



**CROATIAN ENERGY  
REGULATORY AGENCY**  
Ulica Grada Vukovara 14  
10000 Zagreb  
GAS AND OIL DIVISION

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## **DRAFT METHODOLOGY FOR THE DETERMINATION OF THE TARIFF ITEMS FOR THE UNLOADING AND SEND OUT OF LIQUEFIED NATURAL GAS**

- SUPPORTING DOCUMENT -

The Republic of Croatia has, according to its legal framework, primarily the Gas Market Act (Official Gazette of the Republic of Croatia, number 28/13 and 14/14), defined the energy activity of managing the terminal for liquefied natural gas as a public service and therefore regulated energy activity. In accordance with Article 88 paragraph 1 of the Gas Market Act, Croatian Energy Regulatory Agency (hereinafter: HERA) is obliged to issue the method of determining the amount of tariff items for the energy activity of managing the terminal for liquefied natural gas.

Pursuant to the Ordinance on Licenses for Energy Activities and Keeping the Register of Issued and Revoked Licenses for Energy Activities (Official Gazette of the Republic of Croatia, number 88/15 and 114/15), HERA issued the license for carrying out the energy activity of managing the terminal for liquefied natural gas to the company LNG HRVATSKA Ltd in February 2016. The Government of the Republic of Croatia, at its session on 16 July 2015, named the company LNG HRVATSKA Ltd as an investor interested in the project called LNG terminal (→ project of the construction of the terminal for the regasification of liquefied natural gas on the island of Krk) (hereinafter: LNG terminal). The LNG terminal was designated as a strategic investment project of importance for the Republic of Croatia at the same session of the Government of the Republic of Croatia. The proposed project includes the construction and management of the infrastructure necessary for the unloading, storage and regasification of liquefied natural gas. The project aims to ensure the energy needs and represents an important factor in diversifying the natural gas supply, as well as increasing the security of natural gas supply for the countries of the Southeast Europe. The European Commission included this project in the list of key energy infrastructure projects and projects of common interest (PCI), as they shall help to achieve Europe's energy and climate goals and strengthen the Energy Community by integrating energy markets in Europe.

In February 2016, the European Commission published the „*Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on an EU strategy for liquefied natural gas and gas storage*“, in which special emphasis is placed on the diversification of supply routes, ensuring the security of gas supply and the role of the liquefied natural gas in this respect. In this document, the LNG terminal is listed as an important project that shall provide the security and diversification of supply for the

Southeast European countries that are most vulnerable in this respect and mostly depend on one supply route. The Government of the Republic of Croatia, at its session on 8 June 2016, adopted the *“Conclusion on the support to the construction of the first phase of the LNG terminal project - construction of a floating terminal for the storage and regasification of liquefied natural gas on the island of Krk”*.

Consequently, in order to create the prerequisites for the proper and efficient functioning of the natural gas market and the functioning of the LNG terminal itself, HERA has compiled a **Draft Methodology for the determination of the tariff items for the unloading and send out of liquefied natural gas** (hereinafter: Draft Methodology). The Draft Methodology was prepared by taking into account the provisions of all laws and by-laws governing the area of gas in the Republic of Croatia, especially the Energy Act (Official Gazette of the Republic of Croatia, number 120/12, 14/14 and 102/15), the Gas Market Act (Official Gazette of the Republic of Croatia, number 28/13 and 14/14) and the Act on the Regulation of Energy Activities (Official Gazette of the Republic of Croatia, number 120/12).

The Draft Methodology is based on the incentive regulation method, i.e. the method of maximum allowed revenue.

The Draft Methodology determines the following:

- the model of regulating the energy activity of managing the LNG terminal,
- the formula and elements for calculating the allowed revenue of the LNG terminal operator,
- the procedure for the audit of the allowed revenue,
- the tariff items and the manner, elements and criteria for calculating the amount of the tariff items,
- the coefficients for calculating the fee for use of the LNG terminal,
- the calculation of the fee for the use of the LNG terminal for the user of the LNG terminal,
- the characteristics and prerequisites for the establishment of a regulatory account and the method, elements and criteria for the calculation and audit of the amount of tariff items in the regulatory account model,
- the process of submitting a request for the determination, i.e. change in the amount of tariff items,
- information, documentation and other materials that are used to calculate and audit the allowed revenue, as well as for the calculation of the amount of tariff items.

## **REGULATORY PERIOD**

The Draft Methodology, among other, proposes the following:

- the regulatory period is a several-year period for which, separately for each regulatory year, the allowed revenue and the amount of tariff items are determined, during which certain fixed elements for the calculation of allowed revenue apply,
- the LNG terminal operator (hereinafter: operator) submits the request for determining or changing the amount of tariff items for the unloading and send out of LNG for all the years of the regulatory period,
- the first regulatory period begins on the day of entry into force of the decision on the amount of tariff items for the unloading and send out of LNG, and ends on 31 December 2021, in order to comply with the regulatory periods of other operators on the gas market, while the duration of the second and subsequent regulatory periods is five years.

## **ALLOWED REVENUE - DP**

The calculation of the allowed revenue shall be performed based on the projected operating expenses, depreciation and return on regulated assets, net of projected revenue from non-standard services (calculated according to the methodology for determining the price of non-standard services) and projected other operating revenue (realised by using funds intended for the performance of energy activity of managing the LNG terminal, or those relating to the core business of the operator).

The audited amounts of the basic elements for the calculation of allowed revenue, as well as the actual generated revenue for the years of the regulatory period shall be determined during the audit of the allowed revenue. The regular audit of the allowed revenue shall be performed in the last year of the regulatory period (T+4) and possible differences (smaller or larger generation than projected) shall be compensated for in the following regulatory period.

In addition, during the regulatory period, in accordance with the Draft Methodology, an extraordinary audit of all the elements used in the calculation of the allowed revenue and amount of tariff items for the unloading and send out of LNG for the current regulatory period may be performed, at the request of the operator or in accordance with the assessment of HERA. The extraordinary audit of allowed revenue is performed due to unexpected changes in the market that have a significant impact on the conditions of providing energy activity of managing the LNG terminal, which the operator could not have foreseen nor prevented, eliminated or avoided.

### **a) Operating expenses (OPEX)**

OPEX represents all justified operating expenses relating to the energy activity of managing the LNG terminal, and it consists of a justified amount of material expenses, service expenses, personnel expenses, other operating expenses and other business expenditures.

The Draft Methodology also proposes to prescribe the expenses that HERA considers unjustified for the performance of the energy activity of managing the LNG terminal, and which shall, therefore, be excluded from the calculation of the allowed operator revenue when determining the amount of tariff items. Unjustified expenses are as follows:

- advertising and sponsorship services and fair expenses, in the total amount,
- entertainment expenses, internal representation and publicity expenses, in the total amount,
- occasional awards, in the total amount,
- annual awards to the members of the Management Board, in the total amount,
- costs of life insurance premiums, in the total amount,
- gifts (donations), in the total amount,
- value adjustment, exceeding the amount of 1% of total operating income of the operator,
- provisions, in the total amount,
- expenditures - write-offs of tangible and intangible assets if the subject assets are replaced by new assets entered into the regulated assets, in the total amount, and
- fines, penalties, indemnities and expenses arising from the contract, in the total amount.

The model for determining the OPEX for the years of the regulatory period is based on the determination of the base amount of OPEX for the year T-2, which is the last year for which financial statements are available at the time of determining the tariffs, and on the projection of this amount in the years of the regulatory period in accordance with the estimated amount of the consumer price index and the determined amount of the efficiency coefficient for the regulatory period. In the first regulatory period, the efficiency coefficient (X) stands at zero (0). Under the Draft Methodology, the efficiency coefficient (X) is not audited in the regular audit process.

By way of derogation from the model for the determination of the base OPEX and OPEX projection for the following years, it is proposed to determine the projected amount of OPEX for the years of the first regulatory period based on the estimated amounts explained in detail, which HERA considers justified, and to audit it in the last year of the first regulatory period according to the realised amount of OPEX in all the years covered by the regular audit.

#### **b) Depreciation - useful life of assets**

The Draft Methodology proposes to prescribe the regulatory recognised minimum useful life of 40 years for the regulated asset category - buildings, as well as the related maximum recognised annual depreciation rate of 2.5% for the same asset category. In addition, the Draft Methodology proposes to prescribe the regulatory recognised minimum useful life of 20 years for the regulated asset category – plants and equipment, as well as the related maximum recognised annual depreciation rate of 5% for the same asset category. The amount of projected depreciation shall not include the depreciation of non-repayable funds, which may also involve possible funds allocated through the CBCA mechanism, as well as funds from the CEF.

#### **c) WACC - the nominal value of the weighted average cost of capital before tax**

The Draft Methodology defines the formula for the calculation of the nominal value of the weighted average cost of capital before tax (WACC) as follows:

$$WACC^P = \frac{r_e}{1-P} \times \frac{E}{E+D} + r_d \times \frac{D}{E+D}$$

In this regard, the share of equity and the share of debt, each in the amount of 50%, are defined as target shares in the capital structure. We emphasise that the decision on the actual capital structure

in the normal course of business and the project-financing model still remains to be adopted by the regulated energy company, while the target ratio, according to the Draft Methodology, applies only to the calculation of the weighted average cost of capital.

Rate of return on equity -  $r_e$  – is calculated as follows:

$$r_e = r_f + \beta \times (r_m - r_f)$$

The risk-free rate of return ( $r_f$ ) is determined based on the average nominal interest rate of the last three ten-year bonds issued by the Republic of Croatia.

The variability coefficient of the return on operator shares in relation to the average variability of return on the market portfolio ( $\beta$ ) reflects the degree of risk of investing in the energy activity of managing the LNG terminal in relation to the risk of investing in the market, and can be determined on the basis of a comparative analysis of the variability coefficients of return on the shares of the operators of the LNG terminals applied in the regulatory mechanisms of European countries.

The rate of return on the diversified market portfolio ( $r_m$ ) is calculated as the sum of the risk-free rate of return ( $r_f$ ) and the market risk premium ( $r_m - r_f$ ), which is determined based on the expected rate of return on the diversified market portfolio in Croatia.

The rate of return on debt ( $r_d$ ) equals the weighted average interest rate on investment loans used by the operator to finance regulated assets, whereby the interest rate on investment loans are taken into account up to the level of rational and thoughtful borrowed funds, or up to maximum reference interest rates. If the operator does not use investment loans to finance regulated assets, the rate of return on debt capital is equal to the reference interest rate. According to the Draft Methodology, the reference interest rate is the average interest rate of credit institutions on long-term loans in Croatian kuna with a foreign currency clause granted to non-financial companies in the Republic of Croatia, and according to the information on the average monthly interest rates in the last 12 months from the last published monthly bulletin of the Croatian National Bank.

These approaches are the result of a recognised theory of financial analysis in investment planning, as well as the model for the calculation of the WACC and the rate of return on equity ( $r_e$ ), that is, the CAPM model (Capital Asset Pricing Model), applied in the mechanisms used in European and global regulatory practices.

Considering that the projected return on regulated assets is calculated on the basis of WACC and the projected average amount of regulated assets, it should be noted that the projected value of regulated assets shall not include the projected value of non-repayable funds. Likewise, the regulated assets include investments in use, realized in accordance with the approved plan of LNG terminal development, whereby projected investments in the construction and reconstruction of the LNG terminal shall be technically feasible and economically efficient, and provide the appropriate level of security of gas supply. The operator submits the plan for the development of LNG terminal to HERA for approval within the request for determining or changing the amount of tariff items for the unloading and send out of LNG.

Under the Draft Methodology, the WACC is not audited in the regular audit process.

## **TARIFF ITEMS**

Due to the application of the method of incentive regulation, as well as the increase of transparency and facilitation of the process for the use of LNG terminal, determining the amount of tariff items shall be performed in advance, in the year T-1, for each year of the regulatory period. Exceptionally, according to the Draft Methodology, the projected allowed revenue for the years of the first regulatory period, based on which the amount of tariff items is determined, may be determined in the years preceding the year T-1. That is, the request for determining the amount of tariff items for the unloading and send out of LNG for the first regulatory period may be submitted by the operator in the year preceding the year T-1, all due to the strategic importance and the implementation of the LNG terminal project.

The Draft Methodology proposes to prescribe tariff items for the contracted capacity on an annual level for the unloading and send out of LNG, that is, for basic services of the LNG terminal, as follows:

- $T_{pri}$  - tariff item for the berthing of LNG carrier in the regulatory year t (HRK/berthing)
- $T_{skl}$  - tariff item for the temporary storage of LNG in the regulatory year t (HRK/m<sup>3</sup><sub>LNG</sub>)
- $T_{otp}$  - tariff item for the send out of natural gas into the transmission system in the regulatory year t (HRK/MWh/day)

The amounts of tariff items for the aforementioned basic services of the LNG terminal shall be determined using the coefficient of the impact of the projected revenue from an individual basic service of the LNG terminal contracted on an annual basis on the total projected operator revenue in the regulatory year t and the projected total number, or projected total capacity of each service contracted on an annual basis, either as a basic service of the LNG terminal or as part of the standard service package of the LNG terminal.

### **Standard service package of LNG terminal (SSP)**

According to the Draft Methodology, the aforementioned basic services of the LNG terminal may be arranged as a standard service package (hereinafter: SSP). The basic purpose of introducing SSP is to encourage optimal use of the services of LNG terminal. Stimulating the contracting and use of SPU, instead of contracting individual basic services, shall be reflected through the advantage in the allocation of LNG terminal capacities, but also through the discount coefficient for contracted SSP. The SSP includes the right to one berthing of LNG carrier a month, temporary storage of LNG in the amount of 150,000 m<sup>3</sup><sub>LNG</sub> a month and the right to send out natural gas into the transmission system in the capacity of 30,000 MWh/day, during the regulatory year t. The users shall be able to contract SSP exclusively on an annual or multi-annual basis. The Draft Methodology does not prescribe a determination of the separate amount of tariff item for the SSP, but suggests a determination of a unit amount of compensation for the contracted SSP.

## **COEFFICIENTS FOR CALCULATING THE FEES FOR USE OF THE LNG TERMINAL**

The coefficients for the contracted SSP applied to calculate the fees for SSP in the regulatory year t depend on the period for which SSP is contracted and refer to the entire contract period, as shown in the following table:

<i>Contract period</i>	<i>Coefficient for SSP (<math>k_{SSP}</math>)</i>
short-term (1 - 5 years)	0.98
medium-term (6 - 15 years)	0.96
long-term ( $\geq 16$ years)	0.94

The unit amount of fees for the contracted SSP is calculated using the aforementioned tariff items for basic services of the LNG terminal and coefficients for SSP, applying the following formula:

$$N_{SSP} = (T_{pri} + T_{skl} \times 150,000 m^3_{LNG} + T_{op} \times 30,000 MWh/day) \times k_{SSP}$$

The unit amount of the fee for the contracted service of berthing of LNG carrier on a monthly basis is calculated by multiplying the tariff item for the service of berthing of LNG carrier by the coefficient for the contracted basic service on a monthly basis in the amount of 1.2.

The unit amount of the fee for the contracted service of temporary storage of LNG or send out of natural gas into the transmission system on a monthly basis is calculated by multiplying the twelfth of the amount of corresponding tariff item by the coefficient for the contracted basic service on a monthly basis in the amount of 1.2.

Furthermore, the unit amount of the fee for the contracted service of temporary storage of LNG or send out of natural gas into the transmission system on a daily basis is calculated by multiplying the thirtieth of the amount of corresponding unit fee by the coefficient for the contracted basic service on a daily basis in the amount of 1.6.

Of the aforementioned basic services of LNG terminal, the Draft Methodology proposes only the basic service of send out of natural gas into the transmission system to be the interruptible service. The coefficients for the contracted interruptible service on an annual and/or monthly basis depend on the actual duration of contracted interruptible service in the month, and they are shown in the following table:

<i>Interruption duration (days in a month)</i>	<i>Coefficient for interruptible service (<math>k_{prekid}</math>)</i>
$\leq 3$	0.80
$> 3$ and $\leq 10$	0.40
$> 10$ and $\leq 25$	0.10
$> 25$	0

## **CALCULATION OF THE FEE FOR THE USE OF THE LNG TERMINAL**

The Draft Methodology proposes to prescribe that the LNG terminal operator shall charge a fee for the use of LNG terminal for each individual user for each month, and issue a single invoice for that. The operator makes the calculation based on the services of the LNG terminal contracted by the user, the amount of tariff items for the unloading and send out of LNG, coefficients for the contracted SSP, the coefficient for the contracted basic service on a monthly basis, the coefficient for the contracted basic service on a daily basis and coefficients for the contracted interruptible service of send out of natural gas into the transmission system.

In addition, the calculation of the fee for the use of LNG terminal shall contain corrections of the fee for the use of LNG terminal that shall be made no later than three months from the issued calculation and the invoice, and the corrections shall be transparently identified and indicated in the calculation.

The amount of the fee for the use of LNG terminal is reduced in the event that the operator fails to provide the contracted service of the LNG terminal due to the performance of the planned or unplanned works.

## **REGULATORY ACCOUNT**

The regulation of operator business, as proposed by the Draft Methodology, covers the period of only one regulatory period. In addition, a correction mechanism in the case of shortage or exceedance of the allowed revenue is introduced between two regulatory periods. However, such model is not appropriate in all cases, especially in the event of possible significant investments in the LNG terminal development or in the case of lower capacity use of LNG terminal in the following regulatory period compared to the expected use of the LNG terminal capacity in subsequent regulatory periods.

In this regard, the Draft Methodology proposes an optional model for incentive regulation of energy activity of managing the LNG terminal, i.e. the regulatory account model. Using the regulatory account model, the operator who is planning significant investments (a significant increase in the book value of regulated assets), under certain conditions over a longer period, is enabled the realization of investments and an adequate return on reasonably invested funds. The regulatory account model enables the operator in the later years of the regulatory account to compensate for the revenue from the early years of the regulatory period that were generated in an amount lower than the allowed revenue arising from the application of the Draft Methodology. Using the regulatory account model allows the operator to achieve cumulatively equal allowed revenue as without the use of a regulatory account, but at a different time dynamics.

In order to determine operator's eligibility for establishing a regulatory account, the Draft Methodology proposes certain requirements that must be met. Furthermore, the provisions of the Draft Methodology include the entire process of calculating tariff items in the regulatory account model, as well as the regulatory account audit process.

HERA approves a regulatory account for the operator pursuant to a decision on establishing a regulatory account for managing the LNG terminal, and upon the request by the operator for establishing a regulatory account, which is submitted by the operator as part of the request for determining or changing the amount of tariff items for the unloading and send out of LNG, in the year preceding the first year of the regulatory account. HERA may also approve a regulatory account for the operator independently. The period for which a regulatory account is established may not be shorter than two regulatory periods.