b>ZMENOVÝ SÚHRNNÝ ROZPOČET SO 01</b>		
<b>New contractual summary budget SO01</b>		
<b>09 Demontáže</b>		<b>1 519 256,19 €</b>
<b>Disassembly</b>		
Demontáž (Spolu 01-16)		1 519 256,19 €
Disassembly (Total 01-16)		
<b>Priame náklady stavebného objektu (Spolu riadky 01, 02, 03, 04, 05, 06, 07, 08, 09)</b>		<b>34 252 970,67 €</b>
<b>Direct costs of the construction item (Total rows 01, 02, 03, 04, 05, 06, 07, 08, 09)</b>		
v tom	Montáže (De-) (Spolu 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16)	12 009 273,10 €
in that	Assemblies (Dis-) (Totals 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16)	
v tom	Materiál (Spolu 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15)	22 243 697,57 €
in that	Material (Totals 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15)	
<b>10 Projekčné a prieskumné práce</b>		<b>826 000,00 €</b>
<b>Design and survey works</b>		
v tom	<u>Dokumentácia pre realizáciu stavby</u> 10 ks Dokumentácia, jej prerokovanie v priebehu a v závere prác s dotknutými orgánmi a organizáciami vrátane úradného overenia oprávnenou právnickou osobou v SR (napr. Technická inšpekcia)	550 000,00 €
in that	<u>Detail implementation design</u> 10 pcs. Documentation and its negotiation with the concerned authorities and organizations during and at the end of design works including legalization by authorised organization in Slovakia (e.g. Technická inšpekcia)	
v tom	<u>Výrobno-montážna dokumentácia</u> 1 ks Dielenská dokumentácia základových dielov a stožiarov, so zapracovanými pripomienkami z kontrolnej montáže vrátane návrhu montážnych rámov a predloženie protokolov z kontrolnej montáže stožiarov	190 000,00 €
in that	<u>Workshop and assembly drawings</u> 1 pc. Workshop and assembly drawings of embedded parts and towers, including incorporation of comments from test assembly including the design of mounting frames and submission of certificates from test assembly of towers	
v tom	<u>Porealizačné zameranie</u> 5 ks Protokol o zameraní súradníc stredov stožiarov a rohov stožiarov, pozdĺžneho profilu vodičov, zemného lana a kombinovaného zemného lana	56 000,00 €
in that	<u>As built survey</u> 5 pcs. Certificate of measurement of towers centre coordinates and foundation corners, longitudinal profile of phase conductors, ground wire and combined ground wire	
v tom	<u>Dokumentácia skutočného vyhotovenia</u> 5 ks Vrátane výrobné - montážnej dokumentácie	30 000,00 €
in that	<u>As built documentation</u> 5 pcs. Including workshop and assembly drawings	

## Cenová tabuľka 01-00

## Price Schedule 01-00

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

3

## ZMENOVÝ SÚHRNNÝ ROZPOČET SO 01

## New contractual summary budget SO01

<b>11 Nepriame náklady stavebného objektu</b> <b>Indirect costs of the construction item</b>		<b>242 000,00 €</b>
v tom	<u>Zaistenie a vypínanie vedení</u> Náklady na realizáciu vypínania križovaných vedení, železníc a nadzemných sietí	50 000,00 €
in that	<u>Switching-off and securing of crossed lines</u> Costs of switching-off of crossed lines, railways and facilities	
v tom	<u>Skúšky izolátorových závesov</u> Náklady na zabezpečenie všetkých potrebných skúšok pre jednotlivé typy izolátorových závesov - skratových a napäťových skúšok	30 000,00 €
in that	<u>Insulator sets tests</u> Costs of all necessary tests for individual insulator sets - power arc and voltage tests	
v tom	<u>Statické skúšky stožiarov</u> Náklady na zabezpečenie statických skúšok stožiarov typu: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)	0,00 €
in that	<u>Tower tests</u> costs for realization of statical tower tests types: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)	
v tom	<u>Geodetická činnosť pri výstavbe</u> Vytýčenie všetkých priesekov a výrubov v trase vedenia - lesné pozemky vrátane poľnohospodárskych pozemkov, kontrola základov po ukončení betonáže	12 000,00 €
in that	<u>Geodetical works for construction</u> Staking-out of all cuts and fellings in the line route - forrest land, agricultural land, checks of foundations after concreting	
v tom	<u>Priama inžinierska činnosť</u> Prejednanie vypínaní križovaných vedení nn, vn, vvn, zvn a výluky železníc, vytýčenie všetkých podzemných sietí, zabezpečenie dohody o vstupe na pozemky s užívateľmi alebo majiteľmi, zabezpečenie výrubov na poľnohospodárskej pôde, náklady spojené s uvedením do prevádzky: napr. revízná správa, úradná skúška, nastavenie elektrických ochrán v Est	150 000,00 €
in that	<u>Direct engineering works</u> Seek an agreement with the operators of low voltage, medium voltage, very high voltage, ex-tra high voltage and railway traction system lines and highways to be crossed, and ensurance their switching-off or closure, staking-out of all underground facilities, provision of right-of-way agreements with land owners or users, securing of fellings on agricultural land, costs related to commissioning, e.g. revision report, official examination, line protection settins in Substations	

**Cenová tabuľka 01-00****Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

4

**ZMENOVÝ SÚHRNNÝ ROZPOČET SO 01****New contractual summary budget SO01**

<b>12</b>	<b>Vedľajšie rozpočtové náklady</b> <b>Side budget costs</b>	<b>823 656,90 €</b>
	<u>Zariadenie staveniska</u> v tom Náklady na zariadenie staveniska vrátane jeho demontáže s uvedením staveniska do pôvodného stavu	<b>823 656,90 €</b>
	<u>Construction site</u> in that Costs of construction site facilities including their dismantling and restoration of the construction site to its original state	
<b>13</b>	<b>Realizácia prístupových ciest vrátane uvedenia všetkých budovaných a používaných ciest do pôvodného stavu v zmysle podmienok užívateľov</b> <b>Construction of access roads and consequent reinstatement of all new-built or other utilized access roads in terms of user's conditions</b>	<b>324 986,03 €</b>
	1 - Zemné práce (Spolu 01-17) 1 - Ground works (Total 01-17)	94 229,41 €
	3 - Zvislé konštrukcie (Spolu 01-18) 3 - Vertical constructions (Total 01-18)	4 614,70 €
	4 - Vodorovné konštrukcie (Spolu 01-19) 4 - Horizontal constructions (Total 01-19)	115,99 €
	5 - Spevnené plochy (Spolu 01-20) 5 - Hardened platforms (Spolu 01-20)	123 151,25 €
	8 - Potrubné rozvody (Spolu 01-21) 8 - Pipelines (Total 01-21)	9 548,20 €
	9 - Ostatné práce (Spolu 01-22) 9 - Other works (Total 01-22)	52 116,02 €
	99 - Presuny hmôt (Spolu 01-23) 99 - Transport of material (Total 01-23)	11 588,15 €
	991 - Dodávky materiálu (Spolu 01-24) 991 - Supply of the material (Total 01-24)	29 622,31 €
<b>14</b>	<b>Realizácia výrubov na poľnohospodárskej pôde vrátane rekultivácie všetkých pôch po výrube</b> <b>Cutting of trees on an agricultural land including recultivation of the areas after cutting</b>	<b>203 874,00 €</b>
	(Spolu 01-25) (Total 01-25)	203 874,00 €
<b>15</b>	<b>Realizácia revitalizačných opatrení</b> <b>Implementation of re-vitalization measures</b>	<b>212 254,47 €</b>
	(Spolu 01-26) (Total 01-26)	212 254,47 €
	<b>Celkom (riadky 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15)</b>	<b>36 885 742,07 €</b>
	<b>Total (rows 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15)</b>	<b>36 885 742,07 €</b>

**Cenová tabuľka 01-00**

**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

**ROZDIELOVÝ SÚHRNNÝ ROZPOČET SO 01**

**Variation summary budget SO 01**

<b>01 Základy</b> <b>Foundations</b>	
Montáž (Spolu 01-01) <i>Assembly (Total 01-01)</i>	
Materiál (Spolu 01-02) <i>Material (Total 01-02)</i>	
<b>02 Stožiare</b> <b>Towers</b>	
Montáž (Spolu 01-03) <i>Assembly (Total 01-03)</i>	
Materiál (Spolu 01-04) <i>Material (Total 01-04)</i>	
<b>03 Vodiče</b> <b>Phase conductors</b>	
Montáž (Spolu 01-05) <i>Assembly (Total 01-05)</i>	
Materiál (Spolu 01-06) <i>Material (Total 01-06)</i>	
<b>04 Izolátorové závesy</b> <b>Insulator sets</b>	
Montáž (Spolu 01-07) <i>Assembly (Total 01-07)</i>	
Materiál (Spolu 01-08) <i>Material (Total 01-08)</i>	
<b>05 KZL</b> <b>OPGW</b>	
Montáž (Spolu 01-09) <i>Assembly (Total 01-09)</i>	
Materiál (Spolu 01-10) <i>Material (Total 01-10)</i>	
<b>06 ZL</b> <b>GW</b>	
Montáž (Spolu 01-11) <i>Assembly (Total 01-11)</i>	
Materiál (Spolu 01-12) <i>Material (Total 01-12)</i>	
<b>07 Dočasné úpravy križovaných elektrických vedení</b> <b>Temporary modifications of power lines crossings</b>	
Montáž (Spolu 01-13) <i>Assembly (Total 01-13)</i>	
<b>08 Tabuľky a doplnky</b> <b>Miscellaneous</b>	
Montáž (Spolu 01-14) <i>Assembly (Total 01-14)</i>	
Materiál (Spolu 01-15) <i>Material (Total 01-15)</i>	

## Cenová tabuľka 01-00

## Price Schedule 01-00

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

2

## ROZDIELOVÝ SÚHRNNÝ ROZPOČET SO 01

## Variation summary budget SO 01

<b>09 Demontáže</b>		
<b>Disassembly</b>		
	Demontáž (Spolu 01-16)	
	Disassembly (Total 01-16)	
<b>Priame náklady stavebného objektu (Spolu riadky 01, 02, 03, 04, 05, 06, 07, 08, 09)</b>		
<b>Direct costs of the construction item (Total rows 01, 02, 03, 04, 05, 06, 07, 08, 09)</b>		
v tom	Montáže (De-) (Spolu 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16)	
in that	Assemblies (Dis-) (Totals 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16)	
v tom	Materiál (Spolu 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15)	
in that	Material (Totals 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15)	
<b>10 Projekčné a prieskumné práce</b>		
<b>Design and survey works</b>		
	<u>Dokumentácia pre realizáciu stavby</u>	
v tom	10 ks Dokumentácia, jej prerokovanie v priebehu a v závere prác s dotknutými orgánmi a organizáciami vrátane úradného overenia oprávnenou právnickou osobou v SR (napr. Technická inšpekcia)	
	<u>Detail implementation design</u>	
in that	10 pcs. Documentation and its negotiation with the concerned authorities and organizations during and at the end of design works including legalization by authorised organization in Slovakia (e.g. Technická inšpekcia)	
	<u>Výrobno-montážna dokumentácia</u>	
v tom	1 ks Dielenská dokumentácia základových dielov a stožiarov, so zapracovanými pripomienkami z kontrolnej montáže vrátane návrhu montážnych rámov a predloženie protokolov z kontrolnej montáže stožiarov	
	<u>Workshop and assembly drawings</u>	
in that	1 pc. Workshop and assembly drawings of embedded parts and towers, including incorporation of comments from test assembly including the design of mounting frames and submission of certificates from test assembly of towers	
	<u>Porealizačné zameranie</u>	
v tom	5 ks Protokol o zameraní súradníc stredov stožiarov a rohov stožiarov, pozdĺžneho profilu vodičov, zemného lana a kombinovaného zemného lana	
	<u>As built survey</u>	
in that	5 pcs. Certificate of measurement of towers centre coordinates and foundation corners, longitudinal profile of phase conductors, ground wire and combined ground wire	
	<u>Dokumentácia skutočného vyhotovenia</u>	
v tom	5 ks Vrátane výrobné - montážnej dokumentácie	
	<u>As built documentation</u>	
in that	5 pcs. Including workshop and assembly drawings	

**Cenová tabuľka 01-00**

**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

3

ROZDIELOVÝ SÚHRNNÝ ROZPOČET SO 01		
Variation summary budget SO 01		
<b>11</b>	<b>Nepriame náklady stavebného objektu</b> <b>Indirect costs of the construction item</b>	<b>-800 000,00 €</b>
v tom	<u>Zaistenie a vypínanie vedení</u> Náklady na realizáciu vypínania križovaných vedení, železníc a nadzemných sietí	
in that	<u>Switching-off and securing of crossed lines</u> Costs of switching-off of crossed lines, railways and facilities	
v tom	<u>Skúšky izolátorových závesov</u> Náklady na zabezpečenie všetkých potrebných skúšok pre jednotlivé typy izolátorových závesov - skratových a napätových skúšok	
in that	<u>Insulator sets tests</u> Costs of all necessary tests for individual insulator sets - power arc and voltage tests	
v tom	<u>Statické skúšky stožiarov</u> Náklady na zabezpečenie statických skúšok stožiarov typu: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)	<b>-800 000,00 €</b>
in that	<u>Tower tests</u> costs for realization of statical tower tests types: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)	
v tom	<u>Geodetická činnosť pri výstavbe</u> Vytýčenie všetkých priesekov a výrubov v trase vedenia - lesné pozemky vrátane poľnohospodárskych pozemkov, kontrola základov po ukončení betonáže	
in that	<u>Geodetical works for construction</u> Staking-out of all cuts and fellings in the line route - forrest land, agricultural land, checks of foundations after concreting	
v tom	<u>Priama inžinierska činnosť</u> Prejednanie vypínania križovaných vedení nn, vn, vvn, zvn a výluky železníc, vytýčenie všetkých podzemných sietí, zabezpečenie dohody o vstupe na pozemky s užívateľmi alebo majiteľmi, zabezpečenie výrubov na poľnohospodárskej pôde, náklady spojené s uvedením do prevádzky: napr. revízná správa, úradná skúška, nastavenie elektrických ochrán v Est	
in that	<u>Direct engineering works</u> Seek an agreement with the operators of low voltage, medium voltage, very high voltage, ex-tra high voltage and railway traction system lines and highways to be crossed, and ensurance their switching-off or closure, staking-out of all underground facilities, provision of right-of-way agreements with land owners or users, securing of fellings on agricultural land, costs related to commissioning, e.g. revision report, official examination, line protection settins in Substations	

**Cenová tabuľka 01-00****Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

4

**ROZDIELOVÝ SÚHRNNÝ ROZPOČET SO 01****Variation summary budget SO 01****12 Vedľajšie rozpočtové náklady**  
**Side budget costs**

v tom	<u>Zariadenie staveniska</u> Náklady na zariadenie staveniska vrátane jeho demontáže s uvedením staveniska do pôvodného stavu
in that	<u>Construction site</u> Costs of construction site facilities including their dismantling and restoration of the construction site to its original state

**13 Realizácia prístupových ciest vrátane uvedenia všetkých budovaných a používaných ciest do pôvodného stavu v zmysle podmienok užívateľov****Construction of access roads and consequent reinstatement of all new-built or other utilized access roads in terms of user's conditions**

1 - Zemné práce (Spolu 01-17)	
1 - Ground works (Total 01-17)	
3 - Zvislé konštrukcie (Spolu 01-18)	
3 - Vertical constructions (Total 01-18)	
4 - Vodorovné konštrukcie (Spolu 01-19)	
4 - Horizontal constructions (Total 01-19)	
5 - Spevnené plochy (Spolu 01-20)	
5 - Hardened platforms (Spolu 01-20)	
8 - Potrubné rozvody (Spolu 01-21)	
8 - Pipelines (Total 01-21)	
9 - Ostatné práce (Spolu 01-22)	
9 - Other works (Total 01-22)	
99 - Presuny hmôt (Spolu 01-23)	
99 - Transport of material (Total 01-23)	
991 - Dodávky materiálu (Spolu 01-24)	
991 - Supply of the material (Total 01-24)	

**14 Realizácia výrubov na poľnohospodárskej pôde vrátane rekultivácie všetkých pôch po výrube****Cutting of trees on an agricultural land including recultivation of the areas after cutting**(Spolu 01-25)  
(Total 01-25)**15 Realizácia revitalizačných opatrení****Implementation of re-vitalization measures**(Spolu 01-26)  
(Total 01-26)**Celkom (riadky 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15)****-800 000,00 €****Total (rows 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15)**

SEPS, a.s.  
Ing. Belanová Alena  
Mlynské nivy 59/A  
824 84 Bratislava

Bratislava, 22.02.2019

zn. 5020/2019/008/Ing. Kk

Subject: **Expression of the author's supervision on the tower specifications, on the tower static tests and the comparison of loading cases, related to the prepared project "Double 400 kV OHL Križovany – Bystričany"**

Tower type sets with configuration DONAU (No.15 – 191, 177 pieces in total) and SÚDOK (No.1-14 and 192-237, 60 pieces in total) are proposed for the project "Double 400 kV OHL Križovany – Bystričany". Both tower type sets were used on many projects of investor SEPS in the past.

DONAU tower type set was used on the following projects in the past:

- V487/489 - Moldava – USS Košice, commissioned in 2009
- V487/488 - USS Košice – Lemešany, commissioned in 2011
- V409/410 - Connection of 400 kV lines to Voľa Substation, commissioned in 2014
- V489/420 - Gabčíkovo – Veľký Ďur, commissioned in 2016

SÚDOK tower type set was used on the project:

- V487/488 - USS Košice – Lemešany, commissioned in 2012

All above given overhead lines including their tower structures were designed according to standard STN EN 50341-1: 2006 Overhead electrical lines exceeding AC 45 kV -- Part 1: General requirements - Common specifications. For comparison, the types of phase conductors used on these lines as well as their basic properties critical for the determination of loading cases, are given in the table below. The icing zone according to STN EN 50341-1: 2006 considered in the line design is given as well.

		Moldava - USS KE - Lemešany; Connection to SS Voľa	Gabčíkovo - V. Ďur	Križovany - Bystričany
Type		AlFe 445/74 3-bundle	AlFe 450/52 3-bundle	476-AL1/62-ST1A 3-bundle
Rated Strength	(kN)	156.19	133.85	146.40
Max Tension	(kN)	85.9023	73.6175	80.52
Diameter	(mm)	29.63	29.31	30.15
Cross-section area	(mm <sup>2</sup> )	519.21	500.46	537.7
Unit mass	(kg/m)	1.8232	1.6674	1.7988
DC resistance	(Ω/km)	0.0645	0.0646	0.0608
Linear exp. coeff.	(1/K)	1.89E-05	1.98E-05	1.93E-05
Al to St ratio	(-)	6.01	8.65	7.68
Icing Zone		N1, N2	N2	N2

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Above given data shows that the tower type sets used are designed for almost identical operational conditions.

In the past, tower static tests we performed for tower types N, I of DONAU configuration within the project Moldava – USS Košice and tower types N, II of SÚDOK configuration within the project USS Košice – Lemešany. Static tower tests have shown the correctness of proposed tower geometry and the dimensions of rolled material used (mostly equal angles, L-shaped). The geometry of towers itself, used on the individual projects, is almost identical and minor modifications were only made to tower climbing systems, worker safety, tower labeling, etc., based on the actual OHL operator's requirements. However, these changes do not have significant impact on the tower loads.

Regarding all above mentioned projects, towers were made of S355J2 steel and joint material was class 8.8, surface protection was hot-dip galvanizing.

Based on these facts, it is **not necessary** to further verify the design of tower structures well-founded by static tests. However, it is recommended to carry out the verification assembly of each tower piece prototype in the factory before its mass production, to verify the mutual assembly compatibility of individual tower piece members and tower pieces together, respectively. Accordingly, it is necessary to take care of steel chemical composition of rolled material used for manufacturing of towers structures, mainly the percentage of silicon, which has significant impact on the process of hot-dip galvanizing and the quality of zinc layer creation according to EN ISO 1461.

Kind regards

Ing. I ibor Kovalík  
OHL division Manager

Ing. Jozef Predáč  
static designer

Co: 5020, reg.

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Ing. Belanová Alena  
Mlynské Nivy 59/A  
824 84 Bratislava

Bratislava, 22.02.2019

zn. 5020/2019/008/Ing. Kk

**Vec: Vyjadrenie ku špecifikácii stožiarov, k vykonaným statickým skúškam a porovnanie zaťažovacích stavov, k pripravovanej stavbe „Vedenie 2x400kV Križovany-Bystričany“.**

V rámci stavby „Vedenie 2x400 kV Križovany – Bystričany“ je navrhnutá typizácia stožiarov konfigurácie DONAU (p.b.č.15-191, celkom 177 ks) a SÚDOK (p.b.č.1-14, 192-237, celkom 60 ks). Obe typizácie boli v minulosti použité na viacerých stavbách, ktorej investorom bola SEPS.

Typizácia DONAU bola v minulosti použitá na stavbách:

- V487/489 Moldava – USS Košice, uvedenie do prevádzky v r.2009
- V487/488 – USS Košice – Lemešany, uvedenie do prevádzky v r.2011
- V409/410 – Zaústenie 400 kV vedení do ES Voľa, uvedenie do prevádzky v r.2014
- V489/420 – Gabčíkovo – Veľký Ďur, uvedenie do prevádzky v r.2016

Typizácia SÚDOK bola použitá na stavbe:

- V487/488 – USS Košice – Lemešany, uvedenie do prevádzky v r.2012

Všetky vyššie uvedené vedenia vrátane stožiarových konštrukcií boli navrhnuté a projektované v zmysle normy STN EN 50341-1:2006 *Vonkajšie elektrické vedenia so striedavým napätím nad 45 kV. Časť 1: Všeobecné požiadavky. Spoločné špecifikácie.* Pre porovnanie sú v tabuľke uvedené typy fázových vodičov použitých na vedeniach so uvedenými rozhodujúcimi parametrami pre stanovenie zaťažovacích stavov. Taktiež je pri jednotlivých vedeniach uvedená aj námrazová oblasť v zmysle STN EN 50341-1:2006, s ktorou bolo pri návrhu jednotlivých vedení uvažované.

		Moldava-USS KE- Lemešany; Zaústenie do ES Voľa	Gabčíkovo-V.Ďur	Križovany - Bystričany
Typ		AlFe 445/74 3-zväzok	AlFe 450/52 3-zväzok	476-AL1/62-ST1A 3-zväzok
Pevnosť	(kN)	156,19	133,85	146,40
Max.ťah	(kN)	85,9023	73,6175	80,52
Priemer	(mm)	29,63	29,31	30,15
Prierez	(mm <sup>2</sup> )	519,21	500,46	537,7

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Hmotnosť	(kg/m)	1,8232	1,6674	1,7988
DC odpor	( $\Omega$ /km)	0,0645	0,0646	0,0608
Koef.rozťažnosti	(1/K)	1,89E-05	1,98E-05	1,93E-05
Pomer Al:Fe	(-)	6,01	8,65	7,68
Námrazová oblasť		N1, N2	N2	N2

Z údajov uvedených v tabuľke vyplýva, že použité typizácie stožiarov sú navrhnuté na takmer identické podmienky pre ich prevádzku.

V minulosti boli predmetom statických skúšok stožiare typu N, I konfigurácie DONAU v rámci stavby Moldava – USS Košice, a stožiare typu N, II konfigurácie SÚDOK v rámci stavby USS Košice - Lemešany. Statické skúšky preukázali správnosť navrhutej geometrie a dimenzii použitého valcovaného materiálu (v drvivej väčšine rovnoramenné L-uholníky). Samotná geometria stožiarov použitých v jednotlivých stavbách je takmer totožná, mierne úpravy boli vykonávané na základe požiadaviek prevádzkovateľa ohľadom výstupu na stožiare, zabezpečenia pracovníkov, označovania stožiarov apod., ktoré ale nemajú zásadný vplyv na zaťaženie stožiarov.

Pri všetkých vyššie uvedených stavbách boli stožiare vyrobené z ocele S355J2, použitý bol spojovací materiál 8.8 a boli dodávané žiarovo pozinkované.

Na základe týchto skutočností **nie je nutné** ďalšie overovanie návrhu stožiarových konštrukcií podložené statickými skúškami. Odporúča sa ale vykonať kontrolnú montáž prototypu každého dielu vo výrobe pred začatím samotnej sériovej výroby pre overenie zmontovateľnosti jednotlivých komponentov dielu, resp. stožiara. Taktiež je potrebné dbať na chemické zloženie ocele valcovaného materiálu použitého pre výrobu stožiarových konštrukcií, najmä na percentuálne zastúpenie kremíka, ktorý má zásadný vplyv na proces žiarového zinkovania a kvalitu vytvorenia zinkovej vrstvy v zmysle EN ISO 1461.

So srdečným pozdravom

Ing. Tibor Kovalík  
Riaditeľ DEV

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**Project group: Transformation 400/110 kV Bystričany – 1<sup>st</sup> part**  
**Project 4: Double 400 kV OHL Križovany – Bystričany**

**Variation Order No. 2**

**Structure SO01 – Change of location of towers no. 35–41 in vineyards**

Drawn up by: Ing. Štefan Őlvecký

Controlled by: Ing. Matúš Ádám

Approved by: Ing. Marián Mašeja

Contract No.

SEPS 2018-0149-1177501 / VUJE 1222818/00/00

Designation

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Inspection

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## Table of Content

1. Identification Data .....	3
2. Objective of Variation .....	3
3. Reason for variation.....	3
4. Financial Details of the Variation .....	8
5. Detailed breakdown of the Variation.....	8

## 1. Identification Data

<b>Name of Construction:</b>	Complex of Projects: ES Bystričany - Transformation 400/110 kV – 4 <sup>th</sup> project Construction – Double 400 kV OHL Križovany – Bystričany (Project 2, Phase 4)
<b>Location of Construction:</b>	Route and protection zone of the OHL including access roads Trnava Region, District: Trnava, Hlohovec Nitra Region, District: Nitra, Topoľčany Trenčín Region, District: Partizánske, Prievidza Slovak Republic
<b>Investor:</b>	Slovenská elektrizačná prenosová sústava, a. s. Mlynské Nivy 59/A 824 84 Bratislava Slovak Republic
<b>Future Operator:</b>	Slovenská elektrizačná prenosová sústava, a. s. Mlynské Nivy 59/A 824 84 Bratislava Slovak Republic

## 2. Objective of Variation


Relocation of 2x400 kV towers in tension section 35–41

## 3. Reason for Variation

Before the Building Permit for the Implementation of the works "Double 400 kV OHL Križovany - Bystričany" was issued (December 11th, 2015), the location of 240 towers was agreed with landowners/land users on whose land the towers are to be built. The position of the 240 towers is recorded in the Building Permit.

Before starting construction and entering agricultural land, it is required to apply to the District Office for temporary withdrawal of agricultural land. The Employer requested the District Office of Trnava which has pursuant to §18 par. 3 of Act no. 71/1967 on administrative


proceedings notified parties to the proceedings about the commencement of proceedings of permanent withdrawal of agricultural land for the construction of Double 400kV OHL Križovany-Bystričany project by a notice of commencement of proceedings dated April 6 2016. No submissions or comments were submitted to the District Office within the given time during the proceedings. The soil protection body assessed the application and issued a decision no. OU-TT-PLO-2016/018220-Roz dated 14.9.2016 (valid 21.12.2016) by which the agricultural land is withdrawn for non-agricultural purposes for the purpose of construction of "Double 400kV OHL Križovany-Bystričany" and in line with §17 par. 6 letter e) of the Act on administrative proceedings it has imposed, among others, the condition of announcing the commencement of work to the land user in advance and as well respect the conditions of entry to the land requested by the landuser. The District Office recalled that it is possible to enter the agricultural land only with the consent of the user of the agricultural land.



Prior to the start of works the contractor submitted in April 2019 a notice of commencement of works to all land users. Panonia Winery, s. r. o., landuser/owner of the land on which part of the towers are to be built, refused access to its land. The company alleged that significant damage to its vineyard will be caused and as an effect there will be considerable reduction of wine production.

The scope of works to be executed on Panonia Winery's land is the following:

- Erection of towers 35 – 41 of the new Double 400 kV OHL Križovany – Bystričany and stringing works (towers 32-40 and 40-46),
- Disassembly of towers, foundations, conductors and ground wires - tower positions 40 – 46 of the old 220 kV V274 OHL.



Additionally, the Employer, based on operational reasons (reconstruction of the substation Sučany which will ensure continuation of supply of electricity), requested to accelerate the construction of a part of the OHL to be able to energize this part prior the end of April 2020. This will enable completion of the reconstruction on time and when successful, commissioning of the reconstructed substation Sučany and inclusion in the Employer's Transmission Network not to endanger discontinuation of supply of electricity.

Because of the above, the Contractor proposed to the Employer on basis of Subparagraph 13.2 of the Contract of Works (Value Engineering) a variation proposal. The variation proposal comprises: i) the change of tower location of new 400 kV tower no. 35 to tower no. 38 to old tower locations of towers 220KV no. 40 – 43; ii) to move new tower location of tower no. 39 closer to the fence and to the existing road inside the vineyard of Panonia Winery and iii) allows access to Panonia Winery land site to build the OHL towers and its stringing.

The Variation Proposal is justified through:

- Accelerate completion (13.2. Value Engineering (i))
  - o Access to Panonia Winery land site to build the OHL towers and perform its stringing.

- To meet the Date of the Completion (end of the May 2020) and enabling successfully energizing of the OHL V274 in one and half month till 10<sup>th</sup> of July 2020 and to complete reconstruction of substation Sučany and not endangering the continuation of electricity supply to customers.
- To ensure completion of the Works five months before the contractual completion date 22 April 2021 and thus it will be ensured that the related projects from the Complex ES Bystričany – Transformation 400/110kV can be completed on-time (Finalization of the tests of the completion for the projects Transformation 400/110kV in ES Bystričany and Enlargement of 400kV substation in ES Križovany, for which completion Double 400 kV OHL Križovany – Bystričany is mandatory).
- Reduce the maintenance and operating costs to SEPS (13.2. Value Engineering (ii));
  - The distances between the new tower positions and existing roads in vineyard is reduced. It will reduce the maintenance and operating cost to the Employer as the OHL is easier accessible;
- Improve the efficiency to the Employer of the completed Works (13.2. Value Engineering (iii))
  - This solution has a positive effect on the optimization of spans length in this section and a balanced tension force for each tower
  - Improved terms between Panonia Winery s. r. o. and the Employer, which will bring future communication and permission to entry the land much easier
  - The proposed variation will substantially reduce the Environmental Impact as less land and vegetation damage is made.

#### 4. Description of the Variation

In the table underneath the new position of 400 kV OHL towers 35 – 41 is described. All the new tower locations are depicted in the cadastral map (Annex 4).

Tower number of original 220kV OHL	Tower number of new 400kV OHL	Description
40	35	Tower 35 placed in the original location of tower 40
41	36	Tower 36 placed in the original location of tower 41
42	37	Tower 37 placed in the original location of tower 42
43	38	Tower position 43 is not used as tower 38 will have a new tower position closer to the boundary of the vineyard. This will provide a better accessibility.



44	39	Tower 39 placed in the original location of tower 44
45	40	Tower 40 was from the start located on the tower location of tower 45
46	41	Tower 41 was from the start located on the tower location of tower 46

Because the land is not flat but hilly, the tower height must also be adjusted to its actual new position as described in the table below:

New 400kV OHL	Tower list before variation	Tower list after variation	Tower Height Increase
Tower number	Tower type	Tower type	meter
35	N2+6	N2+9	3
36	N2+3	N2+3	0
37	N2+3	N2+6	3
38	N2+9	N2+15	6
39	N2+0	N2+6	6

Activities to be performed to execute the variation

#### Consultation

- Consultation with land users;
- Consultation and approval of District Office (Okresný úrad Trnava), responsible for the application of land (building or agricultural);

The District Office was requested to issue a decision on agricultural land use change within the meaning of Sec. 11(1) of the Act No. 220/2004 Coll. on the conservation and use of agricultural land, as amended by the Act No. 57/2013 Coll., to be used for the implementation of V274 OHL.

#### Building Permit

It is not necessary to update the Building Permit to include the new location of the towers because the relocation of the towers is in the same corridor.

#### Project documentation (Detailed Documentation for Implementation; DDI)

DDI needs to be updated to reflect the new tower positions.

**Tower 400 kV OHL**

- Design:
  - o Update of the design to the new height of towers for the new positions
  - o Calculation of weight of new tower steel constructions
  - o Annex 5 upper table present new total weight of 90987, 3 kg
  - o Annex 5 middle table present "old" weight of 81868 kg
  - o Annex 5 lowest table present the increase of weight of 9119,3 kg
- Foundation:
  - o Update of the design of the foundation by the new tower position adjustment to other land conditions
  - o Update of the dimensions of enlargement foundation part of legs. See annex n.5
  - o Adjustment of new foundation concrete volume to revised height
  - o Annex 7 upper table present new total volume of concrete of 248,47 m<sup>3</sup>
  - o Annex 7 middle table present "old" volume of concrete of 216 m<sup>3</sup>
  - o Annex 7 lowest table present the increase of volume of concrete of 32,47 m<sup>3</sup>
- Excavation:
  - o Additional soil should be excavated to be able to install the 400kV OHL tower foundations
  - o Annex 6 upper table present new total volume of 624,69 m<sup>3</sup>
  - o Annex 6 middle table present "old" volume of 574,970 m<sup>3</sup>
  - o Annex 6 lowest table present the increase of volume of 49,720 m<sup>3</sup>

**Tower 220 kV OHL:**

- Foundation:
  - o Concrete foundations of the 220 kV OHL should be demolished up to a depth of one meter. As now the pits of tower 40, 41, 42 and 44 of the 220 kV OHL are used for tower 35, 36, 37 and 39 of the 400 kV OHL, the entire concrete foundation of tower 40, 41, 42 and 44 should be removed up to a depth of approximately 2,15 m.
- Demolish of concrete:
  - o Annex 8 upper table present new total volume of 122,3 m<sup>3</sup>
  - o Annex 8 middle table present "old" volume of 35,5 m<sup>3</sup>
  - o Annex 8 lowest table present the increase of volume of 86,8 (54,33) m<sup>3</sup>
- Removal of waste:
  - o The additional amount of soil and demolished concrete shall be removed

**Activities which shall not be performed due to the variation**

- Excavation works for the original position of towers 35, 36, 37 and 39 of the 400 kV OHL.

- As the relocated towers fall within one tension section – no. 32 to no. 40, no additional modifications to the tension tower positions and electrical equipment are required.

## 5. Financial Details of the Variation

The additional works and/or activities necessary to implement the variation has been calculated and can be summarized as follows:

Contract price as per contract signing date	Variation cost	New contract price
<b>Eur excl. VAT</b>	<b>Eur excl. VAT</b>	<b>Eur excl. VAT</b>
<b>37,685,742.07</b>	<b>42 460,32</b>	<b>37 728 202,39</b>

## 6. Detailed breakdown of the Variation

In Annex 1 is the cost breakdown (affected part only) of the original Contract price SO 01 attached "Contractual summary budget SO 01".

In Annex 2 is the cost breakdown (affected part only) of the adjusted Contract price SO 01 attached "New contractual summary budget SO 01".

In Annex 3 is the cost breakdown (affected part only) of the increase SO 01 attached "Variation summary budget SO 01".

### Annexes

Annex 1 – Contractual summary budget SO 01

Annex 2 – New contractual summary budget SO 01

Annex 3 – Variation summary budget SO 01

Annex 4 – Cadastral map

Annex 5 – Weight calculation of steel structures of foundation parts

Annex 6 – Volume calculation of foundation excavations according to soil classes

Annex 7 – Calculation of concrete volume for the foundations

Annex 8 – Calculation of concrete volume for the demolition of old foundations

Annex 9 – Statement of design supervisor and construction project designer

Annex 10 – Copy of the quote of the Subcontractor for engineering activity

Annex 11 – Minus calculation of access roads in vineyard

**Cenová tabuľka 01-00**

**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany - Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

1

**ZMLUVNÝ SÚHRNNÝ ROZPOČET SO 01**  
**ORIGINAL GENERAL PRICE SO 01**

<b>01 Základy</b> <b>Foundations</b>		<b>4 981 734,45 €</b>
Montáž (Spolu 01-01) <i>Assembly (Total 01-01)</i>		2 094 108,59 €
Materiál (Spolu 01-02) <i>Material (Total 01-02)</i>		2 887 625,86 €
<b>02 Stožiare</b> <b>Towers</b>		<b>13 170 086,64 €</b>
Montáž (Spolu 01-03) <i>Assembly (Total 01-03)</i>		5 093 784,42 €
Materiál (Spolu 01-04) <i>Material (Total 01-04)</i>		8 076 302,22 €
<b>03 Vodiče</b> <b>Phase conductors</b>		<b>8 785 114,20 €</b>
Montáž (Spolu 01-05) <i>Assembly (Total 01-05)</i>		1 510 094,80 €
Materiál (Spolu 01-06) <i>Material (Total 01-06)</i>		7 275 019,40 €
<b>04 Izolátorové závesy</b> <b>Insulator sets</b>		<b>4 004 667,55 €</b>
Montáž (Spolu 01-07) <i>Assembly (Total 01-07)</i>		1 008 089,85 €
Materiál (Spolu 01-08) <i>Material (Total 01-08)</i>		2 996 577,70 €
<b>05 KZL</b> <b>OPGW</b>		<b>1 354 410,11 €</b>
Montáž (Spolu 01-09) <i>Assembly (Total 01-09)</i>		410 061,60 €
Materiál (Spolu 01-10) <i>Material (Total 01-10)</i>		944 348,51 €
<b>06 ZL</b> <b>GW</b>		<b>8 372,30 €</b>
Montáž (Spolu 01-11) <i>Assembly (Total 01-11)</i>		2 470,90 €
Materiál (Spolu 01-12) <i>Material (Total 01-12)</i>		5 901,40 €
<b>07 Dočasné úpravy križovaných elektrických vedení</b> <b>Temporary modifications of power lines crossings</b>		<b>297 712,65 €</b>
Montáž (Spolu 01-13) <i>Assembly (Total 01-13)</i>		297 712,65 €
<b>08 Tabuľky a doplnky</b> <b>Miscellaneous</b>		<b>131 616,58 €</b>
Montáž (Spolu 01-14) <i>Assembly (Total 01-14)</i>		73 694,10 €
Materiál (Spolu 01-15) <i>Material (Total 01-15)</i>		57 922,48 €

**Cenová tabuľka 01-00**  
**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

2

ZMLUVNÝ SÚHRNNÝ ROZPOČET SO 01		
ORIGINAL GENERAL PRICE SO 01		
<b>09 Demontáže</b>		
<b>Disassembly</b>		<b>1 519 256,19 €</b>
Demontáž (Spolu 01-16)		
<b>Disassembly (Total 01-16)</b>		<b>1 519 256,19 €</b>
<b>Priame náklady stavebného objektu (Spolu riadky 01, 02, 03, 04, 05, 06, 07, 08, 09)</b>		
<b>Direct costs of the construction item (Total rows 01, 02, 03, 04, 05, 06, 07, 08, 09)</b>		<b>34 252 970,67 €</b>
v tom	Montáže (De-) (Spolu 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16)	
		12 009 273,10 €
in that	Assemblies (Dis-) (Totals 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16)	
v tom	Materiál (Spolu 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15)	
in that	Material (Totals 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15)	22 243 697,57 €
<b>10 Projekčné a prieskumné práce</b>		
<b>Design and survey works</b>		<b>826 000,00 €</b>
v tom	<u>Dokumentácia pre realizáciu stavby</u> 10 ks Dokumentácia, jej prerokovanie v priebehu a v závere prác s dotknutými orgánmi a organizáciami vrátane úradného overenia oprávnenou právnickou osobou v SR (napr. Technická inšpekcia)	
		550 000,00 €
in that	<u>Detail implementation design</u> 10 pcs. Documentation and its negotiation with the concerned authorities and organizations during and at the end of design works including legalization by authorised organization in Slovakia (e.g. Technická inšpekcia)	
v tom	<u>Výrobná-montážna dokumentácia</u> 1 ks Dielenská dokumentácia základových dielov a stožiarov, so zapracovanými pripomienkami z kontrolnej montáže vrátane návrhu montážnych rámov a predloženie protokolov z kontrolnej montáže stožiarov	
		190 000,00 €
in that	<u>Workshop and assembly drawings</u> 1 pc. Workshop and assembly drawings of embedded parts and towers, including incorporation of comments from test assembly including the design of mounting frames and submission of certificates from test assembly of towers	
v tom	<u>Porealizačné zameranie</u> 5 ks Protokol o zameraní súradníc stredov stožiarov a rohov stožiarov, pozdĺžneho profilu vodičov, zemného lana a kombinovaného zemného lana	
		56 000,00 €
in that	<u>As built survey</u> 5 pcs. Certificate of measurement of towers centre coordinates and foundation corners, longitudinal profile of phase conductors, ground wire and combined ground wire	
v tom	<u>Dokumentácia skutočného vyhotovenia</u> 5 ks Vrátane výrobné - montážnej dokumentácie	
		30 000,00 €
in that	<u>As built documentation</u> 5 pcs. Including workshop and assembly drawings	

**Cenová tabuľka 01-00**

**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

3

ZMLUVNÝ SÚHRNNÝ ROZPOČET SO 01		
ORIGINAL GENERAL PRICE SO 01		
<b>11</b>	<b>Nepriame náklady stavebného objektu</b> <b>Indirect costs of the construction item</b>	<b>1 042 000,00 €</b>
v tom	<u>Zaistenie a vypínanie vedení</u> Náklady na realizáciu vypínania križovaných vedení, železníc a nadzemných sietí	50 000,00 €
in that	<u>Switching-off and securing of crossed lines</u> Costs of switching-off of crossed lines, railways and facilities	
v tom	<u>Skúšky izolátorových závesov</u> Náklady na zabezpečenie všetkých potrebných skúšok pre jednotlivé typy izolátorových závesov - skratových a napäťových skúšok	30 000,00 €
in that	<u>Insulator sets tests</u> Costs of all necessary tests for individual insulator sets - power arc and voltage tests	
v tom	<u>Statické skúšky stožiarov</u> Náklady na zabezpečenie statických skúšok stožiarov typu: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)	800 000,00 €
in that	<u>Tower tests</u> costs for realization of statical tower tests types: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)	
v tom	<u>Geodetická činnosť pri výstavbe</u> Vytýčenie všetkých priesečkov a výrubov v trase vedenia - lesné pozemky vrátane poľnohospodárskych pozemkov, kontrola základov po ukončení betonáže	12 000,00 €
in that	<u>Geodetical works for construction</u> Staking-out of all cuts and fellings in the line route - forrest land, agricultural land, checks of foundations after concreting	
v tom	<u>Priama inžinierska činnosť</u> Prejednanie vypínaní križovaných vedení nn, vn, vvn, zvn a výluky železníc, vytýčenie všetkých podzemných sietí, zabezpečenie dohody o vstupe na pozemky s užívateľmi alebo majiteľmi, zabezpečenie výrubov na poľnohospodárskej pôde, náklady spojené s uvedením do prevádzky: napr. revízná správa, úradná skúška, nastavenie elektrických ochrán v Est	150 000,00 €
in that	<u>Direct engineering works</u> Seek an agreement with the operators of low voltage, medium voltage, very high voltage, ex-tra high voltage and railway traction system lines and highways to be crossed, and ensurance their switching-off or closure, staking-out of all underground facilities, provision of right-of-way agreements with land owners or users, securing of fellings on agricultural land, costs related to commissioning, e.g. revision report, official examination, line protection settins in Substations	
v tom	<u>Vyvolaná inžinierska činnosť</u> Zabezpečenie inžinierskych činností v rámci zmeny osadenia stožiarov vo viniciach, (zmena stavby pred dokončením), rokovanie a zabezpečenie príslušných povolení štátnych orgánov a majiteľov dotknutých pozemnkov	
in that	<u>Induced engineering works</u> Ensuring engineering activities in the context of replacing the installation of poles in vineyards, (rebuilding before completion), negotiating and securing the relevant permits of state authorities and landowners concerned	

**Cenová tabuľka 01-00**

**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

4

<b>ZMLUVNÝ SÚHRNNÝ ROZPOČET SO 01</b>		
<b>ORIGINAL GENERAL PRICE SO 01</b>		
<b>12</b>	<b>Vedľajšie rozpočtové náklady</b> <b>Side budget costs</b>	<b>823 656,90 €</b>
v tom	<u>Zariadenie staveniska</u> Náklady na zariadenie staveniska vrátane jeho demontáže s uvedením staveniska do pôvodného stavu	823 656,90 €
in that	<u>Construction site</u> Costs of construction site facilities including their dismantling and restoration of the construction site to its original state	
<b>13</b>	<b>Realizácia prístupových ciest vrátane uvedenia všetkých budovaných a používaných ciest do pôvodného stavu v zmysle podmienok užívateľov</b> <b>Construction of access roads and consequent reinstatement of all new-built or other utilized acces roads in terms of user's conditions</b>	<b>324 986,03 €</b>
	1 - Zemné práce (Spolu 01-17) 1 - Ground works (Total 01-17)	94 229,41 €
	3 - Zvislé konštrukcie (Spolu 01-18) 3 - Vertical constructions (Total 01-18)	4 614,70 €
	4 - Vodorovné konštrukcie (Spolu 01-19) 4 - Horizontal constructions (Total 01-19)	115,99 €
	5 - Spevnené plochy (Spolu 01-20) 5 - Hardened platforms (Spolu 01-20)	123 151,25 €
	8 - Potrubné rozvody (Spolu 01-21) 8 - Pipelines (Total 01-21)	9 548,20 €
	9 - Ostatné práce (Spolu 01-22) 9 - Other works (Total 01-22)	52 116,02 €
	99 - Presuny hmôt (Spolu 01-23) 99 - Transport of material (Total 01-23)	11 588,15 €
	991 - Dodávky materiálu (Spolu 01-24) 991 - Supply of the material (Total 01-24)	29 622,31 €
<b>14</b>	<b>Realizácia výrubov na poľnohospodárskej pôde vrátane rekultivácie všetkých pôch po výrube</b> <b>Cutting of trees on an agricultural land including recultivation of the areas after cutting</b>	<b>203 874,00 €</b>
	(Spolu 01-25) (Total 01-25)	203 874,00 €
<b>15</b>	<b>Realizácia revitalizačných opatrení</b> <b>Implementation of re-vitalization measures</b>	<b>212 254,47 €</b>
	(Spolu 01-26) (Total 01-26)	212 254,47 €
<b>Celkom (riadky 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15)</b>		<b>37 685 742,07 €</b>
<b>Total (rows 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15),</b>		<b>37 685 742,07 €</b>

**Cenová tabuľka 01-00**  
**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany - Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

1

ZMENOVÝ SÚHRNNÝ ROZPOČET SO 01 ADJUSTED GENERAL PRICE SO 01	
<b>01 Základy</b> <b>Foundations</b>	<b>4 988 414,55 €</b>
Montáž (Spolu 01-01) Assembly (Total 01-01)	2 096 253,46 €
Materiál (Spolu 01-02) Material (Total 01-02)	2 892 161,09 €
<b>02 Stožiare</b> <b>Towers</b>	<b>13 189 775,20 €</b>
Montáž (Spolu 01-03) Assembly (Total 01-03)	5 101 025,14 €
Materiál (Spolu 01-04) Material (Total 01-04)	8 088 750,06 €
<b>03 Vodiče</b> <b>Phase conductors</b>	<b>8 785 114,20 €</b>
Montáž (Spolu 01-05) Assembly (Total 01-05)	1 510 094,80 €
Materiál (Spolu 01-06) Material (Total 01-06)	7 275 019,40 €
<b>04 Izolátorové závesy</b> <b>Insulator sets</b>	<b>4 004 667,55 €</b>
Montáž (Spolu 01-07) Assembly (Total 01-07)	1 008 089,85 €
Materiál (Spolu 01-08) Material (Total 01-08)	2 996 577,70 €
<b>05 KZL</b> <b>OPGW</b>	<b>1 354 410,11 €</b>
Montáž (Spolu 01-09) Assembly (Total 01-09)	410 061,60 €
Materiál (Spolu 01-10) Material (Total 01-10)	944 348,51 €
<b>06 ZL</b> <b>GW</b>	<b>8 372,30 €</b>
Montáž (Spolu 01-11) Assembly (Total 01-11)	2 470,90 €
Materiál (Spolu 01-12) Material (Total 01-12)	5 901,40 €
<b>07 Dočasné úpravy križovaných elektrických vedení</b> <b>Temporary modifications of power lines crossings</b>	<b>297 712,65 €</b>
Montáž (Spolu 01-13) Assembly (Total 01-13)	297 712,65 €
<b>08 Tabuľky a doplnky</b> <b>Miscellaneous</b>	<b>131 616,58 €</b>
Montáž (Spolu 01-14) Assembly (Total 01-14)	73 694,10 €
Materiál (Spolu 01-15) Material (Total 01-15)	57 922,48 €



**Cenová tabuľka 01-00**

**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

2

ZMENOVÝ SÚHRNNÝ ROZPOČET SO 01		
ADJUSTED GENERAL PRICE SO 01		
<b>09</b>	<b>Demontáže</b>	
	<b>Disassembly</b>	1 530 778,23 €
	Demontáž (Spolu 01-16)	
	Disassembly (Total 01-16)	1 530 778,23 €
	<b>Priame náklady stavebného objektu (Spolu riadky 01, 02, 03, 04, 05, 06, 07, 08, 09)</b>	<b>34 290 861,37 €</b>
	<b>Direct costs of the construction item (Total rows 01, 02, 03, 04, 05, 06, 07, 08, 09)</b>	
v tom	Montáže (De-) (Spolu 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16)	
in that	Assemblies (Dis-) (Totals 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16)	12 030 180,73 €
v tom	Materiál (Spolu 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15)	
in that	Material (Totals 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15)	22 260 680,64 €
<b>10</b>	<b>Projektové a prieskumné práce</b>	
	<b>Design and survey works</b>	<b>826 000,00 €</b>
v tom	<u>Dokumentácia pre realizáciu stavby</u> 10 ks Dokumentácia, jej prerokovanie v priebehu a v závere prác s dotknutými orgánmi a organizáciami vrátane úradného overenia oprávnenou právnickou osobou v SR (napr. Technická inšpekcia)	550 000,00 €
in that	<u>Detail implementation design</u> 10 pcs. Documentation and its negotiation with the concerned authorities and organizations during and at the end of design works including legalization by authorised organization in Slovakia (e.g. Technická inšpekcia)	
v tom	<u>Výrobno-montážna dokumentácia</u> 1 ks Dielenská dokumentácia základových dielov a stožiarov, so zapracovanými pripomienkami z kontrolnej montáže vrátane návrhu montážnych rámov a predloženie protokolov z kontrolnej montáže stožiarov	190 000,00 €
in that	<u>Workshop and assembly drawings</u> 1 pc. Workshop and assembly drawings of embedded parts and towers, including incorporation of comments from test assembly including the design of mounting frames and submission of certificates from test assembly of towers	
v tom	<u>Porealizačné zameranie</u> 5 ks Protokol o zameraní súradníc stredov stožiarov a rohov stožiarov, pozdĺžneho profilu vodičov, zemného lana a kombinovaného zemného lana	56 000,00 €
in that	<u>As built survey</u> 5 pcs. Certificate of measurement of towers centre coordinates and foundation corners, longitudinal profile of phase conductors, ground wire and combined ground wire	
v tom	<u>Dokumentácia skutočného vyhotovenia</u> 5 ks Vrátane výrobo - montážnej dokumentácie	30 000,00 €
in that	<u>As built documentation</u> 5 pcs. Including workshop and assembly drawings	

**Cenová tabuľka 01-00**  
**Price Schedule 01-00**

Stavba **Vedenie 2x400kV Križovany - Bystričany**  
Structure **Double 400kV OHL Križovany - Bystričany**  
PS-SO **E1. SO01: Vedenie 2x400kV**  
Construction item **E1. SO01: Double 400kV OHL**

3

**ZMENOVÝ SÚHRNNÝ ROZPOČET SO 01**  
**ADJUSTED GENERAL PRICE SO 01**

<b>11 Nepriame náklady stavebného objektu</b> <b>Indirect costs of the construction item</b>		<b>1 044 500,00 €</b>
v tom	<u>Zaistenie a vypínanie vedení</u> Náklady na realizáciu vypínania križovaných vedení, železníc a nadzemných sietí	50 000,00 €
in that	<u>Switching-off and securing of crossed lines</u> Costs of switching-off of crossed lines, railways and facilities	
v tom	<u>Skúšky izolátorových závesov</u> Náklady na zabezpečenie všetkých potrebných skúšok pre jednotlivé typy izolátorových závesov - skratových a napätových skúšok	30 000,00 €
in that	<u>Insulator sets tests</u> Costs of all necessary tests for individual insulator sets - power arc and voltage tests	
v tom	<u>Statické skúšky stožiarov</u> Náklady na zabezpečenie statických skúšok stožiarov typu: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)	800 000,00 €
in that	<u>Tower tests</u> costs for realization of statical tower tests types: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)	
v tom	<u>Geodetická činnosť pri výstavbe</u> Vytýčenie všetkých priesekov a výrubov v trase vedenia - lesné pozemky vrátane poľnohospodárskych pozemkov, kontrola základov po ukončení betonáže	12 000,00 €
in that	<u>Geodetical works for construction</u> Staking-out of all cuts and fellings in the line route - forrest land, agricultural land, checks of foundations after concreting	
v tom	<u>Priama inžinierska činnosť</u> Prejednanie vypínaní križovaných vedení nn, vn, vvn, zvn a výluky železníc, vytýčenie všetkých podzemných sietí, zabezpečenie dohody o vstupe na pozemky s užívateľmi alebo majiteľmi, zabezpečenie výrubov na poľnohospodárskej pôde, náklady spojené s uvedením do prevádzky: napr. revízná správa, úradná skúška, nastavenie elektrických ochrán v Est	150 000,00 €
in that	<u>Direct engineering works</u> Seek an agreement with the operators of low voltage, medium voltage, very high voltage, ex-tra high voltage and railway traction system lines and highways to be crossed, and ensurance their switching-off or closure, staking-out of all underground facilities, provision of right-of-way agreements with land owners or users, securing of fellings on agricultural land, costs related to commissioning, e.g. revision report, official examination, line protection settins in Substations	
v tom	<u>Vyvolaná inžinierska činnosť</u> Zabezpečenie inžinierskych činností v rámci zmeny osadenia stožiarov vo viniciach, (zmena stavby pred dokončením), rokovanie a zabezpečenie príslušných povolení štátnych orgánov a majiteľov dotknutých pozemkov (Zdroj ceny - Ponuka subdodávateľa, Príloha č.10)	<b>2 500,00 €</b>
in that	<u>Induced engineering works</u> Ensuring engineering activities in the context of replacing the installation of poles in vineyards, (rebuilding before completion), negotiating and securing the relevant permits of state authorities and landowners concerned (Price reference - Proposal of Subcontractor, Annex Nr.10 )	

**Cenová tabuľka 01-00**

**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

4

<b>ZMENOVÝ SÚHRNNÝ ROZPOČET SO 01</b>		
<b>ADJUSTED GENERAL PRICE SO 01</b>		
<b>12</b>	<b>Vedľajšie rozpočtové náklady</b> <b>Side budget costs</b>	<b>823 656,90 €</b>
	<u>Zariadenie staveniska</u> v tom Náklady na zariadenie staveniska vrátane jeho demontáže s uvedením staveniska do pôvodného stavu	823 656,90 €
	<u>Construction site</u> in that Costs of construction site facilities including their dismantling and restoration of the construction site to its original state	
<b>13</b>	<b>Realizácia prístupových ciest vrátane uvedenia všetkých budovaných a používaných ciest do pôvodného stavu v zmysle podmienok užívateľov</b> <b>Construction of access roads and consequent reinstatement of all new-built or other utilized acces roads in terms of user's conditions</b>	<b>324 859,43 €</b>
	1 - Zemné práce (Spolu 01-17) 1 - Ground works (Total 01-17)	94 126,54 €
	3 - Zvislé konštrukcie (Spolu 01-18) 3 - Vertical constructions (Total 01-18)	4 614,70 €
	4 - Vodorovné konštrukcie (Spolu 01-19) 4 - Horizontal constructions (Total 01-19)	115,99 €
	5 - Spevnené plochy (Spolu 01-20) 5 - Hardened platforms (Spolu 01-20)	123 151,25 €
	8 - Potrubné rozvody (Spolu 01-21) 8 - Pipelines (Total 01-21)	9 548,20 €
	9 - Ostatné práce (Spolu 01-22) 9 - Other works (Total 01-22)	52 116,02 €
	99 - Presuny hmôt (Spolu 01-23) 99 - Transport of material (Total 01-23)	11 564,42 €
	991 - Dodávky materiálu (Spolu 01-24) 991 - Supply of the material (Total 01-24)	29 622,31 €
<b>14</b>	<b>Realizácia výrubov na poľnohospodárskej pôde vrátane rekultivácie všetkých pôch po výrube</b> <b>Cutting of trees on an agricultural land including recultivation of the areas after cutting</b>	<b>203 874,00 €</b>
	(Spolu 01-25) (Total 01-25)	203 874,00 €
<b>15</b>	<b>Realizácia revitalizačných opatrení</b> <b>Implementation of re-vitalization measures</b>	<b>212 254,47 €</b>
	(Spolu 01-26) (Total 01-26)	212 254,47 €
	<b>Celkom (riadky 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15) bez primeraného zisku</b> <b>Total (rows 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15), without reasonable profit</b>	<b>37 726 006,17 €</b>
	Original contractual summary budget So 01	37 685 742,07 €
	Variation summary budget SO 02	40 438,40 €
	Reasonable profit <span style="float: right;">5,00%</span>	2 021,92 €
	Variation summary budget So 01 including reasonable profit	42 460,32 €

**Cenová tabuľka 01-00**  
**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

5

**ZMENOVÝ SÚHRNNÝ ROZPOČET SO 01**

**ADJUSTED GENERAL PRICE SO 01**

Total (rows 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15), with reasonable profit	37 728 202,39 €
New contractual summary budget SO 01	37 728 202,39 €

**Cenová tabuľka 01-00**  
**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

ROZDIELOVÝ SÚHRNNÝ ROZPOČET DIFFERENTIAL GENERAL PRICE SO 01	
<b>01 Základy</b> <b>Foundations</b>	<b>6 680,10 €</b>
Montáž (Spolu 01-01) Assembly (Total 01-01)	2 144,87 €
Materiál (Spolu 01-02) Material (Total 01-02)	4 535,23 €
<b>02 Stožiare</b> <b>Towers</b>	<b>19 688,56 €</b>
Montáž (Spolu 01-03) Assembly (Total 01-03)	7 240,72 €
Materiál (Spolu 01-04) Material (Total 01-04)	12 447,84 €
<b>03 Vodiče</b> <b>Phase conductors</b>	
Montáž (Spolu 01-05) Assembly (Total 01-05)	
Materiál (Spolu 01-06) Material (Total 01-06)	
<b>04 Izolátorové závesy</b> <b>Insulator sets</b>	
Montáž (Spolu 01-07) Assembly (Total 01-07)	
Materiál (Spolu 01-08) Material (Total 01-08)	
<b>05 KZL</b> <b>OPGW</b>	
Montáž (Spolu 01-09) Assembly (Total 01-09)	
Materiál (Spolu 01-10) Material (Total 01-10)	
<b>06 ZL</b> <b>GW</b>	
Montáž (Spolu 01-11) Assembly (Total 01-11)	
Materiál (Spolu 01-12) Material (Total 01-12)	
<b>07 Dočasné úpravy križovaných elektrických vedení</b> <b>Temporary modifications of power lines crossings</b>	
Montáž (Spolu 01-13) Assembly (Total 01-13)	
<b>08 Tabuľky a doplnky</b> <b>Miscellaneous</b>	
Montáž (Spolu 01-14) Assembly (Total 01-14)	
Materiál (Spolu 01-15) Material (Total 01-15)	

**Cenová tabuľka 01-00**

**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

2

ROZDIELOVÝ SÚHRNNÝ ROZPOČET		
DIFFERENTIAL GENERAL PRICE SO 01		
<b>09 Demontáže</b>		
<b>Disassembly</b>		<b>11 725,34 €</b>
Demontáž (Spolu 01-16)		
Disassembly (Total 01-16)		11 725,34 €
<b>Priame náklady stavebného objektu (Spolu riadky 01, 02, 03, 04, 05, 06, 07, 08, 09)</b>		<b>38 094,00 €</b>
<b>Direct costs of the construction item (Total rows 01, 02, 03, 04, 05, 06, 07, 08, 09)</b>		
v tom	Montáže (De-) (Spolu 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16)	
in that	Assemblies (Dis-) (Totals 01-01, 01-03, 01-05, 01-07, 01-09, 01-11, 01-13, 01-14, 01-16)	21 110,93 €
v tom	Materiál (Spolu 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15)	
in that	Material (Totals 01-02, 01-04, 01-06, 01-08, 01-10, 01-12, 01-15)	16 983,07 €
<b>10 Projekčné a prieskumné práce</b>		
<b>Design and survey works</b>		
v tom	<u>Dokumentácia pre realizáciu stavby</u> 10 ks Dokumentácia, jej prerokovanie v priebehu a v závere prác s dotknutými orgánmi a organizáciami vrátane úradného overenia oprávnenou právnickou osobou v SR (napr. Technická inšpekcia)	
in that	<u>Detail implementation design</u> 10 pcs. Documentation and its negotiation with the concerned authorities and organizations during and at the end of design works including legalization by authorised organization in Slovakia (e.g. Technická inšpekcia)	
v tom	<u>Výrobnomoontážna dokumentácia</u> 1 ks Dielenská dokumentácia základových dielov a stožiarov, so zapracovanými pripomienkami z kontrolnej montáže vrátane návrhu montážnych rámov a predloženie protokolov z kontrolnej montáže stožiarov	
in that	<u>Workshop and assembly drawings</u> 1 pc. Workshop and assembly drawings of embedded parts and towers, including incorporation of comments from test assembly including the design of mounting frames and submission of certificates from test assembly of towers	
v tom	<u>Porealizačné zameranie</u> 5 ks Protokol o zameraní súradníc stredov stožiarov a rohov stožiarov, pozdĺžneho profilu vodičov, zemného lana a kombinovaného zemného lana	
in that	<u>As built survey</u> 5 pcs. Certificate of measurement of towers centre coordinates and foundation corners, longitudinal profile of phase conductors, ground wire and combined ground wire	
v tom	<u>Dokumentácia skutočného vyhotovenia</u> 5 ks Vrátane výrobnomoontážnej dokumentácie	
in that	<u>As built documentation</u> 5 pcs. Including workshop and assembly drawings	

**Cenová tabuľka 01-00**  
**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany - Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

3

ROZDIELOVÝ SÚHRNNÝ ROZPOČET DIFFERENTIAL GENERAL PRICE SO 01	
<b>11 Nepriame náklady stavebného objektu</b> <b>Indirect costs of the construction item</b>	<b>2 500,00 €</b>
v tom	<u>Zaistenie a vypínanie vedení</u> Náklady na realizáciu vypínania križovaných vedení, železníc a nadzemných sietí
in that	<u>Switching-off and securing of crossed lines</u> Costs of switching-off of crossed lines, railways and facilities
v tom	<u>Skúšky izolátorových závesov</u> Náklady na zabezpečenie všetkých potrebných skúšok pre jednotlivé typy izolátorových závesov - skratových a napäťových skúšok
in that	<u>Insulator sets tests</u> Costs of all necessary tests for individual insulator sets - power arc and voltage tests
v tom	<u>Statické skúšky stožiarov</u> Náklady na zabezpečenie statických skúšok stožiarov typu: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)
in that	<u>Tower tests</u> costs for realization of statical tower tests types: Donau N+6 (19,0 t), I+3 (37,3 t), Súdok N+6 (27,0 t), II+6 (62,3 t)
v tom	<u>Geodetická činnosť pri výstavbe</u> Vytýčenie všetkých priesekov a výrubov v trase vedenia - lesné pozemky vrátane poľnohospodárskych pozemkov, kontrola základov po ukončení betonáže
in that	<u>Geodetical works for construction</u> Staking-out of all cuts and fellings in the line route - forrest land, agricultural land, checks of foundations after concreting
v tom	<u>Priama inžinierska činnosť</u> Prejednanie vypínania križovaných vedení nn, vn, vvn, zvn a výluky železníc, vytýčenie všetkých podzemných sietí, zabezpečenie dohody o vstupe na pozemky s užívateľmi alebo majiteľmi, zabezpečenie výrubov na poľnohospodárskej pôde, náklady spojené s uvedením do prevádzky: napr. revízná správa, úradná skúška, nastavenie elektrických ochrán v Est
in that	<u>Direct engineering works</u> Seek an agreement with the operators of low voltage, medium voltage, very high voltage, ex-tra high voltage and railway traction system lines and highways to be crossed, and ensurance their switching-off or closure, staking-out of all underground facilities, provision of right-of-way agreements with land owners or users, securing of fellings on agricultural land, costs related to commissioning, e.g. revision report, official examination, line protection settins in Substations
v tom	<u>Vyvolaná inžinierska činnosť</u> Zabezpečenie inžinierskych činností v rámci zmeny osadenia stožiarov vo viniciach, (zmena stavby pred dokončením), rokovanie a zabezpečenie príslušných povolení štátnych orgánov a majiteľov dotknutých pozemkov (Zdroj ceny - Ponuka subdodávateľa, Príloha č.10)
in that	<u>Induced engineering works</u> Ensuring engineering activities in the context of replacing the installation of poles in vineyards, (rebuilding before completion), negotiating and securing the relevant permits of state authorities and landowners concerned (Price reference - Proposal of Subcontractor, Annex Nr.10 )
	<b>2 500,00 €</b>

**Cenová tabuľka 01-00**

**Price Schedule 01-00**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL

4

ROZDIELOVÝ SÚHRNNÝ ROZPOČET DIFFERENTIAL GENERAL PRICE SO 01		
<b>12</b>	<b>Vedľajšie rozpočtové náklady</b> <b>Side budget costs</b>	
	v tom <u>Zariadenie staveniska</u> Náklady na zariadenie staveniska vrátane jeho demontáže s uvedením staveniska do pôvodného stavu	
	in that <u>Construction site</u> Costs of construction site facilities including their dismantling and restoration of the construction site to its original state	
<b>13</b>	<b>Realizácia prístupových ciest vrátane uvedenia všetkých budovaných a používaných ciest do pôvodného stavu v zmysle podmienok užívateľov</b> <b>Construction of access roads and consequent reinstatement of all new-built or other utilized access roads in terms of user's conditions</b>	<b>-155,60 €</b>
	1 - Zemné práce (Spolu 01-17) 1 - Ground works (Total 01-17)	-131,87 €
	3 - Zvislé konštrukcie (Spolu 01-18) 3 - Vertical constructions (Total 01-18)	
	4 - Vodorovné konštrukcie (Spolu 01-19) 4 - Horizontal constructions (Total 01-19)	
	5 - Spevnené plochy (Spolu 01-20) 5 - Hardened platforms (Spolu 01-20)	
	8 - Potrubné rozvody (Spolu 01-21) 8 - Pipelines (Total 01-21)	
	9 - Ostatné práce (Spolu 01-22) 9 - Other works (Total 01-22)	
	99 - Presuny hmôt (Spolu 01-23) 99 - Transport of material (Total 01-23)	-23,73 €
	991 - Dodávky materiálu (Spolu 01-24) 991 - Supply of the material (Total 01-24)	
<b>14</b>	<b>Realizácia výrubov na poľnohospodárskej pôde vrátane rekultivácie všetkých pôch po výrube</b> <b>Cutting of trees on an agricultural land including recultivation of the areas after cutting</b>	
	(Spolu 01-25) (Total 01-25)	
<b>15</b>	<b>Realizácia revitalizačných opatrení</b> <b>Implementation of re-vitalization measures</b>	
	(Spolu 01-26) (Total 01-26)	
	<b>Celkom (riadky 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15)</b>	<b>40 438,40 €</b>
	<b>Total (rows 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15)</b>	



**Súpis stožiarov č. 35 - 39 z DRS po zmene k 15.8.2019**  
**List of towers n. 35-39 from DRC after change to 15.8.2019**

Podp. bod č.	Typ stožiara	Konštrukčný výkres	Hĺbka zal.	Predĺžená noha				Hmotnosť konštrukcie [kg], náter [m2]		
				1	3	7	9	Základový diel	Horná stavba	Celkom
Tower No.	Tower type	Outline drawing	Found. depth	Extension leg				Wieght of construction [kg], Paint [m2]		
								Stub	Tower	Total
35	N2+9	149/DRS/E1/03/04, 05, 06	2,6	0	500	0	0	2 143,70	18 808,60	
36	N2+3	149/DRS/E1/03/04, 06	2,5	0	0	500	0	1 586,20	15 815,00	
37	N2+6	149/DRS/E1/03/04, 06	2,5	0	0	500	500	1 805,38	17 051,20	
38	N2+15	149/DRS/E1/03/04, 05, 06	2,7	1000	1000	0	0	2 771,50	22 261,30	
39	N2+6	149/DRS/E1/03/04, 06	2,5	1000	1500	0	0	1 903,07	17 051,20	
<b>SPOLU PODĽA DRS PO ZMENE</b>								<b>10 209,85</b>	<b>90 987,30</b>	
<b>SUMMARY BY DRC AFTER THE CHANGE</b>										

**Súpis stožiarov č. 35 - 39 z DRS pred zmenou k 15.4.2019**  
**List of towers n. 35-39 from DRC before change to 15.4.2019**

Podp. bod č.	Typ stožiara	Konštrukčný výkres	Hĺbka zal.	Predĺžená noha				Hmotnosť konštrukcie [kg], náter [m2]		
				1	3	7	9	Základový diel	Horná stavba	Celkom
Tower No.	Tower type	Outline drawing	Found. depth	Extension leg				Wieght of construction [kg], Paint [m2]		
								Stub	Tower	Total
35	N2+6	149/DRS/E1/03/04, 05, 06	2,5	0	500	0	500	1 803,80	17 028,20	
36	N2+3	149/DRS/E1/03/04, 06	2,5	0	0	500	500	1 620,30	15 795,10	
37	N2+3	149/DRS/E1/03/04, 06	2,5	0	0	0	500	1 587,80	15 795,10	
38	N2+9	149/DRS/E1/03/04, 05, 06	2,6	1500	1500	0	0	2 313,10	18 785,60	
39	N2+0	149/DRS/E1/03/04, 06	2,5	500	500	0	0	1 436,80	14 464,00	
<b>SPOLU PODĽA DRS PRED ZMENOU</b>								<b>8 761,80</b>	<b>81 868,00</b>	
<b>SUMMARY BY DRC BEFORE THE CHANGE</b>										

<b>ROZDIEL DRS po zmene VOČI DRS pre zmenou</b>									
<b>DIFFERENCE IN DRC after the change TOWARDS</b>								<b>1 448,05</b>	<b>9 119,30</b>
<b>DRC before the change</b>									

DRC - DOCUMENTATION FOR REALIZATION OF THE CONSTRUCTION

stožiar č.	triedy ťažiteľnosti v m3 - DRS po zmene k 15.8.2019						SPOLU
	tr.1	tr.2	tr.3	tr.4	tr.5	tr.6	
tower n.	classes of mineability in m3 - DRC after the change to 15.8.2019						Summary
	class.1	class.2	class.3	class.4	class.5	class.6	
35	0,00 m3	6,13 m3	49,05 m3	67,45 m3	0,00 m3	0,00 m3	122,63 m3
36	0,00 m3	0,00 m3	74,87 m3	24,96 m3	0,00 m3	0,00 m3	99,83 m3
37	0,00 m3	100,98 m3	25,25 m3	0,00 m3	0,00 m3	0,00 m3	126,23 m3
38	0,00 m3	62,67 m3	94,00 m3	0,00 m3	0,00 m3	0,00 m3	156,67 m3
39	0,00 m3	29,83 m3	89,50 m3	0,00 m3	0,00 m3	0,00 m3	119,33 m3
<b>CELKOM/TOTAL</b>	<b>0,00 m3</b>	<b>199,61 m3</b>	<b>332,67 m3</b>	<b>92,41 m3</b>	<b>0,00 m3</b>	<b>0,00 m3</b>	<b>624,69 m3</b>
stožiar č.	triedy ťažiteľnosti v m3 - DRC pred zmenou k 15.4.2019						SPOLU
	tr.1	tr.2	tr.3	tr.4	tr.5	tr.6	
tower n.	classes of mineability in m3 - DDI before the change to 15.8.2019						Summary
	class.1	class.2	class.3	class.4	class.5	class.6	
35	0,00 m3	5,63 m3	45,05 m3	61,95 m3	0,00 m3	0,00 m3	112,630 m3
36	0,00 m3	0,00 m3	74,87 m3	24,96 m3	0,00 m3	0,00 m3	99,830 m3
37	0,00 m3	95,46 m3	23,87 m3	0,00 m3	0,00 m3	0,00 m3	119,330 m3
38	0,00 m3	54,82 m3	82,23 m3	0,00 m3	0,00 m3	0,00 m3	137,050 m3
39	0,00 m3	26,53 m3	79,60 m3	0,00 m3	0,00 m3	0,00 m3	106,130 m3
<b>CELKOM/TOTAL</b>	<b>0,00 m3</b>	<b>182,44 m3</b>	<b>305,62 m3</b>	<b>86,91 m3</b>	<b>0,00 m3</b>	<b>0,00 m3</b>	<b>574,970 m3</b>
<b>ROZDIELY PODĽA TRIED / Differences accordance to the classes</b>	<b>0,000 m3</b>	<b>17,170 m3</b>	<b>27,050 m3</b>	<b>5,500 m3</b>	<b>0,000 m3</b>	<b>0,000 m3</b>	<b>49,720 m3</b>

DRC - DOCUMENTATION FOR REALIZATION OF THE CONSTRUCTION

**Betóny podľa DRS po zmene k 15.8.2019 / Concrete volumes according to DRC after the change 15.8.2019**

Stožiar		Tvar základu	Kubatury [m3]				Výkop	Zához	Odvoz
Č.	Typ		Vršok		Spodok				
			[m3]	Kvalita	[m3]	Kvalita			
Tower		Type of foundation	Volume [m3]						
No.	Type		Top		Bottom		Excavation	Back filling	Removal
			[m3]	Quality	[m3]	Quality			
35	N2+9	PATKA-A	3,90	C30/37	39,78	C20/25	122,63	80,31	42,33
36	N2+3	PATKA-A	3,90	C30/37	34,28	C20/25	99,83	63,01	36,82
37	N2+6	PATKA-A	3,90	C30/37	57,66	C20/25	126,23	66,03	60,20
38	N2+15	PATKA-A	3,90	C30/37	50,03	C20/25	156,67	104,10	52,58
39	N2+6	PATKA-A	3,90	C30/37	54,00	C20/25	119,33	62,79	56,54
Celkom / Total:			<b>19,50</b>	<b>C30/37</b>	<b>235,75</b>		<b>624,69</b>	<b>376,24</b>	<b>248,47</b>

**Betóny podľa DRS pred zmenou k 15.4.2019 / Concrete volumes according to DRC before the change 15.4.2019**

Stožiar		Tvar základu	Kubatury [m3]				Výkop	Zához	Odvoz
Č.	Typ		Vršok		Spodok				
			[m3]	Kvalita	[m3]	Kvalita			
Tower		Type of foundation	Volume [m3]						
No.	Type		Top		Bottom		Excavation	Back filling	Removal
			[m3]	Quality	[m3]	Quality			
35	N2+6	PATKA-A	3,90	C30/37	38,76	C20/25	112,63	71,33	41,30
36	N2+3	PATKA-A	3,90	C30/37	34,28	C20/25	99,83	63,01	36,82
37	N2+3	PATKA-A	3,90	C30/37	46,27	C20/25	119,33	70,52	48,82
38	N2+9	PATKA-A	3,90	C30/37	45,38	C20/25	137,05	89,13	47,92
39	N2+0	PATKA-A	3,90	C30/37	38,59	C20/25	106,13	65,00	41,14
Celkom / Total:			<b>19,50</b>	<b>C30/37</b>	<b>203,28</b>	<b>C20/25</b>	<b>574,97</b>	<b>358,99</b>	<b>216,00</b>

<b>Rozdiely / Differences</b>		<b>0,00</b>	<b>C30/37</b>	<b>32,47</b>	<b>C20/25</b>	<b>49,72</b>	<b>17,25</b>	<b>32,47</b>
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**DRC - DOCUMENTATION FOR REALIZATION OF THE CONSTRUCTION**

**Búranie betónov podľa DRS po zmene k 15.8.2019**

**/ Dismantle of concrete according to DRC after the change 15.8.2019**

Stožiar		Hĺbka búrania m	Kubátúra búrania betónu m3	Výkop m3	Zásyp m3	Dovoz m3
Č.	Typ					
Tower		Depth of dismantle m	Volume of dismantle concrete m3	Excavation m3	Backfilling m3	Removal m3
No.	Type					
40	N2+6	2,15	30,40	50,80	79,60	28,80
41	N2+3	2,15	30,40	30,40	79,60	28,80
42	N2+3	2,15	30,40	30,40	79,60	28,80
43	N2+9	1,0	8,70	8,60	15,70	7,10
44	N2+0	2,15	30,40	50,80	79,60	28,80
<b>Celkom / Total:</b>			<b>130,30</b>	<b>171,00</b>	<b>334,10</b>	<b>122,30</b>

**Búranie betónov podľa DRS pred zmenou k 15.4.2019**

**/ Dismantle of concrete according to DRC before the change 15.4.2019**

Stožiar		Hĺbka búrania m	Kubátúra búrania betónu m3	Výkop m3	Zásyp m3	Dovoz m3
Č.	Typ					
Tower		Depth of dismantle m	Volume of dismantle concrete m3	Excavation m3	Backfilling m3	Removal m3
No.	Type					
40	N2+6	1,00	8,70	8,60	18,70	7,10
41	N2+3	1,00	8,70	8,60	18,70	7,10
42	N2+3	1,00	8,70	8,60	18,70	7,10
43	N2+9	1,00	8,70	8,60	18,70	7,10
44	N2+0	1,00	8,70	8,60	18,70	7,10
<b>Celkom / Total:</b>			<b>43,50</b>	<b>43,00</b>	<b>93,50</b>	<b>35,50</b>

<b>Rozdiely / Difference</b>		<b>86,80</b>	<b>128,00</b>	<b>240,60</b>	<b>86,80</b>
<b>Skutočný odvoz / Real volume of removal</b>					<b>54,33</b>

**DRC - DOCUMENTATION FOR REALIZATION OF THE CONSTRUCTION**

Slovenská elektrizačná prenosová  
sústava, a.s.  
Mlynské nivy 59/A  
824 84 Bratislava 26

Bratislava, 15.11.2019

zn. 5020/2019/049/Ing.Ju

Vec / Subject: **Vedenie 2x400 kV Križovany – Bystričany / Double 400 kV OHL Križovany - Bystričany**  
**Vyjadrenie autorského dozoru k zmene stožiarových miest č.35-39 / Expression of the**  
**author's supervision on the change of tower locations in section No.35 - 39**

V priebehu realizácie stavby Vedenie 2x400 kV Križovany – Bystričany došlo k potrebe zmeny umiestnenia stožiarov v úseku p.b.č.35 – p.b.č.39 oproti pôvodne navrhovanému riešeniu. Táto zmena bola vyvolaná najmä komplikáciami s prerokovaním vstupov a škôd na pozemkoch vo vinohrade. Táto zmena má vplyv na výškové riešenie stožiarov, ktoré bolo projektantom zhotoviteľom upravené a zapracované do aktuálneho znenia dokumentácie pre realizáciu stavby. Keďže sa zmena umiestnenia stožiarov nepreniesla mimo kotevného úseku p.b.č.32 – p.b.č.40, nemá táto zmena praktický vplyv na väčšinu aspektov projektu vedenia (dĺžky vodičov a KZL, typy izolátorových závesov, upevnení KZL a pod), týka sa len zmien vo výmerách pre zemné práce, základy a oceľovú konštrukciu. Nové tabuľky priehybov pre vodiče a KZL boli projektantom zhotoviteľom prepočítané a sú zdokladované v dokumentácii, rovnako tak aj pozdĺžny profil vedenia a ostatné súvisiace prílohy z technologickej časti DRS.

Zmenou stožiarových miest a typov stožiarov č.35-39 nedošlo k takej zmene statických podmienok zaťaženia stožiarov, ktoré by prekročili typové podmienky zaťaženia, na ktoré boli stožiare v rámci tejto stavby navrhnuté a posúdené. Výškové typy stožiarov navrhnuté v nových stožiarových miestach č.35-39, sú použité aj v iných miestach v rámci trasy vedenia. Základy pre nové výškové typy stožiarov boli prepočítané a navrhnuté na zvýšené zaťaženie v úrovni základovej špáry vzhľadom na vyššie stožiare.

Ako zástupca autorského dozoru súhlasím s vyššie uvedeným riešením zmeny stožiarových miest č.35-39.

*During the construction of project Double 400 kV OHL Križovany – Bystričany the need to change the originally proposed locations of towers No. 35 - 39 was identified. This change was caused mainly by complications with the negotiations of entrances to estates and of restitution costs on these estates, which are located in vineyard. This change has influence on tower heights and has been adjusted and incorporated by the designer of the contractor into the detail design documentation. As this change of tower locations is limited to tension section Tower No.32 – 40, this change has negligible influence on most aspects of the line design (conductor and OPGW*

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IČO: 36 863 513  
DIČ: 2022840127  
IČ DPH: SK2022840127

Spoločnosť je zapísaná v obchodnom  
registri Okresného súdu Bratislava I.,  
Oddiel Sa, Vložka číslo 5058/B

Vybavuje: Ing. Juraj Jurkovič  
Tel. č.: 00421 2 50251 187  
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TATRA BANKA a.s.  
IBAN: SK26 1100 0000 0026 2004 0555  
SWIFT: TATRSKBX

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lengths, insulator string types, OPGW attachment types, etc.) and only affects changes in quantities of civil works, foundations and steel construction. New sag-tension tables for conductors and OPGW has been recalculated and incorporated into the design detail documentation along with longitudinal profile and other related annexes by the designer of the contractor.

The change of tower locations and tower types of Tower No.35 – 39 did not implied such changes in static loading conditions of these towers that would exceed the type static loading conditions designated for the tower types included within this project. Height types of towers proposed in these changed locations Tower No.35 – 39 has already been used in other places of the line route. The foundations for newly proposed towers were recalculated and redesigned to withstand the increased load in the level of foundation pit due to the increased tower heights.

As a representative of the author's supervision I hereby agree with the above-mentioned solution of tower locations and types change in the section Tower No.35 – 39.

So srdečným pozdravom / Kind regards.

Ing. Juraj Jurkovič  
koordinátor projekčných zákaziek  
v úseku elektrických vedení

Ing. Jozef Predáč  
projektant - statik

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Bajkalská 198  
821 01 Bratislava

**CENOVÁ PONUKA zo dňa 22.11.2019**

**pre inžiniersku činnosť pre vybavenie Rozhodnutia na posun/ legalizáciu stožiarových miest  
p.b.c. 35-39 na stavbe**

**Vedenie 2x400kV Križovany - Bystričany**

*PRICE OFFER dated 22.11.2019*

*for engineering activities for the execution of the Decision to move / legalize 35-39 mast sites on the  
construction site*

*2x400kV line Križovany – Bystričany*

Na základe Vašej požiadavky Vám predkladáme nasledovnú cenovú ponuku:

*Based on your request we offer you the following Price offer:*

Vyvolaná inžinierska činnosť

Zabezpečenie inžinierskych činností v rámci zmeny osadenia stožiarov vo viniciach, (zmena stavby pred dokončením), rokovanie a zabezpečenie príslušných povolení štátnych orgánov a majiteľov dotknutých pozemkov

Induced engineering Works

Ensuring engineering activities in the context of replacing the installation of poles in vineyards, (rebuilding before completion), negotiating and securing the relevant permits of state authorities and landowners concerned

**Cenová ponuka spolu ..... 2 500,00 Eur**

**Total price.....2 500,00 Eur**

S pozdravom  
Sincerely



Ing. Martin Marko  
konateľ

**Cenová tabuľka 01-23**

**Price Schedule 01-23**

Stavba	Vedenie 2x400kV Križovany - Bystričany
Structure	Double 400kV OHL Križovany – Bystričany
PS-SO	E1. SO01: Vedenie 2x400kV
Construction item	E1. SO01: Double 400kV OHL
Časť	0
Part	0

**Realizácia prístupových ciest vrátane uvedenia všetkých budovaných a používaných ciest do pôvodného stavu v zmysle podmienok užívateľov**  
**Construction of access roads and consequent reinstatement of all new-built or other utilized acces roads in terms of user's conditions**

**99 - PRESUNY HMŔT / TRANSPORT OF MATERIAL**

p.č.	Popis činnosti	m.j.	Počet	Jedn. cena	Spolu
Item	Description of works	Unit	Quantity	Unit price	Total price
1	Presun hmôt pre pozemnú komunikáciu a letisko s krytom asfaltovým Transport of material for roads and airport with asphalt cover, with no	t tons	15,82	1,50 €	23,73 €
					0,00 €
					Spolu 01-23 Total 01-23
					23,73 €





**Annex 4 to Amendment No. 2**  
**Contract Price Adjustment Summary**



## Annex 4 to Amendment No. 2

Project: Double 400 kV OHL Križovany - Bystričany

### Contract Price Adjustment Summary

<b>Contract Price as signed</b>	<b>38 879 999,94 €</b>
<b>Approved Variations to the Contract, series I as per Annex 2 to Amendment No. 2</b>	<b>-757 539,68 €</b>
<b>The Contract Price as per Amendment No. 2</b>	<b>38 122 460,26 €</b>

