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ACCOUNTING FOR PROCESSES RELATED TO RENEWABLE ENERGY RESOURCES IN ACCORDANCE WITH IFRS

Abstract. The use of renewable energy sources is developing more and more around the world these days. One of the main reasons for this is that declining fossil fuel resources and pollution from burning gas, oil, and coal have a significant impact on climate change. Many foreign investments are being attracted to increase the profitability of renewable resources. As a result, in order to provide transparent information for foreign investors electricity supply companies are required to maintain accounting and reporting in accordance with the requirements of IFRS standards. This article examines the organization of the purchase and sale of renewable energy in accordance with IFRS standards, defining the rights and obligations in contracts on the basis of international concepts, combining and modifying contracts, differentiating work and services in them, and determining individual selling prices. The results of the study show that the requirements of IFRS 16 (Leasing) of contracts related to the purchase of renewable energy in power supply companies, IFRS 15 for measuring the rights and obligations under contracts in the recognition of revenue provide an appropriate basis. The application of these criteria ensures that the terms of the contract are constantly monitored.

Keywords: energy, leasing, cost, revenue, contract identification, individual sell price

Introduction

The use of renewable energy sources is growing in the world. This is because declining fossil fuel resources and pollution from burning gas, oil and coal have a significant impact on climate change. The profitability of renewable resources is improving day by day, and a lot of foreign investment is being attracted to increase energy efficiency. As a result, in order to provide transparent information for foreign investors, electricity supply companies are required to maintain accounting and reporting in accordance with the requirements of IFRS standards.

Literature review

Accounting for revenue from contracts entered into. The main goal of any business entity is to obtain high profits in a market economy. Achieving this result will depend on a number of economic processes. Their core is the recognition of revenue and expenses. Revenue is considered the most important indicator of financial results. T. Sutton believes that revenue is an increase in the composition of net resources resulting from its operating activities, a decrease in costs [1]. M. Dobrel argues that revenue is a decisive number in a financial statement that can be used for accounting manipulation [2]. D. Henry and A. David argues that revenue is an asset

that is generated when goods or services are transferred to a customer [3].

Analysis and results

Contracts related to the purchase of renewable energy at power supply companies are accounted for in accordance with IFRS 16 Leasing, IFRS 37 Reserves, Contingent Liabilities and Contingent Assets, and IFRS 9 Financial Instruments. In international practice, contracts for the purchase of renewable energy at power supply companies meet the requirements of the following criteria, it is recommended to take into account these contracts in accordance with IFRS 16 "Leasing":

- Are there identifiable assets in renewable energy purchase agreements?
- Is the producer entitled to almost all economic benefits during the term of contracts for the purchase of renewable energy sources?
- Does the recipient have the right to control the intended use of the identified producer asset during the term of the contract?

The first criterion mentioned above requires that energy contracts be accounted for as finance leases only if an identified asset is available. In accordance with the requirements of IFRS 16, an identified asset may be directly or indirectly identified in the contract. The second criterion requires the customer to be entitled to all economic benefits from the use of the identified asset over its entire useful life in order to control the use of the identified asset.

This is usually a criterion that requires a lot of management consideration for evaluation, and often requires participation not only from the financial side, but also from the operational side. The customer has the right to manage the use of the identified asset during the period of use in the following cases:

- the customer has the right to manage the use of the asset during the period of use.
- preliminary determination of the intended use of the asset.

Relevant decisions on the intended use of the asset should be pre-determined by the right to manage the asset or the right to direct other persons to manage the asset as indicated during the life of the asset or to determine in advance the purpose for which the asset will be used. If contracts for the purchase of renewable energy sources do not meet the above three criteria, they should be considered in accordance with IFRS 37 Reserves, Contingent Liabilities and Contingent Assets or IFRS 9 Financial Instruments.

One of the main conditions for the effective management of electricity supply organizations is the correct organization of the calculation of operating costs. This is because operating costs are a key driver in determining energy costs, controlling material, technical, labor and financial resources, and increasing profitability. The main objectives of accounting for operating costs in electricity supply organizations are:

- a) timely and complete reflection of all costs that allow to estimate the cost of energy;
- b) ensuring control over energy supply;

c) data generation to control the rational use of funding sources.

IFRS 15 divides the costs associated with the supply of energy under a contract with the customer into two categories: costs incurred in generating energy and costs incurred in the transmission of electricity. When accounting for the above costs in accounting, it is necessary to determine, first of all, that these costs do not fall within the scope of IFRS 2 "Inventories", IFRS 16 "Property, plant and equipment" and IFRS 38 "Intangible Assets". If the costs incurred in performing the contract are not recognized in accordance with the above standards and these costs meet the following criteria, IFRS 15 recognizes these costs as an asset as a result of capitalization of the costs associated with the contract:

- a) the costs relate to a direct contract or a clearly defined contract;
- b) costs create or increase the resources of the enterprise in the future to meet the obligation;
- c) costs are expected to be reimbursed (by the customer).

We propose to use the following model in recognizing the result of capitalization of costs incurred in the supply of energy resources as an asset on the basis of the criteria specified in article 95 of IFRS 15 (Figure 1).

The cost of energy resources under a contract (or offer) with a customer of electricity companies includes the following costs in accordance with article of 97 IFRS 15 Revenue from Contracts with Customers:

- a) direct material costs;
- b) direct labor costs;
- c) indirect costs associated with the contract or contract activities;
- g) costs clearly covered by the customer;
- d) other costs incurred in the performance of the contract (subcontract costs).

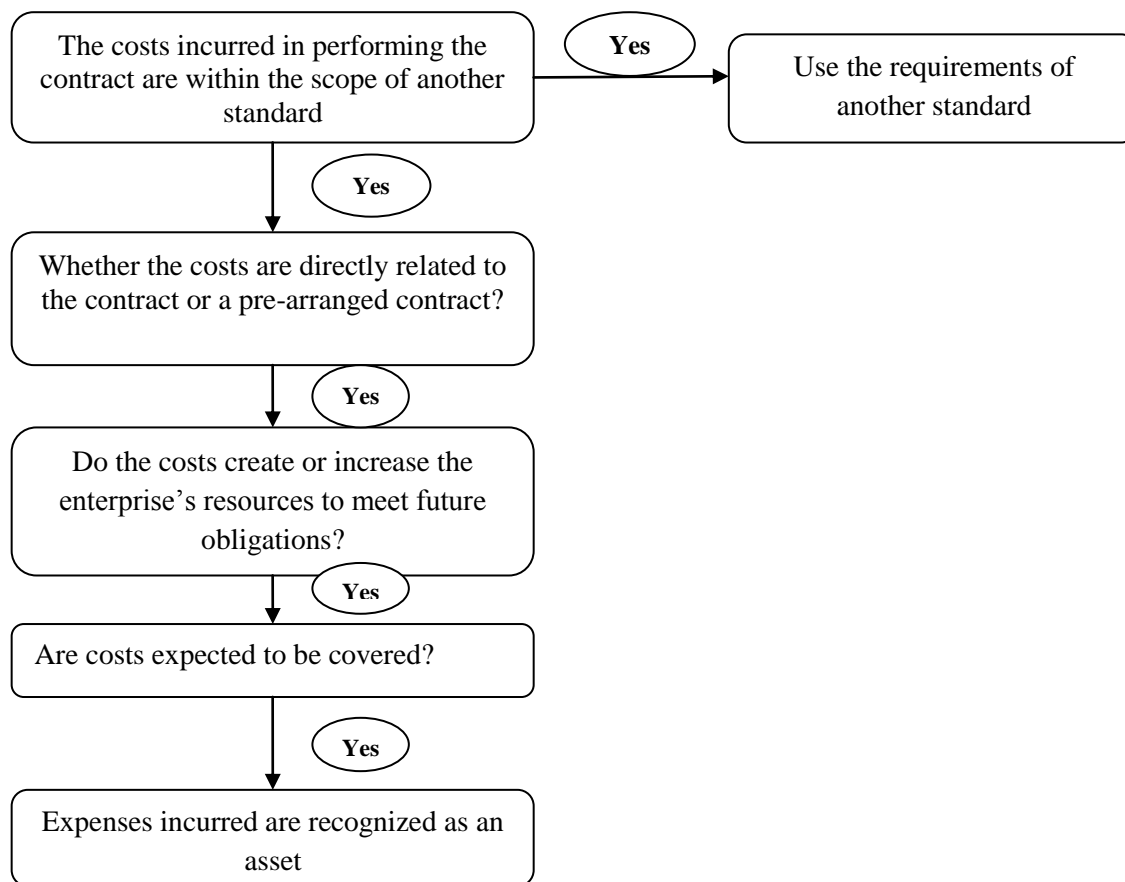


Figure 1. Model for determining the recognition of an asset as a result of the capitalization of costs associated with the performance of the contract¹

IFRS 15 Revenue from Contracts with Customers groups energy costs by cost elements and divides them into direct and indirect costs.

Revenues from contracts concluded with the customer in electricity supply organizations are recognized in accordance with IFRS 15 “Revenues from contracts with customers”. This is because this standard serves as a basis for the recognition of revenue received under any contract. In order to improve the methodology of revenue recognition, IFRS 15 “Revenue from Contracts with Customers” was developed in May 2014 by the International Accounting Standards Board (IASB). From January 1, 2018, IFRS15 “Revenue from Contracts with Customers” will be used instead of IAS 18 Revenue.

IFRS 15, Revenue from Contracts with Customers, recognizes revenue from the transfer of energy agreed with the customer at the power supply company, which reflects the entity's right to receive the revenue. Revenues in electricity supply organizations are recognized using the following 5-stage model (Figure 2):

- stage 1 - identification (identification) of the contract (s) with the 1st stage

¹ Developed by the author in accordance with the requirements of IFRS 15

customers;

- stage 2 - determining the fulfillment of contract obligations;
- stage 3 - determining the contract pricing;
- stage 4 - distribution of the contract price to the contractual obligations;
- stage 5 – recognition revenue.

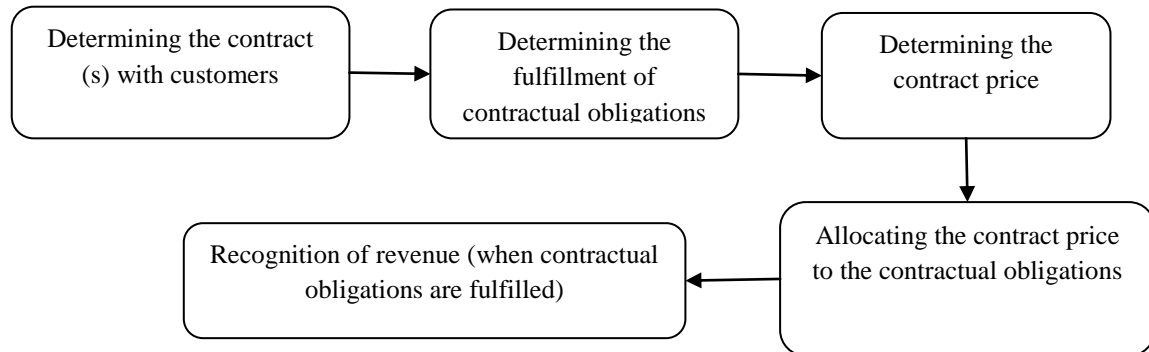


Figure 2. Recognition of income from contracts under IFRS 15²

Issues of identification of concluded contracts. A contract concluded with customers of electricity supply organizations is an agreement between two or more parties that creates rights and obligations. Pursuant to Article 9 of IFRS 15 “Revenue from Contracts with Customers” the contract must meet the following criteria based on the requirement of Identify contract with the customer:

- the parties must have approved the contract and defined their obligations ;
- the organization must be able to determine the rights and obligations in respect of the transfer of goods, works or services to the customer;
- the organization must be able to determine the terms of payment for goods, works or services transferred to the customer;
- the contract must be of economic significance and concluded for commercial purposes;
- the organization must acquire the right to receive payment at the time of transfer of goods, works or services to the customer [4].

The above criteria allow for the definition of contractual rights and obligations for electricity supply organizations. T. Randolph, Jr. Ellis confirmed that the identification of the rights and obligations could be straightforward for the construction industry if the rights and obligations are clarified in the contract [5]. In addition, H. Ndlovu (2017) pointed out that there are different forms of contracts in South Africa that would assist in providing standardized and more simplified contracts to clarify the rights and obligations [6].

The work and services provided by the energy power supply organizations may be carried out on the basis of several contracts between the customer and its relevant parties. As a result, there have been some difficulties in recognizing operating

² Developed by the author in accordance with the requirements of IFRS 15

revenue under contracts entered into between electricity supply organizations and the customer.

Work and services provided by the energy power supply organizations are carried out on the basis of several contracts between the customer and its relevant parties. This has led to some difficulties in recognizing revenue from operating activities under contracts between the energy power supply organizations and the customer. Step 1 of the five-step revenue recognition model under IFRS 15 provides the criteria that require two or more contracts to be combined into one contract in order to recognize revenue.

Such a combining of contracts is possible if the contracts are concluded with the customer or its respective parties at the same time or almost simultaneously, and at least one of the following criteria is met:

- the contracts are negotiated with a single commercial objective;
- the amount of consideration in one contract depends on the other contract;
- the goods or services promised are a single performance obligation.

As noted by Ernst & Young, IFRS 15 “Revenue from Contracts with Customers” simplifies contract consolidation by requiring only one or more requirements to be met instead of all requirements under IFRS 11 “Revenue”[7].

IFRS 15 “Revenue from Contracts with Customers” provides criteria that require the merging of two or more contracts as a single contract to recognize revenue in the first stage of the five-step revenue recognition model. Such merging of contracts is possible if the contracts are concluded with the customer or his relevant parties at the same time or almost simultaneously, and at least one of the following criteria is met:

- contracts are concluded for a single commercial purpose;
- the payment under one contract depends on the cost or performance of another contract;
- the goods or services agreed in the contract or the goods or services agreed in each of the contracts can be considered as a single obligation.

IFRS 15 provides guidelines for contract modification in the first stage of the fifth stage of revenue recognition model (identify contract with the customer).

Amendments to the contract in accordance with the provisions of this standard are made only when the contract is changed or new rights and obligations can be fulfilled or existing rights and obligations change.

IFRS 15 sets out three different approaches to accounting for contract modifications in accordance with the article of 21. These approaches provide that additional work and services are accounted for in a separate contract, as part of the original contract, or as a new contract with the termination of the original contract [8]. We recommend the use of the following criteria in determining which approach requires contract modification:

- are the additional work and services different from the work and services specified in the original contract?
- does this modification reflect the cost of separate sales of additional work and

services?

We recommend using the following scheme when considering contract modification in power supply organizations (Figure 3).

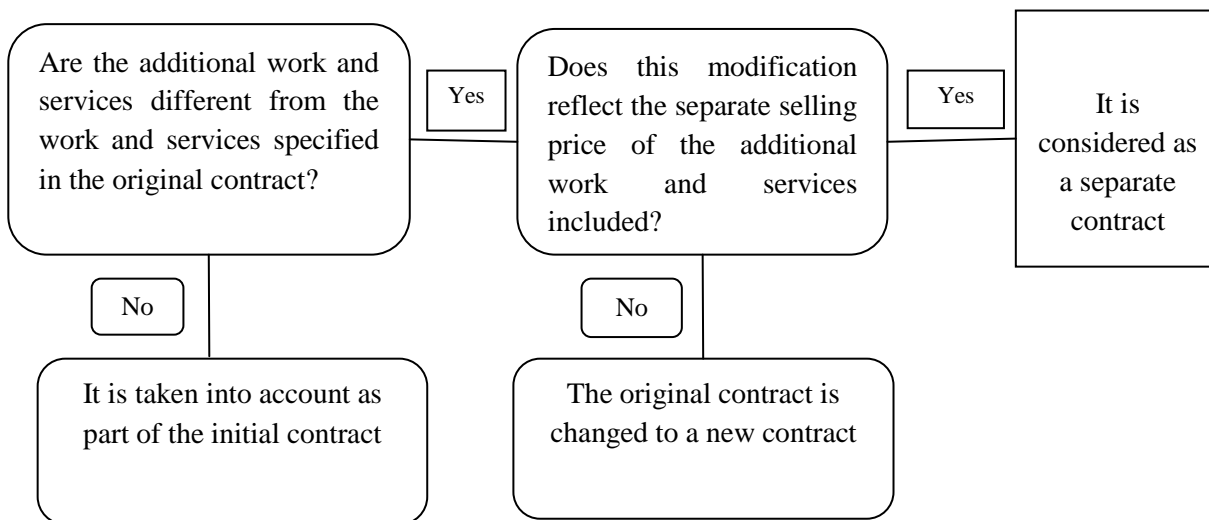


Figure 3. Model of accounting for contract modification in electric power supply organizations on the basis of IFRS 15³

The second stage of revenue recognition model of IFRS 15 requires the energy power supply organizations to determine the performance of its obligations in the contract with the customer. This is an important step in the revenue recognition process, which involves recognizing revenue when the obligation is fulfilled.

Consequently, failure to properly define performance obligations, the timing of the recognition of revenue may not comply with the requirements of IFRS 15 and the revenue may be recognized in another reporting period.

According to article 27 of IFRS 15, the work (goods) or services agreed with the customer differ from each other if they meet the following criteria:

- the customer can use the work (goods) or services alone or in combination with other sources to which the customer has the right of free access;
- the agreement of the organization on the transfer of the object (goods) or services to the customer is specified separately from other contractual agreements [8].

The second stage requirement of the revenue recognition model determines that the entities must first assess whether they have the ability to differentiate the work (goods) or services in the contract with the customer based on Article 22 of IFRS 15

We recommend using the following model to determine the difference between the work (goods) or services agreed in the contract with the customer (Figure 4).

³ Developed by the author in accordance with the requirements of IFRS 15

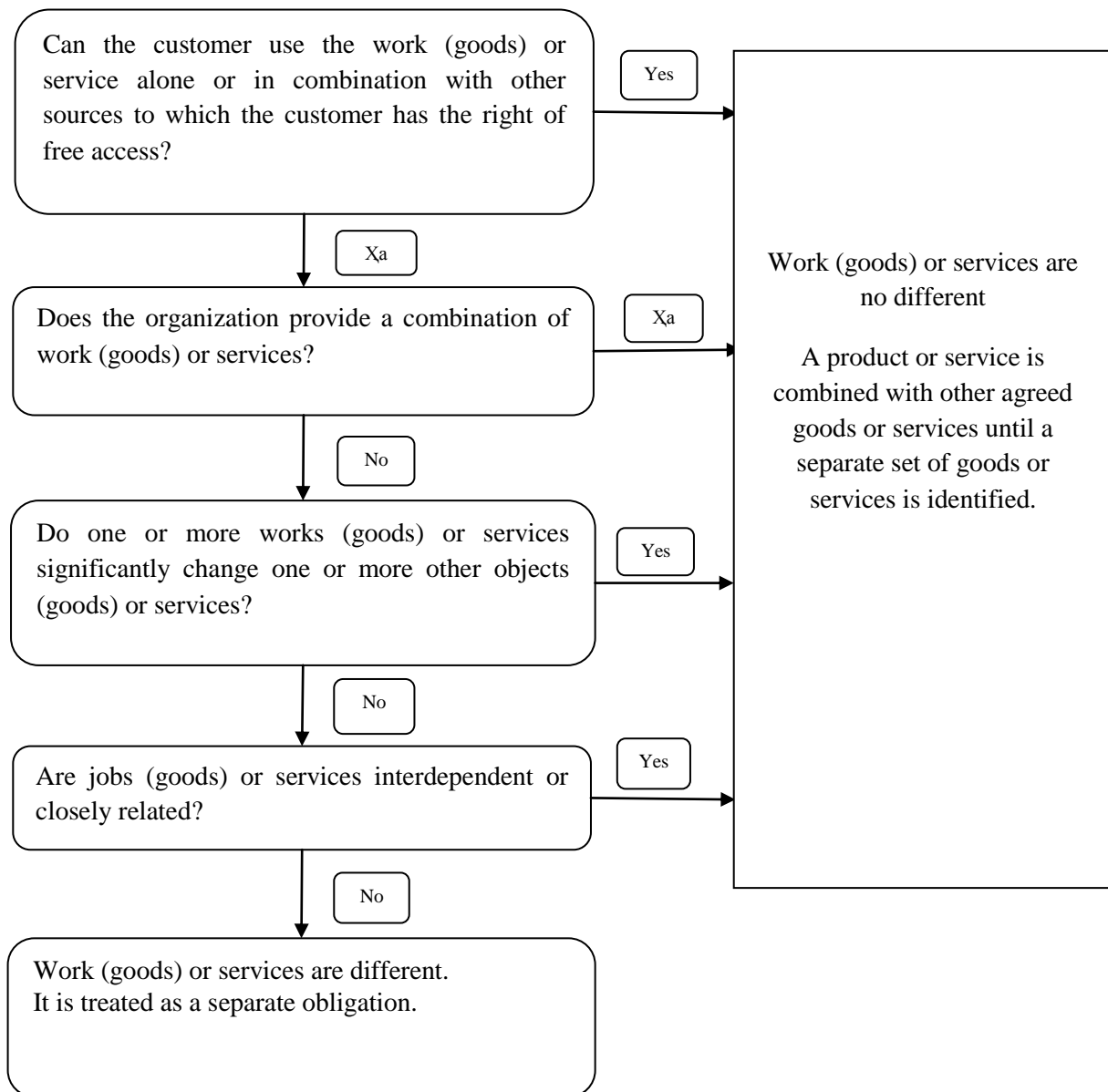


Figure 4. Determine the difference between the work or services agreed in the contract⁴

According to D.Morris, the obligation to perform a contract with customers should be considered as a single performance obligation. The reason for this is that the object (goods) or services agreed in the contracts are usually interdependent or interdependent. Therefore, it does not meet the requirements for a separate (differentiated) construction object (goods) or services [9].

Typically, a contract is a macro-level agreement that represents the creation or development of a specific asset. As a result, performance obligations in most contracts do not differ from each other.

⁴ Developed by the author in accordance with the requirements of IFRS 15

In calculating (determining) the contract price (transaction) in the power supply organizations, the entity must take into account the terms of the contract and its normal operation. The contract price is the amount that an entity expects to be entitled to receive in exchange for the transfer of the agreed goods or services to the customer in accordance with article 47 of IFRS 15. The contract price is determined taking into account the influence of the following factors in accordance with article 48 of this Standard:

- variable payment;
- limiting the assessment of variable payments;
- important components of the contract financing (availability);
- other non-cash payments;
- Payments to the customer.

H. Mudler believes that variables and uncertainties are specific to the energy supply sector and are complicated by the interaction of this sector with multifaceted customers and subcontractors [10].

The third stage of the revenue recognition model in IFRS 15 allows for the identification and measurement of variable payments. In applying this third step, energy supply organizations will first need to determine the variable charge that is included in the contract. The second step is to consider different assessment methods.

The accounting for variable payments usually determines that the contract is clearly stated in accordance with article 52 of IFRS 15.

It may be simple to determine the contract price for a fixed amount of goods or services specified in a contract that is expected to be received in a fixed amount in a short period of time.

However, it is difficult to determine the contract price when the contract includes elements such as variable payment, an important financing component, non-cash payments, and payments to the customer. IFRS 15 provides clear guidance on these issues and the contract price and other issues. IFRS 15 requires an entity to estimate the amount of the variable payment that is due to it on a contractual basis if the entity is to account for a variable payment.

Common forms of variable payment consideration include price rebates, refunds (refunds for unsatisfactory goods and services sold), rebates, loans, benefits, salary bonuses, and royalties. The best estimate (estimate) or average weighted approach is used to account for variable pay. The valuation takes into account the amount that is closest to the amount that the organization expects to receive in return for the transfer of goods and services to the customer. If an energy forecasting entity has received a non-monetary payment and is unable to estimate its fair value, the entity will indirectly calculate the individual selling price of the goods and services provided in return for that payment. Significant funding components will be available if the organization's performance obligation and customer advances or payments occur at significantly different periods.

If the contract contains significant financing components, IFRS 15 requires organizations to adjust the contract price to take into account the time value of the

money. IFRS 15 generally recognizes that it is practically inappropriate to disregard the time value of money if the time between the transfer of work (goods) or services to the customer and payment does not exceed twelve months (less). Determining the essential components of financing leads to the fact that the funds received from the customer are in the item of profit or loss, in the item of temporary revenue.

It should be noted that in some cases, the contracts concluded with the customer specify the conditions that lead to the accounting of payments to be made to the customer. Refund (payment) of such payments will result in a reduction in the contract price if there is no payment for a particular work (goods) or services by the energy supply organizations.

The purpose of allocating the contract price to performance obligations is to determine the amount that the entity expects to acquire for each identified good or service (performance obligation) in accordance with article 73 of IFRS 15. Article 73 of this standard is important for contracts with multiple performance obligations that can be satisfied at different stages. The allocation of contract value to liabilities is a new methodological criterion, as IFRS 18 assumed that revenue would be recognized in the general (whole) contract. The allocation of the contract price to the contractual obligations is based on the criteria of the fourth stage of the revenue recognition model of this standard (Allocating the transaction price to the performance obligation in the contract).

In accordance with paragraph 74 of IFRS 15, the contract price stipulates that it should be distributed on the basis of individual (separate) selling prices for each specified obligation. This ensures that the individual selling price accurately represents the margin of each agreed product or service. If goods or services are sold separately, the individual selling price principle is used to determine the price that corresponds to the appropriate price. Thus, we can see that IFRS 15 defines the individual selling price as “The price at which an entity sells goods and services agreed upon in a contract to a customer”.

The best proven proof of an individual selling price is the selling price tracked by the enterprise, if any, for customers who do not fall into the same category and in similar circumstances. If not available, the individual selling price is estimated using all available data (including market conditions, enterprise-specific factors, and buyer or buyer class information) to the maximum extent possible using the tracking data.

Conclusions and proposals

It is expedient to take into account contracts related to the purchase of renewable energy at power supply companies within the requirements of the Leasing Standard 16. Because accounting under this standard guarantees the legal criteria for controlling the use of assets in contracts, the right to receive economic benefits from their use.

Step 5 revenue recognition model of IFRS 15 was considered. Stage 1 criteria are the basis for ensuring that only executable contracts are taken into account for the recognition of revenue in electricity supply organizations. The results of the study

show that IFRS 15 provides an appropriate basis for measuring rights and obligations under all contracts that are the basis for the recognition of revenue. Applying these criteria will lead to an improvement in contractors' control over the terms of the contract over time. The requirements for merging contracts in accordance with IFRS 15 in the electricity companies operating in the Republic of Uzbekistan lead to significant changes in practice in the field of energy supply. However, because contracts are constantly changing, the difference between contract change and variable price is important for this industry. IFRS 15 provides a basis for modifying contracts and we offer three alternatives to which the contract may be modified as a result of the modification: a separate contract, a new contract and part of the original contract (existing unfinished contract). Due to the specifics of the energy supply sector, we consider it appropriate to consider contract modifications as generally unfinished contracts.

References

1. Sutton, T., *Corporate Financial Accounting and Reporting*, Second Edition, Pearson, 2004. UK.
2. Dobler, M., 2008, 'Rethinking revenue recognition: The case of construction contracts under International Financial Reporting Standards', *International Journal of Revenue Management* 2(1), 1–22. <https://doi.org/10.1504/IJRM.2008.018175>
3. Henry, D., David A. *Introduction to financial Accounting: Based on International Financial Reporting Standards*, Second edition, Valley Educational Services Ltd. 2014. Canada.
4. International Accounting Standards Board, 2014b, 'Basis for conclusions on IFRS 15 revenue from contracts with customers', in IASB (ed.), *International Financial Reporting Standards: A guide through IFRS official pronouncements*, issued at 01 July 2014 with extensive cross-references and other annotations, Part B2, The IFRS Foundation, London, pp. B295–B1435.
5. Randolph, T.H. & Ellis Jr., R.D., 2007, *Interpreting construction contracts: Fundamental principles for contractors, project managers and contract administrators*, American Society of Civil Engineers (ASCE) UT.
6. Ndlovu, H., 2017, 'Factors influencing clients' choice of standard form construction contracts: A case study of three metropolitan municipalities in Gauteng Province of South Africa', Master's dissertation, University of the Witwatersrand, Johannesburg.
7. Ernst & Young, 2015a, *Applying IFRS in engineering and construction*, IFRS Publications, UK, viewed 09 February 2016, from [https://www.ey.com/Publication/vwLUAssets/Applying_IFRS_in_Engineering_and_Construction:_The_new_revenue_recognition_standard./\\$File/Applying-Rev-Construction-July2015.pdf](https://www.ey.com/Publication/vwLUAssets/Applying_IFRS_in_Engineering_and_Construction:_The_new_revenue_recognition_standard./$File/Applying-Rev-Construction-July2015.pdf).
8. International Accounting Standards Board, 2014a, 'IFRS 15 revenue from contracts with customers', in IASB (ed.), *International Financial Reporting Standards: A guide through IFRS official pronouncements*, issued at 01 July 2014

with extensive cross-references and other annotations, Part A1, The IFRS Foundation, London, pp. A683–A743.

9. Morris, D., 2014, ‘Entire contract theory in construction’, Brief 41(3), 8–11p.

Mulder, H., 2013, An analysis of the state of innovation in the South Africa construction industry, Master’s dissertation, University of Pretoria, Hatfield, Pretoria, viewed 11 August 2017, from <https://repository.up.ac.za/handle/2263/41014>