

УДК 502.33: 338.24.021.8

**INSTRUMENTATION ACCOUNTING AND AUDIT OF CAPITAL INVESTMENTS
IN THE INVESTMENT PROJECT FOR THE PRODUCTION OF BIOFUELS**

A.S. Balan PhD in engineering, Associate Professor

V.A. Polyakova

Odessa National Polytechnic University, Odessa, Ukraine

Балан О.С., Полякова В.А. Інструментарій обліку і аудиту капітальних інвестицій в інвестиційному проекті з виробництва біопалива.

У статті досліджено інструментарій обліку і аудиту капітальних інвестицій в інвестиційному проекті з виробництва біопалива. Виробництво біопалива на сьогоднішній день залишається в центрі уваги багатьох дослідників. Структура паливно-енергетичних ресурсів України є загрозовою для енергетичної безпеки, тому пошук альтернативних джерел енергозабезпечення являється дуже актуальним.

Ключові слова: біопаливо, капітальні інвестиції, облік, аудит

Балан А.С., Полякова В.А. Инструментарий учета и аудита капитальных инвестиций в инвестиционном проекте по производству биотоплива.

В статье исследовано инструментарий учета и аудита капитальных инвестиций в инвестиционном проекте по производству биотоплива. Производство биотоплива на сегодняшний день остается в центре внимания многих исследователей. Структура топливно-энергетических ресурсов Украины является угрожающей для энергетической безопасности, поэтому поиск альтернативных источников энергообеспечения является очень актуальным.

Ключевые слова: биотопливо, капитальные инвестиции, учет, аудит

Balan A.S., Polyakova V.A. Instrumentation accounting and audit of capital investments in the investment project for the production of biofuels.

The article studied accounting and audit toolkit capital investment in the investment project for the production of biofuels. Biofuel today remains the focus of many researchers. The structure of fuel and energy resources in Ukraine is threatening energy security, so the search for alternative sources of energy is very important.

Keywords: biofuels, capital investment, accounting, auditing

Investment projects for the production of biofuel is very important for Ukraine, they provide energy independence. However, biofuels production in modern conditions faces challenges. One of the enterprise's problems at the stage of production start this is a problem in the accounting and audit of this project.

Analysis of recent researches and publications

Instrumentation accounting and audit of capital investments devoted to research work of various scientists-economists: Sazhynets S. [1], Vysochan O., Hnatiuk R. [2], Markov N. [3], Ciric N. [4] Bondar M. [5] Sachenko B. [6] Sopko B. [7].

The aim of the article is a detailed examination of accounting and auditing of capital investments in the investment project for the production of biofuels. To explore the information base for accounting and auditing of capital investments and information flows in the accounting of capital investments and the auditing of capital investments.

The main part

Energy security is an important component of national and economic security of each country. Ukraine's dependence on imported oil and gas and encourages the search for new alternative sources of energy. Increasing energy prices and uncertainty about the stability and reliability of their suppliers has led to a growing interest in renewable energy and in particular biofuel. In the conditions development agrarian sector of economy is impossible without a stable agricultural production by fuel [8].

The constant increase in the cost of fuel and lubricants adversely affects the condition of their provision of agricultural producers, and may eventually lead to a substantial decrease of agricultural production in Ukraine or to their rise in price [9].

Capital investments are expenditures on creation of new, expansion, reconstruction and technical re-equipment of fixed assets and their acquisition, regardless of funding sources.

Account №15 "Capital investments" refers to Class 1 "non-current assets" account in this class are intended for generalization of information on availability and movement of fixed assets other non-current tangible assets, intangible assets, long-term financial investments capital investments long-term

receivables and other noncurrent assets and depreciation of non-current assets [5].

In the debit account 15 "Capital investment" and its sub-accounts will reflect the expenses (on acquisition and creation of tangible and intangible fixed assets), loan – write-off of these costs on completed and commissioned objects [10].

Analytical accounting of capital investments carried out respectively by types of fixed assets, other non-current tangible assets, intangible assets, as well as by separate objects of capital investments [11].

When considering investments in the enterprise in the form of capital investments in fixed assets should consider that they can be implemented in various ways (construction and acquisition of new assets, reconstruction or modernization and the like), which affects the reflection of economic operations in primary documentation [12].

Capital investments are disclosed in such documents (table 1).

Table 1. Information on capital investment [13]

Document	Article
Balance	according to the article "work in progress" on the cost of construction in progress (including mounting hardware), carried out for own needs of the enterprise and the amount of advance payments to Finance such construction
Profit and Loss Account	according to the article "Other income" and "other expenses" respectively in income and the cost of sales of non-current assets
Statement of cash flows	according to the articles "The realization of non-current assets" in the amount of cash received from the sale of non-current assets; "Acquisition of non-current assets" in the amount of cash payments for the acquisition of such assets; "Other income" in the amount of other receipts, can't be classified as a financial activity (trust receipts to Finance capital investment); "Net cash flow" – in the result cash flow from extraordinary events associated with this activity
Statement of Owner's Equity	according to the articles "Revaluation surplus of unfinished construction" and "Write-down of unfinished construction" in the amount of data, representing, respectively, the increase or decrease in equity resulting from the revaluation of incomplete construction
Notes to financial statements	accounting policy regarding the valuation principles of capital investments and methods of their records; information on capital investment, which is not included directly in the financial statements, but is required to disclose in accordance with the requirements listed R(S)A; information on capital investment, containing additional analysis of the articles in which they are presented, and necessary to ensure its understandability and validity

For correct reflection of capital investments should be guided by the following regulations: R(S)A 7 "PP&E", R(S)A 8 "Fictitious asset", R(S)A 16 "Disbursements", R(S)A 15 "Revenue", NR(S)A 1 "General requirements to financial reporting", R(S)A 25 "Financial statement of small business entity", the Law of Ukraine "About accounting and financial reporting in Ukraine" № 996-XIV, instructions for application of account-plan book keeping № 291 [12].

Analyzing regulatory and methodological support it can be concluded that the capital investment is the

sum of the enterprise costs aimed at the acquisition, construction, expansion, modernization or reconstruction of fixed assets other non-current tangible assets and intangible fixed assets, for the purpose of obtaining income or economic benefits in the future (table 2).

Accounting of capital investments can be represented in the form of the document flow diagram (Fig. 1).

Table 2. Information base for accounting and auditing of capital investments

№	Standard forms of accounting and analytical information
1	Law of Ukraine "About accounting and financial reporting in Ukraine" № 996-XIV
2	NR(S)A 1 "General requirements to financial reporting"
3	R(S)A 7 "PP&E"
4	R(S)A 8 "Fictitious asset"
5	R(S)A 16 "Disbursements"
6	R(S)A 15 "Revenue"
7	R(S)A 25 "Financial statement of small business entity"
8	Instructions for application of account-plan book keeping № 291
9	The order on the accounting policy of the company
10	Supporting primary documentation on accounting of capital investments:
10.1	operation commencement act
10.2	delivery and acceptance certificate of repaired, reconstructed and modernized facilities
10.3	Defects Certificate, acts of the performed works on repair of fixed assets, estimates and contracts for major repairs, maintenance of fixed assets contractors
11	Accounting registers are used for reflection of economic operations on accounting of non-current assets: capital investment: magazine 4, statement 4.1, account 15
12	The audit program of capital investments

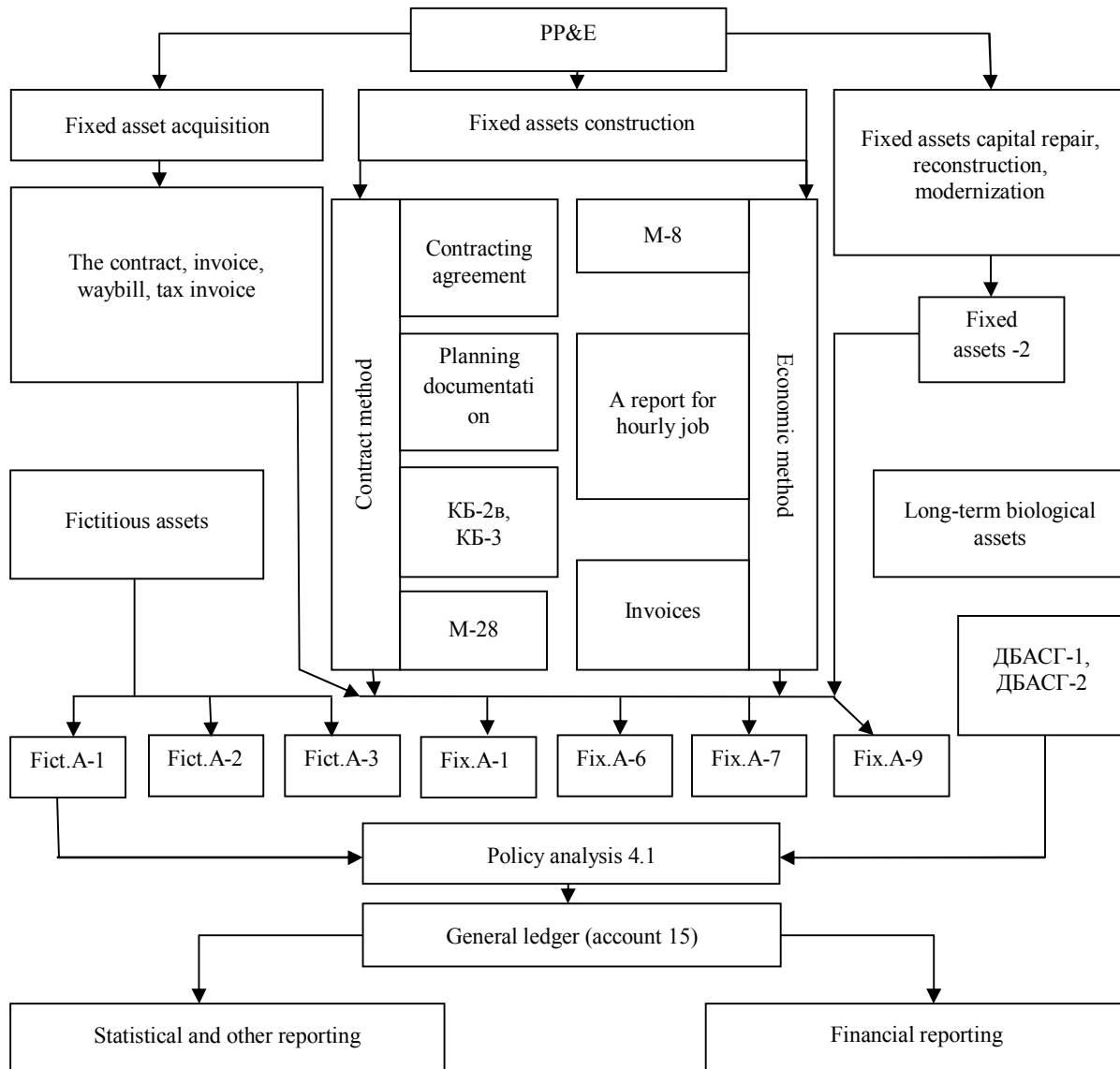


Fig. 1. Information flows in the accounting of capital investments

Based on the above schematic representations of informational relationships, argue that the flow of capital investments can be divided into 2 levels: the first level is the formation of the initial cost of separate objects of capital investments, the second – the introduction into operation. Thus, to reduce loss and distortion of information at enterprises regardless of sector and form of ownership should create an internal document for the accounting of capital investments – analytical card account capital costs, which has become a connecting link between the present levels [14].

During the inspection establish sources of funding. Source of funding determine the form of capital investments. If capital expenditures are financed from the state budget, state enterprises, local budgets, they belong to the state. If capital investments are at the expense of investors, they belong to non-state.

When testing is necessary to determine:

- Allocation legality investment;
- completeness of the use of allocated sources;
- target use of investments;
- sufficiency of the investments to complete the construction of the facility;
- legality allocated investment in selected forms: borrowed and own financial resources of investors, funds of foreign investors [19].

Procedure for checking documentation of capital investment begins with the study of primary documentation used by the company during construction and upon its completion (table. 3) [15].

According to the Instruction on application chart of accounts assets, capital, obligations and economic operations of enterprises and organizations to account for capital investment is provided an active account 15 "Capital investments".

Table 3. Primary documentation for capital investments

Category	Title of the document
Capital investments	The acts of acceptance of work performed (f. № КБ-26)
	Information about the cost of contract work (f. № КБ-3)
	Acts of acceptance-transfer (internal displacement) of fixed assets (f. O3CT-1)
	Acts of delivery-acceptance of repaired and reconstructed (modernized) objects (f. O3CT-2)
	Limit-fence card (f. № M-8, M-9)
	Order for piecework (f. № ПЦГ-5)
	Registration sheets of tractor-driver (f. № ПЦГ-3)
	Statements of depreciation
	Waybills truck (f. № 2)
	Invoices
	Bills of lading
	Reports on the use of funds provided on a business trip or a subreport

Table 4. Analytical support of capital investment

Category	Title of the document
Capital investments	Accounting registers are used for reflection of economic operations on accounting of capital investment: magazine 4, statement 4.1, account 15
	Acts and certificates of previous audits, audit findings and other documentation that summarizes the inspection results

Table 5. Disclosure of information about capital investment in the accounting records and financial statements [1]

The cipher and name of the account	Accounting registers	The line number in the balance (f. №1)	The line number in the notes to the annual financial statements (f. №5)
15 «Capital investments»	magazine 4, statement 4.1	020	280-340

When considering investments in the enterprise in the form of capital investments in fixed assets should take into account that they can be implemented in various ways (construction and acquisition of new assets, reconstruction or modernization and the like), which affects the reflection of economic operations in primary documentation. Thus, for the documentation of capital construction of fixed assets, you should consider how the implementation of construction work: a contractor that uses the services of contracted construction or installation companies and commercial, which provides for the implementation of own construction. The attraction of capital investment in construction in the first method is reflected in such primary documents [19].

In the notes to the annual financial statements must include information about the amount of capital investment in fixed assets for the reporting year [16].

During validation of the procedure for drawing up of business operations study balance account 15 "Capital investments". When assigning material values for construction of the facility, the debit account 151 "Capital construction" and credit of account 20 "inventories", 22 "Low value items". When calculating the salaries of employees on construction of the project credit account 66 "Settlements in employee

benefits". In the calculation of fees and contributions for social events on the wage fund credit account 65 "Calculations on insurance" [17].

Audited investment transactions are the processes and transactions associated with acquisition, evaluation, income generation, retirement and the targeted use the sources of financing investment activity.

Audited capital investment is:

- elements of accounting policy: primary documents on accounting of capital investment, regulation of the method of equity, the list of persons entitled to sign documents on accounting of investments, the order of evaluation (the initial cost estimate at the balance sheet date – R(S)A 12), custody of securities, inventory, capital investments, classification of forms and types in the enterprise, sources of investment financing;
- records: the primary documents, accounting registers and reporting.
- information: accounting abuse, misuse, lack, which found reflection in acts of documentary audit inspections, the auditors, the decisions of law enforcement.

The auditing of capital investments is shown in table 6.

Table 6. Capital Investment Audit Tools

№	Document
1	The order on the accounting policy of the enterprise
2	Primary documents on accounting of capital investments:
-	acts of commissioning
-	acts of acceptance-transfer of repaired, reconstructed and modernized facilities
-	Defects Certificate, acts of the performed works on repair of fixed assets, estimates and contracts for major repairs, maintenance of fixed assets contractors
3	Accounting registers are used for reflection of economic operations on accounting of non-current assets: capital investment: magazine 4, statement 4.1, account 15
4	Acts and certificates of previous audits, audit findings and other
5	Documentation that summarizes the findings of the audit
6	Reporting

The main tasks solved in the framework of the audit capital investment include the following:

- analysis of efficiency investment projects;
- monitoring critical control relations of production volumes and sales in the project;
- assessing projects of capital investment funding sources;
- analysis of turnover invested capital and return on projected production;
- confirmation reality granted financial statements [13].

Analyzing regulatory and methodological support it can be concluded that the capital investment is the sum of costs of the enterprise aimed at the acquisition, construction, expansion,

modernization or reconstruction of fixed assets other non-current tangible assets and intangible fixed assets, for the purpose of obtaining income or economic benefits in the future [18].

Conclusions

Currently the efficiency of capital investment in the company affects the state of production, the position and level of technical equipment enterprises fixed assets of the national economy, restructuring the economy, solving social and environmental problems, so we need a lot of attention to correctness of reflection capital investments carefully and to audit capital investment.

References:

1. Sazhynets S. Organization of accounting of capital investment in creating fixed assets by economic way in industrial enterprises // Herald of National University "Lviv Polytechnic". – 2009. – №647. – P. 504-510.
2. Vysochan O.S., Gnatyuk R.I. Primary accounting of capital investments // Scientific Bulletin of Kherson state University.– 2013.– № 1. – P. 85-87. Markova N.M. Accounting of capital investments // Scientific Bulletin of CHIEU. – 2012. – №4. – P. 167-170.
3. Ciric N.B. Organizational-methodical aspects of accounting of capital investments at industrial enterprises // Herald of National University "Lviv Polytechnic". – 2009.– №647. – P. 535-540.
4. Bondar M.I. The main types of investments and their role in the reproduction of the economy // Collection of scientific works – Issue 8. – K.:KNEU, 2006. – P.27-32.
5. Sachenko V.J. Auditing: study guide / V.J. Sachenko. – K.: KNEU, 2005.
6. Sopko V.V. Accounting: study guide / V.V. Sopko. K.: KNEU, 2000.
7. Shulga Y.I. State regulation of energy saving and environmental activities. Energy efficiency – the problem of state Power. Ecology. People: Tr international energetic Congress (30 March – 2 July 2004). – K.: 2003., P. 6-8.
8. Zabarny G.M., Shurchakov A.V. The energy potential of non-conventional energy sources of Ukraine. – K.: Institute of technical thermal engineering of NASU, 2002. 211 p.
9. Financial accounting: textbook for specialty "accounting and auditing" higher educational institutions / ed. by F. F. Butynets. – 5th ed. EXT. and Rev. – Zhytomyr: Ruta, 2003. – 726 p.
10. Accounting in Ukraine: basis and practice: teaching aid / edited by V.S. Leon. – K.: Center of educational literature, 2006. – 370 p.
11. About approval of approximate forms of primary accounting documents in construction : the order of the Ministry of regional development and construction in Ukraine from 04.12.2009 № 554.
12. Accounting in Ukraine: educational grant / edited by RL Hom'yaka, V.I. Lemishovskogo. – 7-th edition, EXT. and Rev. – Lviv: Lviv Polytechnic, Intelligence-West, 2008. – 1224 p.
13. Accounting of fixed assets and other non-current tangible and intangible assets: textbook / I.M. Pavlyuk. 2nd edition revised and enlarged – M.: Centre of educational literature, 2004. – 159 p.

14. Ohiychuk N.F. Audit: the organization and methodology: textbook for universities / N.F. Ohiychuk, I.I. Novikov, I.I. Ragulina. – K.: Alpine, 2010. – 584 p.
15. Methodical recommendations for accounting of fixed assets: MFU from 31.03.2008 N 498 [*Electronic resource*]. – Access mode: http://www.minfin.gov.ua/control/uk/publish/article?art_id=293623.
16. Khobta V.M. Investment management: educational manual / V. M. Khobta. – Donetsk, 2009.
17. Markova N.M. Accounting of capital investments // Scientific Bulletin of CHIEU. – 2012. – №4. – P. 167-170.
18. Sazhinets S.Y. Organizational aspects of accounting system capital investment in enterprises // Herald of National University "Lviv Polytechnic". – 2008. – №628. – P. 288-293.
19. Puhtayevych G.A. Analysis of the national economy: textbook for independent study course / G.A. Puhtayevych – K.: KNEU, 2003.
20. Сценарне управління процесом прийняття інвестиційних рішень [*Електронний ресурс*] / О.С. Балан // Економіка: реалії часу. Науковий журнал. – 2014. – № 5 (15). – С. 128-132. – Режим доступу до журн.: <http://economics.opu.ua/files/archive/2014/n5.html>.
21. Юдін М.А. Українське машинобудування: основні тенденції та пріоритетні напрями розвитку / М.А. Юдін. // Бізнес Інформ. – 2012. – №2. – С. 111-115.
22. Система формування і забезпечення економічної безпеки підприємства [*Електронний ресурс*] / С.В. Філіппова, О.С. Дашковський // Економіка: реалії часу. Науковий журнал. – 2012. – № 2 (3). – С. 17-21. – Режим доступу до журн.: <http://www.economics.opu.ua/n3.html>.
23. Балан О.С. Управління процесом прийняття інвестиційних рішень на підприємствах виробничої сфери [*Електронний ресурс*] / О.С. Балан // «ВМВ». – 2014. – Режим доступу до ресурсу: http://economics.opu.ua/files/scientific-base/monogr/yrp_proc2.pdf.

Надано до редакції 20.09.2015

Балан Олександр Сергійович / Olexandr S. Balan
shurabalan@gmail.com

Полякова Вікторія Анатоліївна / Viktoriia A. Poliakova
vikyliia1612@mail.ru

Посилання на статтю / Reference a Journal Article:

Instrumentation accounting and audit of capital investments in the investment project for the production of biofuels [*Електронний ресурс*] / О. С. Балан, В. А. Полякова // Економіка: реалії часу. Науковий журнал. – 2015. – № 5 (21). – С. 45-50. – Режим доступу до журн.: <http://economics.opu.ua/files/archive/2015/n5.html>