**Indexation Mechanism Proposal and Explanation for a New Tender for Chemical Spreading Materials (CSM).**

**Assignment:** *To propose a mechanism for the indexation of fuels and commodities, where applicable, taking into account price increases and decreases on the market as objectively as possible.*

**Proposed solution:**

1. **It is proposed that the tenderers establish the required price offer as a unit price (hereinafter referred to as the "UP") in Euros per ton of CSM in the tender**. With the tenderer's success being evaluated on the basis of the criterion of the lowest price.
2. It is proposed that the indexation mechanism of the contractual value arising from the successful tender should be based on the structure of weights for the individual specified components.
3. Subsequently, the **ratio between the commodity, fuels and other components (explained below) determined this way would be entered into a formula resulting in a contract value adjustment coefficient.**
4. **The proposed formula** is as follows:

**Pt = 0.10 + 0.30 \* (AFPt / AFPt0) + 0.60 \* (IPPIt /IPPIt0)**

**Pt :** adjustment coefficient, the resulting value of which will be applied to the estimated contract value for the particular period downwards or upwards after the specified period (t value), with this period being a quarter. The value of the coefficient shall be rounded to 3 decimal places.

**t:** the completed quarter, i.e. the determining period which the indexation mechanism is applied for.

**t0:** the reference period, the quarter which includes the calendar day on which the deadline for submitting bids for the CSP tender expired

**0.10:** a fixed coefficient of 10%, which represents the part of the CSP delivery cost that is not subject to indexation. This coefficient thus represents the mathematically expressed business risk of the successful tenderer.

**0.30:** a coefficient of 30%, which represents the part of the cost of fuel (diesel) in the contract for CSP purchase and delivery which is subject to indexation adjustment. This part is significantly higher for the type of a contract such as the CSP purchase and delivery compared to e.g. different formulas for construction work, due to the fact that the delivery and actual transfer to the particular centers operatively as needed, whether in the regime of regular or extraordinary deliveries, is an essential part of the contract and a service required by the operations department with demands also for machineries, e.g. tanks for blowing salt into silos and the like.

**AFP:**  the indicator of "average fuel prices in the Slovak Republic - monthly" [sp0202ms] (diesel) in Slovakia published by the Statistical Office of the Slovak Republic on their website [www.statistics.sk](http://www.statistics.sk). The reported monthly values of the indicators must be converted to the quarterly period for t0 and t periods by calculating the arithmetic average of the reported values for 3 relevant months pertaining to t\_0 and t period. The calculated arithmetic averages shall be mathematically rounded to 3 decimal places.

**AFPt:** the value of the indicator corresponding to the quarter in t period. It is calculated as indicated for the AFP indicator.

**AFPt0:** the value of the indicator corresponding to the quarter in reference period t0.It is calculated as indicated for the AFP indicator.

**0.60:**  a coefficient of 60%, which represents the part of the cost of the requested commodity in the contract for CSP purchase and delivery which is subject to indexation adjustment.

**IPPI:** the indicator of "industrial producer and water price index - a summary indicator of production sphere price index compared to the base period - monthly" [sp0102ms], specifically the observed value for "producer prices in industry - domestic and mining and quarrying". In Slovakia published by the Slovak Statistical Office on their website [www.statistics.sk](http://www.statistics.sk).Industrial producer price index (IPPI), which is a Laspeyres price index (base year 2015 =100, price base = December 2015). The index measures the development of the prices of industrial products intended for the domestic market, for export and the total as three separate time series. The index covers divisions 05 - 39 SK NACE Rev. 2. The index includes mineral raw materials, products of industrial production and electricity, gas, heat, water and waste (SK NACE Rev. 2, sections B, C, D and E). The part of the index "Mining and Quarrying" seems to be the most suitable one for chemical spreading material in view of the categories in the statistical classification of economic activities SK NACE Rev. 2- specifically section B 08.93.0 Salt Mining. The reported monthly values of the indicators must be converted to the quarterly period for t0 and t periods by calculating the arithmetic average of the reported values for 3 relevant months pertaining to t\_0 and t period. The calculated arithmetic averages shall be mathematically rounded to 3 decimal places.

**IPPIt:** the value of the indicator corresponding to the quarter in t period. It is calculated as indicated for the IPWPI indicator.

**IPPIt0:** the value of the indicator corresponding to the quarter in reference period t0. It is calculated as indicated for the IPPI indicator.

1. **The proposed invoicing mechanism** would be as follows:

**It is proposed to invoice all CSM deliveries from the supplier properly in terms of the UP in Euros per ton of CSM.**

**The indexation mechanism shall be applied after the expiry of the first quarterly period, counting of which starts as of the effective date of the contract. Three scenarios are possible depending on the result, where** the resulting adjustment coefficient may have the following value:

* 1. higher than 1 = additional financial claims
	2. lower than 1 = reduction of financial claims
	3. equal to 1 = no change in financial claims

Additional financial claims will be invoiced by an extraordinary quarterly invoice, in which the supplier will be paid only the difference between the contract value multiplied by the adjustment coefficient and the paid contract value in terms of the submitted orders. Converted to all tonnes of CSM supplied. The calculation in terms of the formula applied shall be enclosed with the invoice.

The customer will be notified of the reduction of financial claims. It is proposed to reduce the decrease in form of a credit note by the difference between the paid contract value in terms of the submitted orders and the contract value multiplied by the adjustment coefficient. Converted to all tonnes of CSM supplied.

The customer (NDS) with no financial claims applied for the particular quarter for both NDS and the supplier will only be notified of the financial claims with no change.

1. **Practical example** (the values are illustrative):

The successful tenderer submitted an offer of 100 Euros per ton of CSM.

The tender submission deadline expired in March 2022. The reference period t0 is thus the March value in the observed indices.

The supplier delivered 1,000 tons in accordance with the contract to the centres for three months as of the effective date of the contract from April 2022 to June 2022.

The indexation mechanism shall be applied for the first quarter as of the effective date of the contract for the months from April 2022 to June 2022.

When publishing data in the Statistical Office, there is a shift, thus the June value is known in July, for instance.

The adjustment coefficient is calculated as follows in July:

**Pt = 0.10 + 0.30 \* (1.591 / 1.340) + 0.60 \* (1.605/1.405)**

**Pt = 0.10 + 0.30 \* (1.187) + 0.60 \* (1.142)[[1]](#footnote-2)**

**Pt = 0.10 + 0.356 + 0.685**

**Pt = 1.141**

The adjustment coefficient establishes additional financial claims for the supplier in the amount of approximately 14% per ton of CSM supplied. Where the increase per ton is 100\*1.141 = 114.1 Euros.

In July 2022, NDS will thus issue an extraordinary quarterly invoice for the months of April to June 2022.

Since the quantity supplied was 1000 tons for 100 Euros per ton in regular invoices, the supplier was paid 100,000 Euros. Upon the extraordinary invoice, additional 14,000 Euros will be paid to the supplier for the particular quarter.

***Note: The above values are illustrative only and serve to demonstrate the calculation. They are not real values.***

1. During the observed quarterly period there was an increase in the price of diesel fuel by approximately 19% and the price of the commodity by approximately 14% [↑](#footnote-ref-2)