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greener economies through sustainable public procurement**

MARKET READINESS ANALYSIS



State Environmental Academy of Postgraduate Education and
Management of the Ministry of Ecology and Natural Resources of
Ukraine

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Introduction

The study was conducted to determine the readiness of the market to promote sustainable public procurement (hereinafter - SPP) on the priority product categories in Ukraine.

The report thoroughly investigated group of products which were chosen at the stage of prioritization. As the result of the working session of the Steering Committee of the project "Provision of sustainable development and the possibility of transition to environmental economy based on sustainable public procurements" (hereinafter - the project) priority product groups on which the analysis of the readiness of the market was based were identified in each selected as a priority sector of the economy ("Construction materials and special equipment", "Energy, fuels and chemicals").

Market readiness analysis is made taking into account the results of the Ukrainian legislation review and prioritization for the different categories of products as part of the project for the final selection of priority products or services using the SPP approach in Ukraine.

As the result of the analysis of market readiness:

- the requirements for the selection of the major manufacturers and importers of priority product categories in the domestic market have been identified;
- the opportunities for implementation of SPP approach to select the priority product categories have been identified on the basis of a risk assessment;
- the main factors of environmental impact on the priority categories of products market at all stages of their life cycle have been studied;
- the recommendations for the implementation of SPP approach for the priority product categories have been developed.

Analysis of the market readiness allows to identify those areas that react to the use of sustainability criteria in public procurement, without additional costs, which will affect the value of the procurement.

Sectors that are insufficiently prepared and more expensive at the initial stage of market reform are also identified as the priority sectors. Such identification characterizes the market taking into account the changes in the value of the goods and the assessment of environmental impact and social factors for the development of the market.

The analysis has been prepared as the primary source of information for SPP policy and action plan developing and start of work in areas that require short term changes.

Report structure

The final report on the analysis of market readiness for the implementation of SPP is presented in 5 chapters, 23 paragraphs and 4 appendixes. The second part of the report provides an analysis of the priority product groups reaction to the significant changes in the process of economic restructuring, improvement of environment and provision of high social standards in the market of goods and services.

Research methodology

Analysis of the market readiness was held by quantitative and qualitative indicators for the identification of market opportunities and challenges that arise in the work of the operators, certification bodies and customers in the process of applying the SPP approach

Research objectives

A market readiness analysis consultant solved the following problems:

- a draft report on the definition of a strategy of interaction with the stakeholders involved in the procurement process has been prepared;
- the current level of SPP in Ukraine has been determined (stakeholders are presented, roles, responsibilities of key participants of the procurement system are identified; a survey of buyers was conducted, data are collected and analyzed);

- market readiness for identification of the market segments that react to the inclusion of sustainability criteria in public procurement was analyzed.

Research basis

Basic documents of the research are the following:

- official reports of the UN Programmes: UNEP, UNIDO;
- reports within the project on legislation and prioritization of product categories review;
- use of the information from analytical and statistical reporting documents of:
 - the Ministry of Economic Development and Trade of Ukraine;
 - the Ministry of Finance of Ukraine;
 - the Ministry of Energy and Coal Mining of Ukraine;
 - the Ministry of Agrarian Policy and Food of Ukraine;
 - the Ministry of Culture of Ukraine;
 - the Ministry of Defence of Ukraine;
 - the Ministry of Ecology and Natural Resources of Ukraine;
 - the Ministry of Infrastructure of Ukraine;
 - the Ministry of Regional Development, Construction, and Communal Living of Ukraine;
 - State Statistics Committee of Ukraine;
 - State Agency on Energy Efficiency and Energy Saving of Ukraine;
 - State Environmental Investment Agency of Ukraine;
- the results of research of industry research institutions;
- the results of the buyers questionnaire conducted as part of the project;
- the results of the social assessment.

For the most objective assessment of the procurement in the market project experts held consultations with key stakeholders: representatives of governments, business (construction and chemical industries), certification bodies, during the training as part of the International Forum for Sustainable Development GREEN MIND (08.10.2014, Ukraine, Kyiv, UCCI).

More than 100 experts from Ukraine, Europe, the United States, intergovernmental and international financial institutions, including and UN organizations addressed the forum in two days, the audience were 350 participants who represented the Ministry of Ecology and Natural Resources of Ukraine, Ministry of Economic Development and Trade of Ukraine, the Ukrainian Chamber of Commerce and Industry, the Ukrainian public organization "Living Planet", the Union of environmental auditors, Ukrainian Association for Quality.

The forum was attended by representatives of public and business organizations: Economy Communications Hub, "Capital" business publication, "Ekopoglyad" magazine, "Green Center Metinvest" public union, "Shell in Ukraine" company, "Tetra Pak Ukraine" company, "Textiles contact" company, Ukrainian League of Industrialists and Entrepreneurs, the Ukrainian Union of Manufacturers of building materials, Resource efficient and cleaner production centre, "Coca-Cola Beverages Ukraine" company, "Kamenka Global Wine" company, "Nemiroff" company.

CHAPTER I. SUSTAINABLE PUBLIC PROCUREMENTS (SPP) PRIORITY GOODS AND SERVICES

1.1. Prioritization results

Ukraine's policy on sustainable consumption and production (hereinafter - SCP) is set out in guidelines (strategy) of the state environmental policy and programs of development of the main sectors of the economy.

Ukraine's policy on SCP is primarily focused on economic growth and the creation of a competitive market economy, improving the structure of the national economy, and significant reduction in the energy intensity of gross domestic product.

The main objective of market readiness analysis was to assess the existing potential of the industry and stable subgroups of products prices to enable SPP criteria for priority product categories.

Initial prioritization helped to identify precisely those industries whose products are the most requested in the public procurements taking into account their interest in the "enabling" of sustainability criteria.

Ukrainian market as a whole responds to the implementation of sustainable goods and services positively, although experts have problems with difficult access to statistical information in the analysis of most of the product categories. There is a need for capacity building and principles of sustainable development training.

Most businesses that are involved in this research demonstrated their willingness to cooperate with the authorities in the implementation of SPP fully. It should be noted that inadequate qualification of persons who are responsible for the organization and conducting of public procurement is noted in recent years in the field of public procurement for the following reasons:

- absence of compulsory education requirements at the legislative level (the requirement was repealed in 2013);
- problems of public-sector organizations financing;
- lack of interest of officials themselves: bidding committees appointment comes on the orders of the head, not voluntary, it does not provide any remuneration for committee work, etc.

Based on these reports on prioritization the steering committee of the project decided that there is a need to focus on two major sectors of the economy for the implementation of SPP in Ukraine and further analysis of the market: "Energy, fuel and chemicals", "Construction, building materials and special equipment", and to highlight 3 product groups which have overcome the barrier of 50%:

- Branch 1: Energy, fuel, and chemicals -
 - Group 1: Paintwork materials;
 - Group 2: Detergents and cleaners.
- Branch 2: Construction, building materials and special equipment
 - Group 3: Heat insulating materials

Table 1 – The most promising in terms of the potential to improve their environmental performance product groups rating

Branch	Energy, fuel, and chemicals				Construction, building materials and special equipment			
	Paintwork materials	Detergents	Briquettes	Wood	Heat insulating materials	Ceramic products	Concrete products	Parts of machinery and equipment
Importance of capacity building to improve their environmental performance, %	76	56	49	25	71	45	43	21

Methodical comment. Greening of industrial enterprises in the national economy requires intensive development of STP and it's translation into the ecological and economic, economic-organizational and ecological and technical relations. Experts assessed the importance of capacity building to improve their environmental performance in each of the sectors in order to determine the highest priority product groups.

The categories of products which have scored the most points were chosen for further study.

Arguments for the selection of priority groups

- **Group 1 «*Paintwork materials*».**

Despite the positive trends in the manufacturing of paintwork materials (hereinafter – PWM) in Ukraine, it's domestic market is formed mainly at the expense of general use of PWM based on organic solvents. Dynamic market of products with improved environmental characteristics, for the moment, has the potential to meet the needs of the customer in PWM with different functional characteristics.
- **Group 2 «*Detergents*».**

The Ukrainian market of household chemicals shows the positive dynamics of growth of products with improved environmental characteristics. Revision of Technical Regulations for detergents adapted to EU law will provide an exception of manufacturing of phosphates containing detergents and other substances on the basis of phosphorus not more than 0,05% in 2017.
- **Group 3 «*Heat insulating materials*».**

The legal framework which is aimed at improving of energy efficiency of buildings and structures, resulting in the need for the production of Heat insulating materials, is rapidly developing In Ukraine. Buying activity in the market is high, despite the rapid rise in prices. In Ukraine Heat insulating materials market is represented mainly with the organic or mineral based production with good physical and technical performance that can be seen as improving of the environmental characteristics.

75 organizations that carry out procurements from budget funds have been surveyed in order to determine the level of market readiness to SPP holding. The questionnaire results are presented in Appendix A.

Table 2: Types and characteristics of priority categories product groups

Primary sub-categories of priority product groups	General functional characteristics	Energy intensity of manufacturing	Environmental benefits	Labelling ¹	The average market price of the product as of 01/12/2014 corresponding to:		Price difference, %
					Environmental criteria	State safety standards	
Group 1: Paintwork materials (PWM)							
PWM based on polycondensation and polymer resins	Petrochemical products obtained by the polycondensation or polymerization are used as film-forming substances. Market share - 60%. Characterized by the electrodeposition ability and high resistance coating. Divided into automotive, electrical insulation, agricultural machinery coatings, appliances, cans, for household purposes and for decorative finishes by use.	High	Good protection ² , chemical ³ and physical and chemical properties ⁴ of the coating; limited by the concentration of toxic substances (by risk factors)	By subcategory and by use (operating conditions) ⁵ Type I eco-labelling corresponding to ISO 14024: ⁶	UAH 18 – 30 per 1 kg	UAH 16 – 24 per 1 kg	+/- 5
PWM based on natural resins	Vegetable oils subjected to special treatment, resins of natural origin (amber, rosin, copal et al.), sands, proteins (casein,	Medium	Using natural resins reduces emissions associated with the production of basic ingredients		UAH 32 – 80 per 1 kg	UAH 24 – 200 per 1 kg	+/- 5

¹ The labelling which indicates the main characteristics of sub-categories of priority product groups.

² The protection properties of PWM: resistance to various atmospheric conditions, heat resistance, light resistance, cold resistance.





³ Chemical properties of PWM: stability when exposed to the atmosphere, corrosive gases, alkalis, acids and various chemical solutions, water, oils, oil, gasoline, emulsions, soap solution.

⁴ physical and chemical properties of PWM: wear resistance, strength, hardness, elasticity, flexural strength, adhesion.

⁵ PWM subcategory and use (operating conditions) labelling: see Appendix B.

⁶ Eco-labelling indicates the overall environmental benefits of products in accordance with the requirements of environmental criteria. Examples of type I environmental labeling signs corresponding to ISO 14024 is based on the labeling of the most common in the Ukrainian market product groups. This does not preclude any other signs of environmental certification systems in accordance with ISO 14024 certified within the framework of the International Programme for mutual trust and mutual recognition GENICES: http://www.globalecolabelling.net/members_associates/map/index.htm











	bone glue) are used as the film-forming substance.		for organic solvents; good chemical ⁷ physical and chemical properties ⁸ of the coating	 EU  Ukraine  Germany  Nordic countries			
PWM based on cellulose ethers	The specially treated cellulose is used as a film-forming substance. Fast drying (1-1.5 h.), good protection and decorative properties. By protection properties are inferior to materials based on synthetic film-forming substances. A relatively high resistance to heat and ultraviolet light, low water resistance, poor adhesion to a metal surface, partially aligned with other film formers and plasticizers.	High	Using cellulose instead of organic solvents provides a reduction in VOC content and emissions; renewable raw materials for the production of cellulose and / or at least 50% recycled material content for the production of cellulose; highly toxic substances free.		UAH 60 – 120 per 1 kg	UAH 58 – 160 per 1 kg	+/- 0,75
Water-thinnable PWM and water-dispersion paints	Water is used as a solvent or base. Water-thinnable primers and enamels are characterized by a high degree of electrodeposition and are used for automobile coating, electrical products and radio industry, domestic, measuring and other devices, as well as medical furniture and lighting fixtures. Water-based paints are divided into the paints for the exterior, interior work and special use paints by use.	Low	VOC and highly toxic substances free; using water instead of organic solvents provides a maximum reduction of emissions.		Water-dilutable PWM		X
				Unavailable in the Ukrainian market	180 – 870		
				Water-dispersion paints			
				24 – 58	10 – 36	+/- 35%	
Common for the entire product group	X	X	Emission reductions in the manufacturing process; relative reduction in the contents and	X	X	X	

⁷ Chemical properties of PWM: stability when exposed to the atmosphere, corrosive gases, alkalis, acids and various chemical solutions, water, oils, oil, gasoline, emulsions, soap solution.

⁸ Physico-chemical properties of PWM: wear resistance, strength, hardness, elasticity, flexural strength, adhesion.



			emissions of VOCs and other toxic substances; exception of ozone-depleting substances; limiting the content of heavy metals; the relatively high resistance and coverability of the coating.				
	X	X	The use of organic solvents.		X	X	X
Group 2: Detergents							
Synthetic detergents	Synthetic detergents do not have a high detergent capacity in its pure form. Used in admixture with additives: neutral and alkaline salts (electrolytes), bleaching agents, foam stabilizers, and others that increase the activity of surfactants.	Medium	Using at least 40% oleochemical (natural) origin substances as a basis; anionic surfactant that provides the ability to primary biodegradability of surfactants free	Type I ecolabelling corresponding to: ISO 14024: 	UAH 20 – 146 per 1 kg	UAH 17 – 26 per 1 kg	+/- 10
Detergents in the oleochemical (natural) basis	Characterized by high activity. Mostly phosphate-free.	Medium	Using at least 80% oleochemical (natural) origin substances as a basis; limiting VOC (boiling point below 150 °C), zeolites up to 15%	EU  Ukraine	UAH 30 – 127 per 1 kg	UAH 45 – 160 per 1 kg	+/- 12
Common for synthetic detergents and detergents in the oleochemical	X	X	The relative reduction in emissions in the manufacturing process; toxic substances free (risk factors); limiting the content of ingredients containing	Nordic countries  GREEN SEAL CERTIFIED	X	X	X

(natural) basis			phosphorus (phosphates, phosphites, phosphonates) to 0.5%, and the concentration of ~200 dyes and flavorings	 <p>USA</p>  <p>Canada</p>			
	Cause allergies, contributes to the development of skin and upper respiratory tract diseases.	X	X		X	X	X
Organic detergents	Their activity depends on the detergent formulation. Modern manufacturing technology can achieve high activity.	Low	Using of vegetable organic raw materials as a basis for the production ⁹ ; synthetic surfactants and other petrochemical ingredients free, which provides the ability to complete biodegradability of surfactants; without phosphates	<p>Signs of compliance with the organic standards of certification systems accredited by IOAS:¹⁰</p> 	UAH 70 – 230 per 1 kg	X	X

⁹ Organic raw materials - raw materials resulting from the production certified according to the requirements of the Law of Ukraine "On the production and trafficking of organic agricultural products and raw materials".

¹⁰ Examples of signs of compliance with organic standards of certification systems accredited by IOAS are based on the most common detergent labelling in the Ukrainian market. This does not preclude other signs of IOAS accredited certification systems: <http://www.ioas.org/>

IOAS – accreditation body of the International Federation of Organic Agriculture Movements (IFOAM): www.ifoam.org.ua







Common for the entire product group	X	X	Consumer containers/packaging made from material containing recycled raw materials/materials		X	X	X
	X	X	Packing material is made from renewable timber. Note. For containers/packagings which contain a cellulose (paper)		X	X	X
	X	X	Container/packaging is recyclable		X	X	X

Group 3: Heat insulating materials (HIM)

Organic HIM	Made by processing cull lumber and wood processing waste. Characterized by low water and biological stability. Subjected to rapid decay, insect damage. Characterized by the use of low temperature limit (60 - 150 °C). Have a low level of fire safety with a small heat capacity, regardless of the density of the applied layer of insulation.	Medium	Using of at least 50% of waste recycling timber or agricultural residues (such as reeds, peat) as a basis for the production; toxic substances free; relatively good heat capacity and biological properties; fire safety.	Type I ecolabelling corresponding to ISO 14024: Ukraine	Dry mixes		- 10%
					UAH 10 – 12 per 1 kg	UAH 10 – 25 per 1 kg	
					Plates		X
Unavailable in the Ukrainian market	UAH 200 – 300 per 1 m ²						



Mineral HIM	Made on the basis of mineral wool and its products. Thermal conductivity is 0,037-0,04 W/(m•K) depending on the density of the applied layer. Flame retardant, high heat and sound insulation properties, temperature resistance, chemical and biological stability, ease of installation, non-hygroscopic. The possibility of applying for thermal insulation in a wide temperature range (200 to +600 ° C)	High	Improved radioactivity and heavy metal content safety performance; highly toxic substances free; high heat capacity.	 Germany Russia	Plates		+/- 15
					UAH 10 – 25 per 1 m	UAH 6 – 25 per 1 m	
Polymeric HIM	Foam plastics, cellular plastics and honeycomb plastics. Characterized by high performance, fairly durable and technical. In appearance and method of use may be piece goods (mainly plates) and a liquid-viscous materials injected and fastening at the site of application (casting foams, assembly foams). Thermal conductivity - - 0.054 0.03 W/(m•K) depending on the material and a layer of insulation. Have a possibility of applying for the thermal insulation of a relatively wide range of average temperatures (80 - 150 0C).		Limited content of toxic substances; high heat capacity		Liquid thermal insulation		X
					Unavailable in the Ukrainian market	UAH 60 – 120 per 1 l	
					Plates		+/- 15%
					UAH 500 – 600 per 1 m ³	UAH 400 – 800 per 1 m ³	
Liquid-viscous materials		X					
Unavailable in the Ukrainian market	UAH 70 – 300 per 1 l						
Mixed HIM	Based on the mixtures of asbestos and mineral binders. A special subgroup for insulation installation in the form of binders (backfill and mastic) or finished products (sheets, plates, shells) used for insulation of pipes and aggregates with high surface temperatures. Using asbestos in assembly insulation is based on its fire resistance, low thermal conductivity and binding functions. Require protection from moisture. Do not burn, do not rot and external (climate) impacts resistant.	High	Highly toxic substances free; minimum emissions		Unavailable in the Ukrainian market	UAH 15 – 30 per 1 l UAH 12 – 25 per 1 m ²	X

Common for organic HIM			Nonflammable material				
			Packaging material is produced from renewable timber				
Common for the entire product group	X	X	Consumer containers/packaging is made of material containing recycled raw materials/materials		X	X	X
	X	X	Container/packaging is recyclable		X	X	X

Taking into account the general functional characteristics, availability in the market, environmental criteria and the market potential of products with improved environmental characteristics in combination with the average market price we can make the following conclusions on the most preferred subgroups of priority product groups:

Group 1: Paintwork materials (PWM):

- PWM based on polycondensation and polymer resins
- PWM based on natural resins
- PWM based on cellulose ethers
- Water-dispersion paints

Group 2: Detergents:

- Synthetic detergents
- Detergents in the oleochemical (natural) basis

Group 3: Heat insulating materials:

- Organic HIM
- Mineral HIM

Appendix B shows the PWM subcategory and use (operating conditions) labeling.

1.2. Socioeconomic and environmental sustainability specifications of the priority product groups

A study of socio-economic impact of the priority product groups was conducted taking into account such aspects as:

- economic impact;
- effects on health;
- the impact on employment of youth and women.

The environmental aspects were considered taking into account:

- energy consumption;
- emissions into the atmosphere and climate change;
- water pollution;
- waste;
- use of natural resources;
- the use of drinking water;
- toxicity.

The potential impacts of certain groups of products at all stages of the life cycle were taken into account in the study of the socio-economic and environmental impacts.

Table 3. The results of evaluation of socio-economic and environmental characteristics of the priority product groups

Procurement subject	Socio-economic impact				Environmental impact								Grand total of the impacts
	Economic impact	Health	Employment of youth and women	Total	Energy	Emissions into the atmosphere and climate change	Emissions (water)	Waste	Natural resources	Water resources	Toxicity	Total	
Group 1: Paintwork materials (PWM)													
PWM based on polycondensation and polymer resins	Yes	Yes	No	2	Yes	Yes	No	Yes	Yes	No	Yes	5	7
PWM based on natural resins	Yes	Yes	No	2	No	Yes	No	Yes	Yes	No	Yes	4	6
PWM based on cellulose ethers	Yes	Yes	No	2	Yes	Yes	No	Yes	Yes	No	Yes	5	7
Water-dispersion paints	Yes	Yes	No	2	No	No	No	Yes	Yes	No	No	2	4
Group 2: Detergents													
Synthetic detergents	Yes	Yes	No	2	No	Yes	Yes	Yes	Yes	No	Yes	5	7

Detergents in the oleochemical basis (natural)	Yes	Yes	No	2	No	Yes	Yes	Yes	Yes	No	Yes	5	7
Group 3: Heat insulating materials (HIM)													
Organic HIM	Yes	Yes	No	2	No	Yes	No	Yes	Yes	No	No	2	5
Mineral HIM	Yes	Yes	No	2	Yes	Yes	Yes	Yes	Yes	No	No	3	7

Methodological comment:

Group 1: PWM

The modernization of technology and equipment including through increased energy efficiency and stable energy supply will allow reducing the cost of production.

PWM have a significant impact on the environment, which is expressed in the consumption of raw materials and energy, emissions of greenhouse gases and toxic substances, and in the amount of waste generated depending of type of life cycle stage.

PWM have a positive impact from an economic point of view because of extending the life of various materials, thus contributing to a significant resource saving.

In the process of PWM cost-effectiveness and potential environmental impact assessing it is necessary to consider the amount of the finished product applied on an area of 1 m² in 2 layers – basic functional unit. In the context of paints this figure varies between 150 - 180 g/m² depending of type of the thickness of a single layer.

The entire PWM life cycle can be traced using paints as an example.

Extraction of raw materials and transportation goes in the first stage. It is needed from 40 to 80 g of material resources (main ingredients) on average for the manufacturing of paint required for painting of 1m² of surface. Under 100 g of energy is usually consumed per one functional unit of the paint, resulting in following energy use: from 0.17 to 0.22 MJ (renewable energy) and about 0.001 g of uranium.

Water is used as a component of the finished product, and at certain stages of the production cycle, such as washing equipment. Therefore, its consumption indicators cover several stages of the life cycle and make up 35 liters.

The processes of raw material extraction, its transportation, processing and manufacturing, as well as the subsequent use of the finished product are contributing to global warming. Production and use of approximately 160 g of paint is associated with emissions of 0.27 - 0.33 kg CO₂ eq.

According to the results of studies conducted in the UK, it can be noted that at the last stage of the life cycle of up to 70% of paint materials in landfills is (along with the products to which they were applied); about 20% does not give the necessary processing and continues generating emissions; 10% to be incinerated. At the same time some better things with packaging production: up to 60% of metal and 10% recycled plastic containers, 25% of containers consisting of metal sent to landfill and 15% - is burned. Plastics, in general, subject to combustion (60%).¹¹.

Group 2: Detergents

The consumption of detergents in Ukraine is growing from year to year. And despite some recession in the whole chemical industry, production and import of detergents show a positive trend.

Detergents are complex chemicals, which are often a part of more than a dozen products and ingredients. From an economic point of view, the importance associated with possible fluctuations in the price of ingredients and products needed for the production of detergents.

The most important aspects related to the production and consumption of detergents are environmental pollution, especially wastewater; greenhouse gas emissions; exposure to certain chemicals in

¹¹



products to human health. The greatest harm detergents applied with wastewater pollution, destroying the ecosystem of water bodies.

Nutrients (P, N), contained in detergents and cleaning agents, getting into sewage, leading to eutrophication of water bodies. Therefore, they must be extracted, avoiding to exceed limit values.

Today the main task of manufacturers of detergents becomes a potential increase in the preparation unit, making it possible to significantly reduce energy and resource consumption, greenhouse gas emissions, the volume of wastewater. For example, thanks to powder detergents with updated formula lifecycle within a single wash only manage to reduce greenhouse gas emissions from 90 g to 35 g. For liquid preparations reduction can be up to 16 g.

A secondary, but no less important aspect is the packaging of detergents and cleaning agents used to optimize the amount of packaging material, making it possible to significantly reduce the amount of solid waste education.

Group 3: Heat insulating materials

In connection with rising energy use heat insulating materials is becoming increasingly popular in both the private and public construction, reconstruction and repair.

Today the Ukrainian market offers a variety of types of heat insulating materials, the composition of which largely determines its cost and impact on the environment throughout their life cycle.

During the preparation of raw material, transportation and processing of the major negative factors are the air and water pollution, destruction of the landscape, the consumption of energy. It should be borne in mind that the composition of the final product can be used 5 - 75% of recycled materials or supplies. At the stage of working with the raw material to generate 62% of the total value of the acidification of soil / water and eutrophication of water bodies, calculated for the entire life cycle of Heat insulating materials.

The cost of fresh water make up 0.2 m³ on 1 m³ finished product.

In the process of production of the main environmental aspects become energy use and greenhouse gas emissions. Up to 70% of the index of global warming for the entire life cycle (1.3 kg CO₂-eq) occurs at this stage. For production 1 m³ Heat insulating materials must be 270 - 986 kW / m³ ¹².

Production of ingredients for the production of heat insulating materials, such as aluminum hydroxide, are linked to the destruction of the ozone layer of the atmosphere (72% of the total destruction of the ozone layer for this product).

In the operation of heat insulating materials are virtually no damage to the environment, will significantly reduce energy consumption for heating or cooling the indoor air.

The final stage of the life cycle of heat insulating materials falls to landfills or shipped for processing to return to the production process as a secondary raw material. The composition of the product determines its suitability for a particular operation is associated with disposal.

¹²

Compact detergents in China - A step towards more sustainable laundry. A Life Cycle Assessment of four typical Chinese detergents by Anne Merete Nielsen, Hao Li, Huatao Zhang.



CHAPTER II. CONTRACT REQUIREMENTS AND SUSTAINABILITY TESTING TOOLS

2.1. Contract requirements

Any procurement policy allows you to apply the principle of SPP in compliance with current legislation, as well as to avoid unnecessary purchases. If the subject of procurement provides for the supply of goods or services, **technical and qualitative characteristics may include requirements:**

- level of quality;
- environmental performance;
- construction;
- ensure access for people with disabilities;
- operation, use or size of the product;
- tests and methods;
- packaging, labeling and instructions for use;
- the process and methods of production.

At the conclusion of agreements on the performance of work with external technical and quality characteristics are defined as *requirements for materials, products or objects* used in the performance of the contract, particularly:

- requirements for environmental protection;
- requirements for the design;
- requirements to ensure access for people with disabilities;
- functional requirements;
- safety requirements;
- requirements for size;
- requirements for the control system;
- requirements for the use of terminology and symbols;
- rules and testing requirements and methods;
- requirements for the methods or techniques of construction and other technical requirements that may relate to the completion of work or the materials used.

Goal Setting

If the customer has decided to pay attention to the environmental aspects of the subject of procurement, to provide an understanding of all stakeholders and the transparency of the procurement procedure, it is best to define the title of subject of procurement.

The environmental component of the title subject of procurement will help bidders easier to identify and determine the importance of environmental performance to provide price quotations or tendering.

In determining the name of the subject of purchase, taking into account its environmental aspects, customers should observe the principle of preventing discrimination in accordance with the principles of the current legislation and the rules of international trade.

The customer must make sure that the wording of the procurement subject to artificially limit the participation of all the proposals that meet the requirements, technical, quality and other characteristics, in including environmental.

The requirements for contracts to supply goods, materials or products may include the following:

- safety environmental impact of materials (raw material) used for the manufacture of products, and the impact of manufacturing processes on the environment;
- the ability to re-use raw materials in finished products (package, packaging);



- reduced consumption of energy and / or water during the operation;
- durability / warranty period and the service life of the product;
- the possibility of recycling / re-use of the product;
- minimization of losses and expenses for packaging and transportation of the product.

Requirements for service contracts may include the following:

- technical knowledge and qualifications of staff, certifying the competence of environmental performance under the contract;
- product / materials specifications used in servicing with their environmental performance;
- management systems aimed at minimizing the impact on the environment in the provision of services;
- reduced consumption of energy and / or water resources, as well as the volumes of waste generated in the course of providing services.

The requirements for contracts to perform services may include the following:

- in addition to all the above requirements can be considered sustainable use of land resources (territory) and infrastructure development;
- for some projects may be necessary or appropriate to assess the impact on the environment.

The result of the implementation of the principles of SPP is the indicators of sustainable development:

Group of environmental indicators

- preserving the quality of water resources;
- protection of the oceans, seas and coastal areas;
- integrated approach to planning and management of land resources;
- sustainable management of fragile ecosystems;
- combating desertification and drought;
- promoting sustainable agriculture and rural development;
- the struggle for the preservation of forests;
- conservation of biological diversity;
- environmentally safe use of biotechnology;
- protection of the atmosphere;
- environmentally sound management of waste and sewage;
- Environmentally sound management of toxic chemicals;
- environmentally sound management of hazardous waste;
- environmentally safe management of radioactive waste;
- international cooperation for sustainable development and regional policy;
- changing consumption patterns;
- financial resources and mechanisms;
- technology transfer of cleaner production;
- development of innovative capacity.

Group of economic indicators

And:

- integration of environmental considerations in planning and management for sustainable development;
- international cooperation for capacity building in developing countries;
- international legal mechanisms;
- information for decision-making;
- employment;
- poverty alleviation;
- demographic dynamics;

Group of social indicators



- level of education, awareness and education of the society;
- protection and improvement of human health;
- the improvement of human settlements development.

Qualification requirements for the ability of the applicant to fulfill the conditions of the contract. Evidence of experience is the fulfillment of the participant of similar agreements, the availability of technical facilities, equipment, etc.. (Art. 16 of the Law of Ukraine "On public procurement").

Environmental qualification criteria can be applied, if the subject of procurement requires specific environmental experience. Such criteria may be used to provide services or perform work, which will have a significant environmental impact or relate to environmental issues and natural resource management.

As proof of compliance with this criterion can be considered the presence of an environmental management system according to the State Standard ISO 14001 or EMAS, or the experience of the applicant environmental services.

2.2. Technical, quantitative and qualitative specifications of the procurement subject

The specification shall define the environmental benefits of the subject procurement. It may be the requirements of environmental standards - international, European, regional and others, including voluntary. These requirements are included in the tender documents, shall be binding on all the participants of procurement procedures.

If submitted proposal does not meet the technical specifications of the customer, it is rejected.

The technical specifications of the procurement subject may be determined on the basis of:

- Technical regulations and environmental standards;
- Environmental standards, including those that establish environmental criteria for eco-labeling programs;
- Organic standards, for example, in accordance with Council Regulation number 834/2007 of 28 June 2007 about organic production and labeling of organic products and repealing Council Regulation № 2092/91.

If necessary, apply the requirements of several standards or specifications, most importantly, that in this case the customer **based on evidence-based technical documentation**. When referring to the standard it should be accompanied by the words "equivalent" because the customer can not reject the proposal of the applicant, without argument.

The customer can use other, higher than specified in the standards, the requirements under the terms if they are not discriminatory.

As requirements for **technical performance** the customer has the opportunity to apply environmental criteria environmental labeling program in accordance with the State Standard ISO 14024: 2002 Environmental labels and declarations. Environmental labeling. Principles and methods (IDT, ISO 14024: 1999). Thus the customer has no right to demand that the Bidder specific certification system certification and licensing agreements for the right to use the mark ecolabel (this is considered discriminatory).

As requirements can only be applied **certain technical, quality, and other characteristics that are defined in the standard**. The presence of environmental certification and eco-labeling can be seen as proof of compliance, without excluding other methods of conformity such as test results, testing, and so on.

Customer should be determined in the tender documentation, whether as evidence be considered certificates, records and conclusions exclusively accredited in the state bodies accrediting conformity assessment bodies and laboratories.

In determining the **technical specifications** the customer can set environmental performance indicators of production, or restrict the use of environmentally harmful substances in the manufacturing process or product.

In applying these criteria to select as evidence may be considered excerpts from the technical documentation, the results of the energy or environmental audit validated in due course. A certified environmental management system according to State Standard ISO 14001 or EMAS, or integrated system is not as evidence of compliance with such requirements.

Given that the procurement of goods and services produced or performed, is provided under market conditions, the main criterion for evaluation of the proposal is the price. The customer has the opportunity to build the selection criteria that will allow to compare the offers associated with different specifications, using the same evaluation criteria.

As a document confirming compliance, Bidders can provide a certificate of compliance management systems or products with the requirements of a particular standard.

2.3. Tools and means for certification in Ukraine

Ukrainian system of technical regulation in general **is in the process of reform** due to the need for liberalization of the market economy and the introduction of more efficient state supervision and consumer protection.

The definition of mandatory requirements (regulations) to the process or method of production or its environmental performance is implemented through legal acts, that is, laws or technical regulations.

In contrast to the technical regulations, **standards in Ukraine are applied on a voluntary basis**. First, environmental standards establish uniform approaches to pollution prevention through the control system; provide savings and rational use of natural resources; a high level of quality and improve the environmental performance of products and services; wider dissemination of modern technologies; transparency in market relations.

A significant role in the development of environmental standards plays **Standardization Technical Committee TC 82 "Environmental Protection of Ukraine"**. As information tool to identify the environmental characteristics and advantages of goods and services on the basis of the TC developed environmental criteria in accordance with the requirements of State Standard ISO 14024.

2.4. Management certification and eco-labelling in Ukraine

Certification of the quality management system allows you to take an active part in the competitive bidding, as well as increase the overall investment attractiveness and capitalization of the business and, as a result, to obtain long-term competitive advantage.

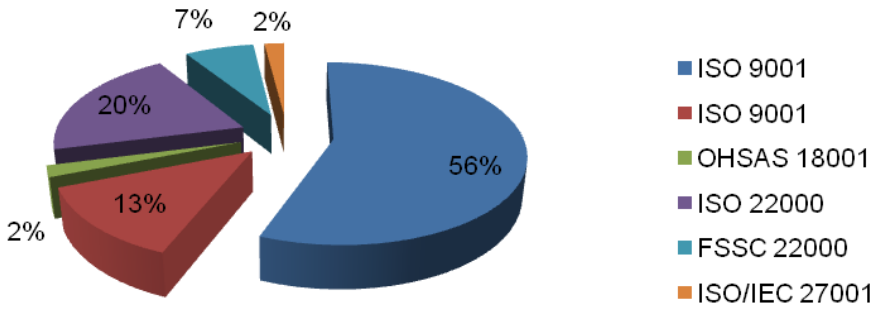


Fig. 1 - The percentage of certified management systems in accordance with international standards

Due to the increasing demands of international standards for quality and safety throughout the product, which is produced for mass consumption, the need for integration of environmental management in the quality management system at all enterprises is obvious.

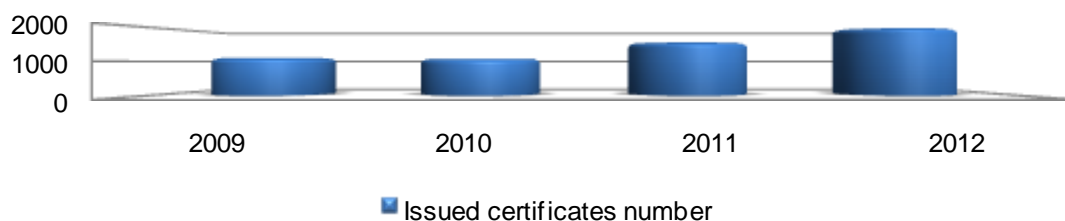


Fig. 2 - The number of Ukrainian companies have implemented and certified environmental management system in accordance with the State Standard ISO 14001 for the period 2009-2012¹³.

Effective use of eco-labelling for the environmentally certified products can increase customer awareness, Potential purchasers and users of the products with respect to environmental preference of goods, products and materials.

Environmental labelling program in accordance with the State Standard ISO 14024 is developed in Ukraine since 2003. Ukrainian authority eco-labelling NGO "Zhyva Planeta (Living Planet)" is a member of the International Association of **Global Eco-labelling Network** (hereinafter - GEN), which gives the opportunity to develop international co-operation, mutual recognition and the credibility of the Ukrainian program.

In 2011, the Cabinet of Ministers of Ukraine of 18.05.2011 № 529 was approved by the Technical regulations on environmental labeling adapted to the Regulation of the European Parliament and of the Council of 25.11.2009 № 66/2010 / EC "On the sign of eco-labelling of the European Union".

The main purpose of the Technical Regulations is the use of accurate and verifiable environmental claims regarding the impact of production on the environment and human health.

In accordance with the requirements of the Technical Regulations to **apply environmental labeling** (including statements regarding the overall environmental benefits) **can only be subject to environmental certification of products in accordance with the State Standard ISO 14024.**

Each group of goods in Ukraine looms trend for production of at least one kind of eco-certified products. **The number of environmentally certified products of Ukrainian origin, marked by the sign of Ukrainian environmental labelling** in accordance with ISO 14024 for the period 2003 – 2014 is displayed in Fig. 3.

¹³ According <http://ukrndnc.org.ua/>

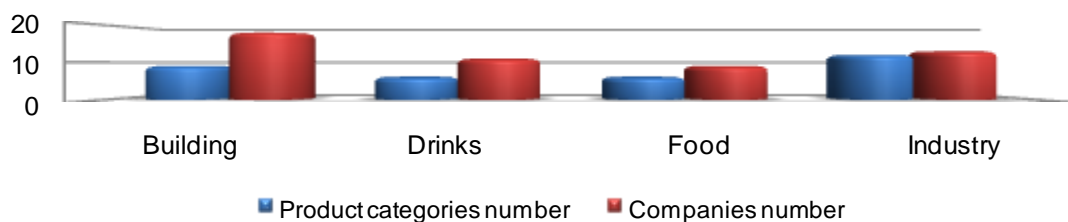


Fig. 3 - Number of certified according to ISO 14024 DSTU Ukrainian producers of product categories as of 01.10.2014¹⁴

Fig. 4 displays % of the ratio of the major sectors of the economy enterprises that have shown interest in the adventures of environmental certification products in accordance with the State Standard ISO 14024. The data were obtained in a survey of 216 manufacturers of basic sectors of the economy, which was held in 2012 year.

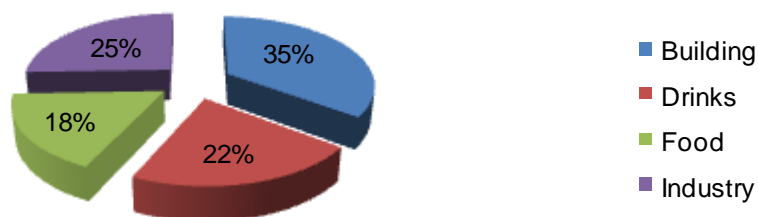


Fig. 4 - Interest in environmental certification products in accordance with the State Standard ISO 14024

Certification of environmental management systems in accordance with the State Standard ISO 14001 is relevant to many areas of activity. However, there are sectors for which a certificate is vital. According to statistics from 2012, the largest number of companies certified in the fields marked "construction", "other industries". Their relationship is displayed in Fig. 5.

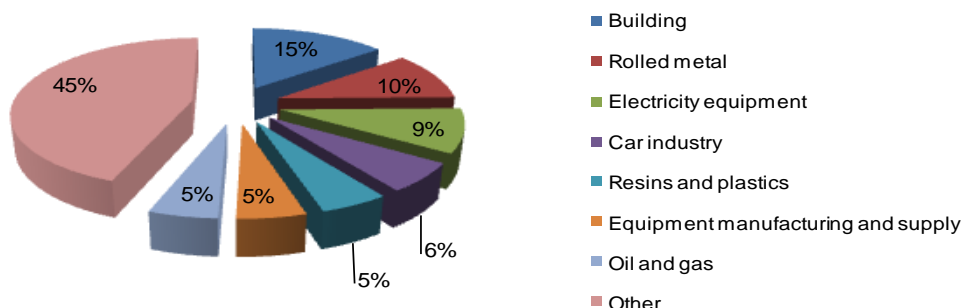


Fig. 5 - The share of industries, companies that have implemented and certified **environmental management system** in accordance with the State Standard ISO 14001 for the period of 2010-2013.¹⁵

¹⁴ <http://www.ecolabel.org.ua>



Currently in Ukraine there are no established criteria for the implementation of sustainable or green public procurement. Various regulations contain requirements that can be used as criteria or on the basis of their design criteria for the preparation of the bidding documents.

Despite this, some customers now include competitive factors SPP documentation (mostly - the environmental characteristics of the object of procurement in the technical specifications or in some cases - measures to protect the environment).

The criteria for sustainable public procurement covers economic, environmental and social aspects which may be considered government customers at different stages of the procurement procedure or combined with environmental priorities in an integrated approach to achieving sustainable development policies.

Ukraine has an extensive network of public centers of metrology and certification which have trained staff and adequate testing facilities to determine an indicator of quality and safety of products. **The list of these bodies is shown in the Appendix B.**

Ecological criteria for eco-labelling programs in accordance with ISO 14024 define the indicators of environmental benefits of goods and services of different categories based on the method of evaluation of their life cycle.

Life cycle assessment is a method of assessing the potential impact of products at all stages of its life cycle

- State Standard ISO 14020: 2003 Environmental labels and declarations. General principles (IDT, ISO 14020: 1998).
- State Standard ISO 14024: 2002 Environmental labels and declarations. Environmental labelling type I. Principles and methods (IDT, ISO 14024: 1999).

In determining the **technical specifications** the customer can set environmental performance indicators of production, or restrict the use of environmentally harmful substances in the production process on the basis of targets set in the environmental criteria for a specific product group.

In applying these criteria to select as evidence may be considered excerpts from the technical documentation, the results of the energy or environmental audit validated in due course.

Selecting a quotation

At this stage of the procurement procedure the customer usually evaluates compliance with the requirements of the proposals submitted tender documents to select the best (technical, quality and other characteristics) as low as participant eligibility requirements.

In applying this approach, in accordance with the provisions of **Law of Ukraine "On public procurement"**, **the customer will not be able to consider the environmental requirements for the procurement of the subject as the criteria for evaluating proposals, if they are not included in the qualification requirements and technical specifications.**

If the subject of procurement is complex or specialized nature, or the procurement is carried out not from public funds, the customer can follow the principle of "**The most economically advantageous tender**" when, besides the price, are considered as other evaluation criteria. Such criteria may relate to, for example, quality, delivery time, technical or environmental performance. It is very important that they have:

- Related to the subject of the contract;
- Quantified;
- Evaluated in relation to other criteria for assessing applicants;
- Clearly defined in the tender documents to ensure transparency.



Application of environmental criteria in the evaluation stage, tenders may be the most justified if the customer is not sure of the availability or price of subject of procurement with improved environmental characteristics.

The introduction of environmental criteria in the assessment procedure, in fact, shows that customers prefer "green products". However, if it is more expensive than other products in the same category, and meet only generally accepted at the legislative level requirements, it will not be selected. The share of environmental criteria in the assessment scoring system determines how much the customer is willing to pay extra for the environmental aspect of the subject procurement.

2.5. Primary tools of sustainability and priority product groups testing

Ukraine has an extensive network of public centers of metrology and certification, which have trained staff and adequate testing facilities to determine an indicator of quality and safety of products.

The basic tools verify the stability of priority product groups in accordance with the current legislation of Ukraine are given in **Appendix D**.

2.5.1. Paintwork materials (PWM)

Conclusions:

Given the above, coupled with the current Ukrainian energy and environmental policy, the provisions of the Law of Ukraine "On public procurement" project experts came to the conclusion that **the first stage of SPP in Ukraine it is optimally as sustainability criteria for PWM consider the following:**

- a) for the definition of the object of procurement, specify the name of the subgroup paint, selecting the best sustainable products with the necessary protective and physical and chemical properties of the coating;
- b) to define the technical specifications for the procurement subject in the field of environmental protection apply:
 - Criteria of "VOC content is restricted" and / or "limited emissions of VOCs in the coating process of exploitation", indicating reasonable indicator of VOCs and conformity assessment methods;
 - The criterion of "no volatile organic compounds (VOCs)" for the procurement of waterborne paints;
 - Environmental criteria in accordance SDA 08.002.12.019. subject to review as described in Sec. 5.

2.5.2. Detergents

Conclusions:

Given the above, coupled with the current Ukrainian energy and environmental policy, the provisions of the Law of Ukraine "On public procurement" project experts have concluded that the first stage of SPP in Ukraine optimal as basic sustainability criteria for detergents to consider the following:

- a) for the definition of the object of procurement specify the name of the subgroup detergents in conjunction with a certain criterion, indicating its main characteristics (e.g., "concentrate"), selecting the best sustainable products with the necessary functional properties;
- b) to define the technical specifications for the procurement subject in the field of environmental protection apply:
 - Criteria for a "complete biodegradation", "without phosphates and other phosphorus-containing preparations";
 - Environmental criteria in accordance SOU (Standard of Organization of Ukraine) 08.002.12.065. subject to review as described in Sec. 9.

Criteria such as the "Economy Pack" and "consumer packaging / container made of material containing secondary raw materials / materials" - can be used as an auxiliary to the basic sustainability criteria.

2.5.3. Heat insulating materials (HIM)

Conclusions:

Given the above, coupled with the current Ukrainian energy and environmental policy, the provisions of the Law of Ukraine "On public procurement" project experts have concluded that the first stage of SPP in Ukraine optimal as basic sustainability criteria for HIM to consider the following:

a) for the definition of the object of procurement specify the name of the subgroup of HIM in conjunction with a certain criterion, indicating its main characteristics (such as "non-flammable HIM"), selecting the best sustainable products with the necessary functional characteristics and operating conditions;

b) to define the technical specifications for the procurement subject in the field of environmental protection apply:

- Criteria "Chemical and biological stability", "Limited content of the substances dangerous for the environment and human health", "contains % recycled raw materials / materials" provided the definition of sustainability indicators for the criteria for each of the sub-HIM;

- Environmental criteria in accordance JMA 08,002. 16,048. subject to review as described in Sec. 8.

Criteria "Low heat conductivity", "heat resistance", "fire resistance" are directly related to the subject of procurement. They must be applied by analyzing the needs with respect to the functional characteristics and conditions of use of HIM.



CHAPTER III. MARKET SUPPLY ANALYSIS

3.1. Sustainable goods in the international market

Suppliers do not emphasize any major problems related to the supply of sustainable products and services presented on the Ukrainian market. Export-oriented enterprises ensure that their products meet international environmental standards for overseas markets. This forces them to use certified products.

The global market for sustainable products and services is growing. Environmental and socio-economic factors change the competitive environment in terms of funding easier to perform corporations, and to make changes to the technology of production - small and medium enterprises. The price policy depends on many factors: the sources of raw materials, production technology, logistics, marketing strategy, and others.

Leading brands to maintain their competitive advantage of developing the production of sustainable products and services as a tool for economic growth, thereby enhancing the satisfaction of interested parties and **improving social and economic standards**.

Although Ukraine in the ranking of ease of doing business relative to other 189 countries is on 96¹⁶ place, the country expend efforts to modernize the investment climate and the licensing system for foreign investment.

Companies that produce environmentally friendly products with improved environmental performance, the first stage of modernization and improvement of the product mentioned their concerns about the fact that the product requirements are too high and the success of products is questionable due to financial costs. But those who have followed the path of the development and launch of new products to market with improved characteristics regarding the impact on the environment and human health, were convinced of the opposite. Even against the backdrop of the economic crisis associated with a decrease in consumer ability and a decrease in sales, **demand for environmentally certified products is growing**.

Compliance with the principles of sustainable development can reduce costs and get more opportunities in marketing to compete with conventional products, thus producing higher quality products with care for the environment and consumer health.

3.2. National manufacturer specifications (short-, mid-, longterm perspectives)

3.2.1. Paintwork materials (PWM)

On the Ukrainian market **25% coatings of various categories have environmental certification and labelling**. Wherein **20% is produced at production facilities of domestic producers** (mainly with the help of foreign investment), and 5% - mainly imports from the EU).

The crisis of the construction industry in late 2008 also affected the related industries. **The drop in demand in the construction**, a glut in the industry, changes in prices for raw materials and other problems **led to a decline in production and sales of the players of the Ukrainian market**.

The main consumers of PWM are construction and repair and construction companies but there is a demand on the part of other sectors, which include furniture manufacturers, machine manufacturers and others, as well as private consumers.

¹⁶ Ranking of the World Bank's Doing Business:
<http://russian.doingbusiness.org/data/exploreconomies/ukraine>

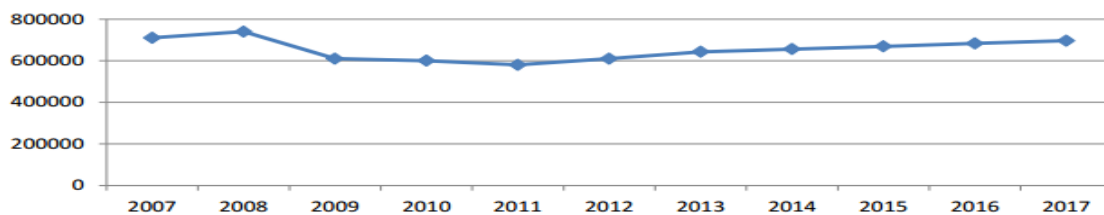


Fig. 6 - Trends in the production of PWM in Ukraine for the period 2007-2017 years.

In connection with the reorientation **since 2013 consumer demand in favor of PWM** domestic production (due to the sharp depreciation of the national currency), and the transition to cheaper paint manufacturers are revising price and assortment policy.

The largest segment of the market in Ukraine is organo-diluted PWM (paints, varnishes, primers, fillings on condensation, and polymer resins based on cellulose ethers). Significant share is occupied by latex paint, because in recent years the production of this type of paint has been steadily increasing.

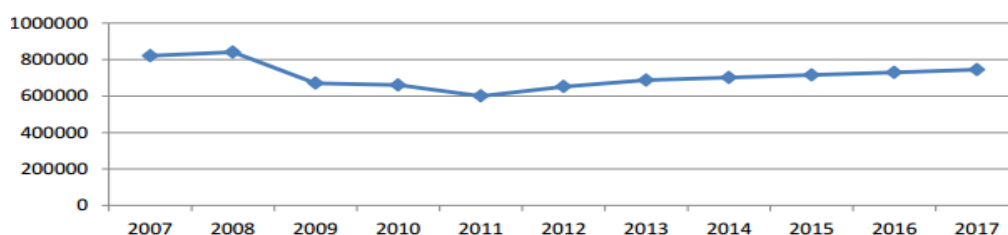


Fig. 7 - Trends in consumption of PWM in Ukraine for the period 2007-2017.

For the Ukrainian market **PWM competition of domestic producers with foreign producers is very high**. Increasing of the capacity of the market as a whole **PWM is expected to be 3-5%**. At the same time the real growth of opportunities both in production and in the consumer market segment is projected latex paints (+ 8-10%). And the rate of increase in this segment will be significantly higher than the market as a whole. Segment varnishes and enamels on organic solvents retains a negative trend (by - 3.5%), which mainly provide sales alkyd products group.

Later, in a highly competitive advantage will go to those companies that will be more flexible and able to adapt to new market conditions. The market will gradually emerge from the crisis, providing an annual 2% increase.



Table 4

An analysis of the dynamics of production of PWM priority groups in the national market

<p>PWM on the basis of and polycondensation polymer resins</p>	<p>In the first nine months of 2013 production volumes increased by 7%. The total output in I quarter of 2012 the share of PWM based on polymers has reached 50% of the paint.</p> <p>Dynamics of production of coatings based on polycondensation and polymer resins for the 2010-2014 period.</p>
<p>PWM on the basis of natural gums</p>	<p>Currently available for more than 40 brands of PWM made on the basis of natural resins and bitumen. For the nine months 2013 production volumes down 4%¹⁷.</p> <p>In notable players group it must be noted such companies as "Polyfarb Ukraine", "Elaks", "Emal", "Progress-2010". These manufacturers have provided about 80% of the total release of PWM with organic solvents.</p> <p>Dynamics of production of coatings based on natural resins based on cellulose ethers for the 2010-2014 period.</p>
<p>PWM on the basis of cellulose ethers</p>	<p>About 70% of the total production of PWM based on cellulose ethers there are only 10 companies, shares of other do not exceed 2%.</p> <p>For 5 months of this year, the 10 largest producers reduced production volumes, "Polysan" - 18%; "Impulse" - 33%; Oleynikov A.V. - 13%; "Polyfarb Ukraine" - 22%; ZIP - 5%.</p> <p>Dynamics of production of PWM based on cellulose ethers for the 2010-2014 period.</p>
<p>Latex paint</p>	<p>In Ukraine, the market share of water-dispersion paints does not exceed 35%. The great potential of the market and says the growing number of players.</p>

¹⁷
goda.html

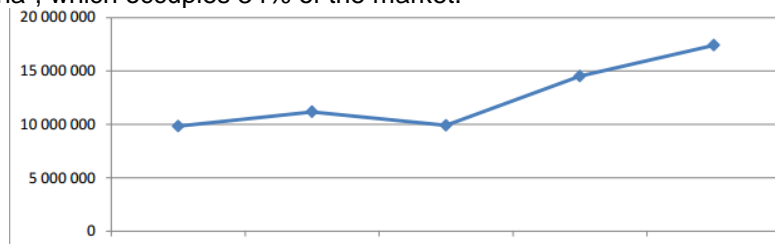
<http://ukrchem.dp.ua/2013/08/15/ukraina-rynok-lakokrasochnyx-materialov-i-kvartal-2013->



In 2006, the Ukrainian market was sold / marketed products only 50 manufacturers in 2013 - more than 180 (practically all well-known European brand: Sadolin (Sweden), Tikkurila (Finland), Sapanol (Germany), Pinotex (Estonia), Dufa (Germany), etc.)

In the segment of water-dispersion paints resistant "eight leaders" ("Snowball Ukraine", "Meffert Ganza Farben", "ZIP", "Tikkurila", "Polyfarb", "Caparol Dnepr", "Faydal Ukraine", "Irkom-POS") which represents 66% of this group of coatings.

Thus the undisputed leader is the Ukrainian company "Snezhka Ukraina", which occupies 34% of the market.



Dynamics of production of waterborne paints for the 2010-2014 period.

3.2.2. Detergents

The high degree of competition in the market makes it necessary to update the product range.

On the Ukrainian market of detergents different groups have environmental certification and labeling - 27%. In this exemplary 5% is produced at the production facilities of domestic producers (mainly with the help of foreign investments) and 22% of imports mainly from the EU and the United States.

In terms of consumer preferences sufficiently oriented to market of new products detergents quite difficult. A simple change of name means without changing its consumer properties that are now characteristic of the goods lower price range, can not bring success to the manufacturer.

Because the market research can be concluded that **oleochemical - a promising trend**, it provides **production of biodegradable surfactants and comprehensive improvement of ecological and functional characteristics of the detergents.**

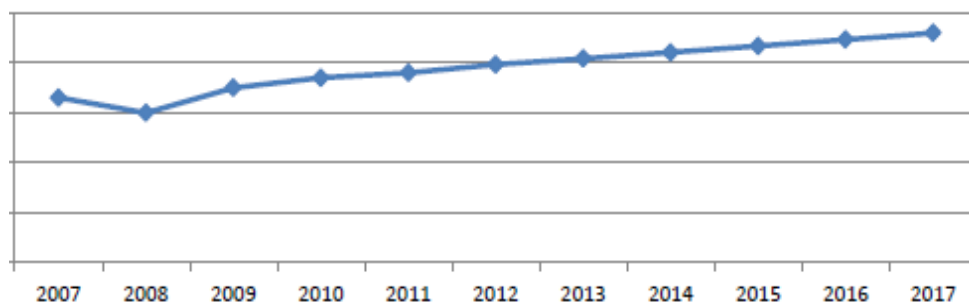


Fig. 8 - Consumption trends in detergents in Ukraine for the period 2007-2017.

Research of consumer preferences regarding the quality and price of goods showed that over the past two years is clearly seen **tendency to shopping better detergents for laundry and dishwashing.**



When you buy detergents consumer usually pays attention to the optimal combination of quality and price. However, over the past two years, a growing number of consumers (10% increase) was the focus on the quality and safety of detergents, regardless of its price.

The share of consumers who are guided only on low prices, also remains low - 15% of respondents. It should be noted that consumers of detergents for sideboard more careful about their safety as compared with one for detergents - 14% more consumer oriented only in quality.

Table 5

An analysis of the dynamics of the production of detergents priority groups in the national market

<p>Synthetic detergents</p>	<p>On the market 63% of all household chemical products represented by domestic production. Leader in the manufacture of washing synthetic means is "Procter & Gamble".</p> <p>The main best players in the market are multinational companies «Procter & Gamble», «Henkel» and "Nevskaja Cosmetica."</p> <p>Other important players who are active in the marketing policy are: «Reckitt Benckiser», «SC Johnson», «Unilever», «Vinnitsabythim" (a subsidiary of "Nevskaja Cosmetica"), "ABC Chemical Industry", "Milam», «Ficosota», «Amway», «Cussons» and others.</p> <p>Volume of the market of detergents in 2012 increased by 3.9% compared with the previous year and in real terms amounted to 338.3 thousand tons. The bulk of the demand and sales took detergents, dishwashing detergent, cleaners for hard surface. There was a slight increase in the segment of specialized laundry detergents (bleaches, conditioners, softeners, antistatic agents, conditioners, etc.).</p> <p>In the commodity structure of the share for retail detergents (washing powder, liquid, powder detergents and cleaning products, laundry aids) occupy more than 95% of total production.</p> <p>Dynamics of production of synthetic detergents for the 2010-2014 period.</p>
<p>detergents in the oleochemical industry (natural) basis</p>	<p>According to market research of detergents on oleochemical base in 2012 applience in industrial manufacturing acids increased by 17.8%, alcohol 5.5% in relation to 2011. Although the first half of 2013 compared to the same period last year, the release of acids has decreased by 10%, production of alcohol was on the same level as in January-June 2012.</p> <p>Given detergents group presented including and Ukrainian producers of environmentally certified products in accordance with ISO 14024 (washing powders and gels, dishwashing detergent, and hard surface) "DeLaMark", "Krimsky Soda Plant", "Aypaks-Ukraine", "Piranha".</p> <p>Dynamics of detergents on oleochemical base for the 2010-2014 period.</p>



3.2.3. Heat insulating materials (HIM)

The results of market research HIM Ukraine for **January-May 2013** demonstrate that **the largest share still occupy insulation based on glass fiber - 36.4%. The share of mineral wool was 32.3%.**



Fig. 9 - Market Segmentation of **heat insulating materials**

Market of mineral cotton for the first 5 months of this year **increased by 6.7%** in comparison with the previous year. **Imports increased by 3.7%**, The share of imports relative to domestic production in the domestic market remained unchanged.

The leader for the last 3 years is a company PsII "Ursa" (TM Ursa), which at the end of 2012 took 34.2% of the Ukrainian market of fiber glass.

Second place in the ranking is the company "Knauf Insulation Ukraine" (TM Knauf Insulation), which in 2012 has regained second place with an index of 32.0% of the market. With a share of 31.0% of the market of fiber glass in Ukraine, the company JSC "Sen Gobain Isover" (TM Isover) closes top three.

On the Ukrainian market of heat insulating materials **21% of various categories have environmental certification and labeling in accordance with ISO 14024**. Wherein **14% - manufactured at the production facilities of domestic producers** (mainly with the help of foreign investment), and 7% of imports - mainly from EU countries.

Need of HIM is very high and is not reduced, but there **obstacles that prevent them from developing markets**. At the end of the season there has been a surge in demand, but felt financial constraints of the customer, which immediately affected the market volume. All these factors led to the fact that the price beat quality. Analyzing the dynamics of prices for energy resources, **we can say that the cost of housing and communal services of Ukraine for energy from 2011 to 2015 will rise in two and a half times**.

Even at a price of gas and electricity to private consumers (households) the cost of insulation simple construction of the roof or the facade can be compensated in **3-4 years. With the rise in price of energy payback period will be even less**.

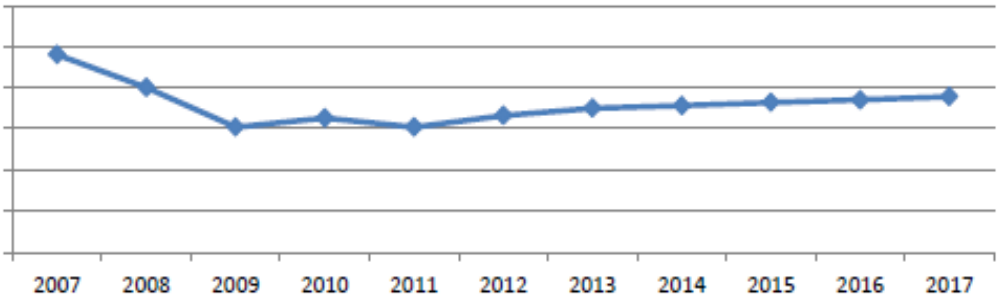


Fig. 10 - Consumption trends in HIM
in Ukraine for the period 2007-2017 years.

Note that pricing in the market is more loyal HIM, including and a relatively stable product. Sustainable goods much more expensive. It can be predicted that the increase in competition (the emergence of new eco-certified means high quality) impact not only on the development of product innovation, modernization of production capacities and optimizing the consumption of resources, but also to review the pricing policy.

CHAPTER IV. DEMAND ANALYSIS

4.1. National and international target goods and services groups demand

4.1.1. Public procurements of priority product categories costs

Experts used information on the costs of public procurement from resource <http://z.texty.org.ua/>. The analysis takes into account the direct purchase of products in conjunction with the procurement of construction works, repairs to coatings and Heat insulating materials, as well as the procurement of services for washing and cleaning detergent.

Table 6

**The cost of public procurement
from budget funds for priority product categories in 2008**

The subject of procurement, product category	The volume of public procurement		The proportion of the total cost, %	Share in the total number of contracts%
	The total value, million USD	Number of contracts		
Branch 1: Power engineering, fuel and chemicals	144,691.9	20200	-	-
Group 1: PWM	3324.55	1122	2.3	5.5
Group 2: Detergents	2100.13	609	14	3.01
Branch 2: Construction, building materials and construction machinery	82318.49	11533	-	-
Group 3: Heat insulating materials	1972.7	412	2.4	3.5

Table 7

**The cost of public procurement from
budget funds for priority product categories in 2010**

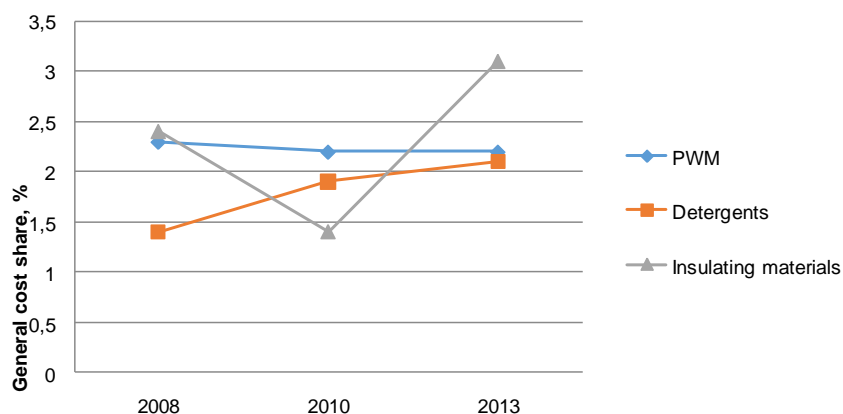
The subject of procurement, product group	The volume of public procurement		The proportion of the total cost, %	Share in the total number of contracts%
	The total value, million USD	Number of contracts		
Branch 1: Power engineering, fuel and chemicals	127,566.6	18700	-	-
Group 1: PWM	2900.33	850	2.2	4.5
Group 2: Detergents and maintenance	2412.13	584	19	3.1
Branch 2: Construction, building materials and construction machinery	87654.5	9878	-	-
Group 3: Heat insulating materials	1256.46	381	14	3.8

Table 8

**The cost of public procurement from
budget funds for priority product categories in 2013**

The subject of procurement, product group	The volume of public procurement ²		The proportion of the total cost, %	Share in the total number of contracts%
	The total value, million USD	Number of contracts		
Branch 1: Power engineering, fuel and chemicals	130,569.6	21100	-	-
Group 1: PWM	2864.11	986	2.2	4.7
Group 2: Detergents	2766.13	634	2.1	thirty
Branch 2: Construction, building materials and construction machinery	85982.49	12721	-	-
Group 3: Heat insulating materials	2689.04	350	3.1	2.7

It displays the data in Tables 6-8 in Fig. 11, 12, which show the dynamics of changes in the cost of public procurement priority product categories and the number of contracts.



**Fig. 11. Dynamics of changes in costs
on public procurement from the budget funds for priority categories of products for the period
2008, 2010 and 2013.**

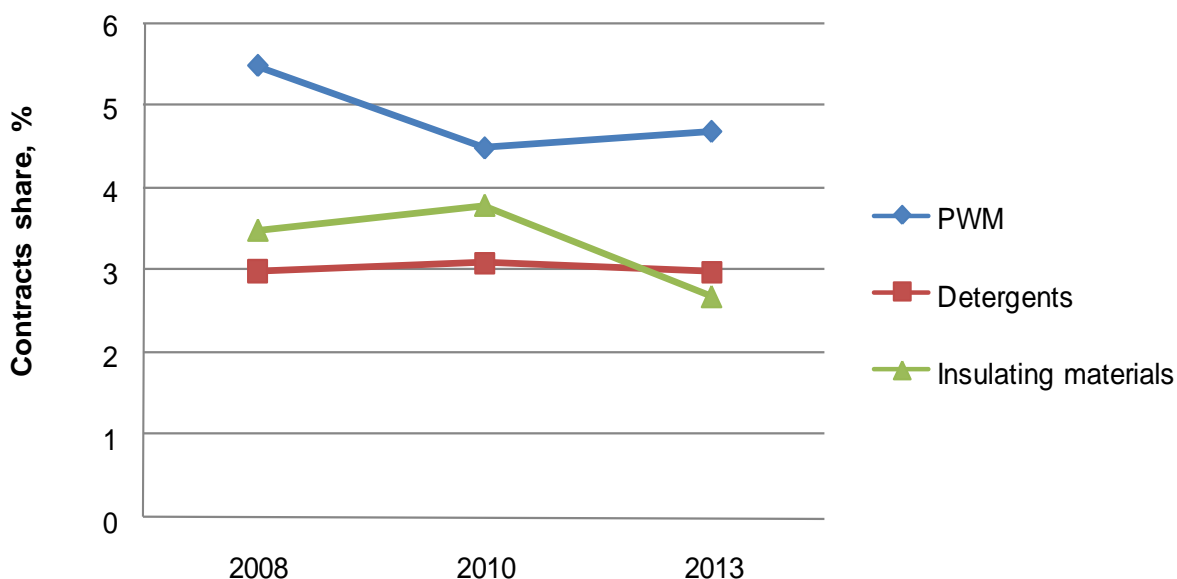


Fig. 12. Dynamics of changes in the total number of contracts on public procurement from the budget funds for priority categories of products for the period 2008, 2010 and 2013.

Experts note that almost all foreign manufacturers produce products in accordance with the international and / or regional (European) standards, including and environmental, despite their voluntary use. This indicates that **availability and environmental consciousness of the international market will facilitate Ukraine's prospects in achieving the objectives of SPP¹⁸**.

The total amount of the actual cost of contracts that have been concluded as a result of the public procurement procedures of 6380 426.9 thousand UAH, which is **11.5% of the total volume of concluded contracts**. In January - March 2013 these costs amounted to 23 796 743.4 thousand UAH.

Analysis of the structure of the actual cost of contracts concluded in the context of the subject of procurement shows **that in the reporting period to purchase services customers spent 54.75% of total assets, goods - 43.9% (of which domestically produced goods - 65.09 %) and works - 1.35%.**

¹⁸ <http://koloro.ua/blog/issledovaniya/issledovanie-rynka-lakokrasochnyh-materialov-v-ukraine.-proizvoditeli-i-torgovye-marki-lkm-v-ukraine.html>

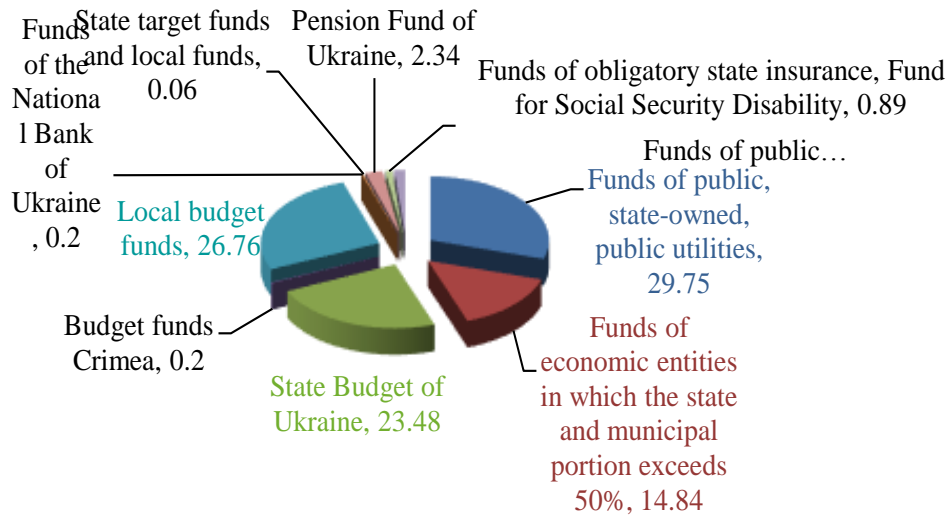


Fig. 13 - The general structure of funding sources of concluded contracts for procurement of goods, works and services for the period January-March 2013

4.1.2. Costs analysis of priority product categories procurements from budget funds in 2013

Experts held analysis the cost of procurement of priority product categories for the budget in 2013, based on which defined the main buyers.

Table 9
Analysis of the cost of procurement of building, construction, installation, repair and construction and repair works for the budget in 2013

Purchasing agent	Code KEKV	The volume of public procurement, thous. UAH	The share of the total value, %
Central Executive Authorities			
The Ministry of Culture of Ukraine	1801490	188605.1	8.5
Security Service of Ukraine	6521100	40000	12
Administration of the State Border Service of Ukraine	5341100	151,424.2	6.08



The Ministry of Finance of Ukraine	3511670	99000	0.08
Ministry of Agrarian Policy and Food of Ukraine	2801300	6650	0.12
Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine (general state expenses)	2761530	44000	24.95
Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine	2751800	17000	2.37
Ministry of Health of Ukraine (general state expenses)	2311190	60000	7.3
The Ministry of Defense of Ukraine	2101190	12030	1.22
Ministry of Energy and Coal Industry of Ukraine	1101200	364293.8	2.33
Other bodies of executive power			
The State Agency of Ukraine for the management zone of alienation	3202090	3924	0.75
The State Agency of Ukraine roads (central costs)	3131020	2390850	17.6
The State Agency of Ukraine for Tourism and Resorts	3109020	1935.6	30.3
The State Service for the disabled and veterans of Ukraine	2505130	20000	9.68
Local executive authorities			
Kherson regional state administration	21100000000	10000	2.27
Dnipropetrovsk regional state administration	04100000000	40,000	9.09
Sumy Regional State Administration	13100000000	0.0185	0.1
Zaporizhzhya Regional State Administration	08100000000	50,000	11.3
Mykolaiv Regional State Administration	14100000000	10000	2.27
Ternopil Regional State Administration	19100000000	15600	3.54
Kharkiv City Council	20201000000	54 846.1	2.29
Vinnytsia Regional State Administration	02201000000	18967.4	0.79
Dnipropetrovsk city council	04201000000	51467.0	2.15
Zaporizhia City State Administration	08201000000	30794.1	1.28
Lviv City Council	13201000000	36006.2	15
Odessa City Council	15201000000	50160.0	2.09

TABLE 10

Analysis of the cost of procurement of services for the complete purification of buildings (building maintenance) from the budget fund in 2013 (Code DC 016-2010 - 81.21.1)

Procurer	Code KEKV	The volume of public procurement, thous. UAH	The share of the total value, %
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Central Executive Authorities			
The Ministry of Finance of Ukraine	3501010	93.6	0.19
Office of the State Security Service in the Interior Ministry of Ukraine in Kharkiv region	08597026	99.0	0.1
The Public property Fund of Ukraine	6610000	247.9	2.65
Pension Fund of Ukraine	00035323	494.0	0.17
Ministry of Justice	00015622	360	0.32
Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine (general state expenses)	2750000	100.5	1.13
Ministry of Health of Ukraine (general state expenses)	2300000	1697.6	2.16
Ministry of Agrarian Policy and Food	2800000	1264	2.36
Other bodies of executive power			
Chop Border Guard Service of Ukraine Mindohodov	38720707	1997900	2.1
SQC Sudd	2240	223.1	0.5
General Directorate of State Treasury Service of Ukraine in the Kiev region	3504000	266.7	1,1
Management of Emergencies and Civil Protection of the Lviv City Council	7830000	91.9	0.9
State Treasury Service of Ukraine	3504010	759.0	1.12
Local executive authorities			
Vinnitsa City Council	010116	172.2	0.8
Mykolaiv Regional State Administration	25696652	465.0	1,1
Kherson regional state administration	34906897	550.0	13
Vinnytsia Regional State Administration	7720000	460.5	3.5
Ivano-Frankivsk regional state administration	7790000	126.2	2.1
Kirovohrad Regional State Administration	7810000	105.0	12
Kharkiv City Council	7901000	31.9	0.17
Vinnitsa City Council	7721010	65.5	0.12
State-owned enterprises			
State territorial and sectoral unification "Southwestern Railroad"	3104000	19 359.6	3.5

Methods. An analysis of public procurement carried out on the basis of:

-the magazine "Herald of public procurement №№: 103 (846) 30.12.2013 (19), 103 (846) 30.12.2013 (11), 11.29.2013 (1), 86-2 (829-2) 31.10.2013 (1), 86 (829) 10/31/2013 (8) 77-2 (820-2) 30.09.2013 (2), 77-1 (820-1) 30.09.2013 (1), 77 (820) 68 (811) 08.29.2013 (5), 61-4 (804-4)

59 (802) 29.07.2013 (10), 50 (793) 27.06.2013 (8), 42 (785) 30.05.2013 (9), 34-3 (777-3) 29.04.2013 (1), 26- 5 (769-5) 03.04.2013 (1), 25-2 (768-2) 28.03.2013 (2), 25 (768) 28.03.2013 (12), 17 (760) 28.02.2013 (19), 8-7 (751-7) 30.01.2013 (2);

-reports on procurement for the budget of central executive bodies, local authorities and state enterprises;

-Law of Ukraine on State Budget 2013 from 06.12.2012 № 5515-VI;

-database of tenders <http://z.texty.org.ua/>;

-reports the State Treasury Service of Ukraine.

CHAPTER V. BARRIERS AND OPPORTUNITIES FOR SPP IMPLEMENTATION

5.1. National programmes, policies and tools for sustainable consumption and production promotion

The existing legal framework in Ukraine can be considered as the basis for sustainable development and socio-economic growth. Currently, the government needs to improve the existing mechanisms aimed at sustainable development.

The effective implementation of the adopted policies, concepts and programs provides some general components, providing for the promotion of sustainable consumption and production, such as:

- a system of governance and support for strategic sectors of the economy;
- strategy of socio-economic reforms;
- strategy of state environmental policy;
- various forms and sources of direct and indirect stimulation of the green economy;
- methods of stimulating innovation and investment potential.

The system of existing legislation to ensure that sustainable development is represented by the Constitution of Ukraine, Laws of Ukraine "On local government in Ukraine", "On local state administrations", "On State Budget of Ukraine", "On the Taxation System", "On Banks and Banking Activities" and other regulatory enactments regulating the solution of various problems of an economic, social and environmental issues at the regional level.

5.1.1. State environmental management system

For a comprehensive presentation of the SPP mechanism we must take into account the system of public administration in the field of environmental protection, rational use of natural resources and environmental safety in the form of the circuit shown in Fig. 14.

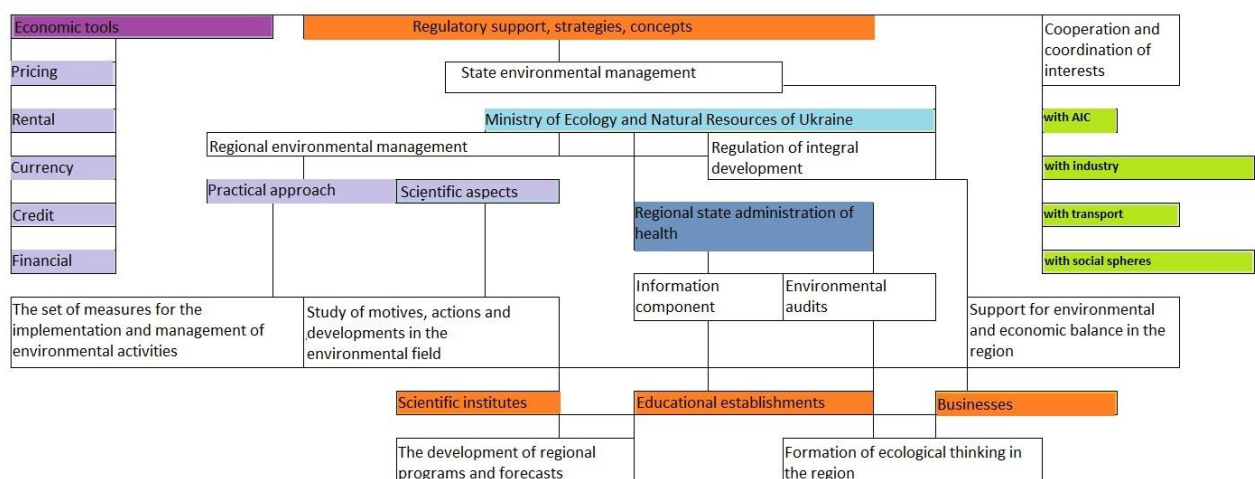


Fig. 14. The system of governance in the field of environmental protection, rational use of natural resources and environmental safety

Ecological and economic model of sustainable development tools. They include natural resource payments, subsidies, tax rebates, insurance, accelerated depreciation, preferential conditions for investment, and others.

These instruments are displayed in the Ukrainian legislation, including in the Law of Ukraine "On investment activity", "On innovation activity", "About enterprises in Ukraine," "On leasing", "On Environmental Audit", "On the main directions of the state policy in the field of scientific and technical activities", "On special regime for innovation activity in technological parks", "On state support of small business". Some of these tools exists mostly "on paper", i.e., in the form of non-binding recommendations. Available economic mechanisms have not yet determined the state policy in the sphere of effective promotion of sustainable development because of the inconsistency of the size and procedures of charging, especially against major polluters¹⁹.

Implementation of SPP can contribute to the direction of public policies on:

- ensuring environmental protection;
- the greening of the individual sectors of the economy;
- development of environmental innovation;
- creating economic incentives for business entities, which improves the environmental performance of production and environmental characteristics of products in accordance with international or national standards, as well as the best production practices;
- creation of a competitive, social market economy and ensure a rise in living standards and welfare of the population;
- priority to energy efficiency in the implementation of economic, administrative and other activities related to the production, processing, transportation, storage, generation and use of energy resources, etc.²⁰.

5.1.2. Project of National energy efficiency plan up to 2020.

Energy efficient public procurement is attributed by the draft National Action Plan for Energy Efficiency to 2020 to one of the subcategories of energy efficiency measures. The action plan is designed to fulfill the commitments made by Ukraine in the framework of the Treaty establishing the Energy Community and to ensure compliance with the provisions of Directive 2006/32 / EC. The plan covers four areas of economic activity: services, housing, industry and transport. The main objective of the Plan is to ensure by 2020 the plan of energy saving in the amount of 9% of the average of the final inland energy consumption. One of the activities of the project plan is to ensure the development of normative legal act on public procurement, which provides for the use of energy efficiency criteria.

The Law of Ukraine "On Protection of Consumers' Rights" sets a consumer's right to appropriate quality and safety of products (goods, the impact of work) for the life, health, the environment and does not harm his/her property.

The Law of Ukraine "On the sanitary-epidemiological welfare of population", "On Air Protection", "On Waste", "On the National Target Environmental Program of Radioactive Waste Management", "About fauna", "On Flora", "On the nature reserve fund of Ukraine" and "On the Red Book", "On Pesticides and Agrochemicals" may also have impact on **environmental component of SPP**.

¹⁹ National Review on sustainable production and consumption, "snapshot"

²⁰ (Water, Forest, Land Code of Ukraine, Natural Resources Code, State Environmental Policy Strategy until 2020 Transport strategy of Ukraine for the period up 2020., National program of reforming and development of housing and communal services in the 2009 - 2014 years., Laws of Ukraine "On Environmental Protection Ukraine", "Fundamentals of the Ukrainian legislation on health care," On Energy Saving "National Security Strategy of Ukraine (Decree of the President of Ukraine June 8, 2012 № 389/2012), the Public program of development of domestic production (resolution of the Cabinet of Ministers of Ukraine from September 12, 2011 № 1130).



The social aspect. Among the factors that affect people's health, the World Health Organization assigns a leading place quality of the environment, food and drinking water.

Purchase of goods and services with improved environmental characteristics may contribute to the achievement of social objectives and the development of sustainable consumption, which will help to solve key social issues such as job creation, improving the quality of working conditions and regional development.

Also, the solution of social problems of SPP can be effective to:

- achieve compliance with the high standards of working conditions;
- develop innovations at the local level;
- stimulate environmental innovative approaches;
- compliance with the principles of sustainable development and corporate social responsibility.

5.2. National programmes, policies and tools for stimulation and promotion of sustainable consumption in certain sectors review

5.2.1. PWM	
National legislation and program	Other tools
<p>Order of the Ministry of Health of Ukraine from 13.12.2002 № 41 "On approval of guidelines "Hygienic regulation of paintwork materials intended for use in construction".</p> <p>The subject of hygienic PWM and products with their application is the safety of the use of PWM in the building industry, which is defined not only by hygienic rationing migrating to contact medium components and their combined effect, but also the features of the application, the destination, "saturation", operating conditions, etc.</p> <p>p. 1. Documentation of PWM, which are subject to hygienic regulation for use in construction, must contain the following information:</p> <ul style="list-style-type: none"> - Data on toxicity of PWM and hygienic standards; - Safety requirements in relation to the impact on human health in the application of PWM; - Data on the environmental safety of PWM. <p>Order of the Cabinet of Ministers of Ukraine from May 25, 2011 № 577-p "On approval of the National Action Plan for Environmental Protection for 2011-2015":</p> <p>n. 51. Act provides for the development rights in respect of the valuation of threshold values of volatile organic compounds in PWM in order to ensure proper labeling of their contents.</p>	<p>Directive 1999/13 / EC of the enterprises that use VOCs, and Directive 2004/42 / EC on the products Containing VOCs provide the use of advanced technologies and modern equipment to meet the requirements for environmental protection (waste water treatment, water treatment system, air cleaning production facilities, modern equipment, construction site)</p> <p>Directive 99/13 / EC emissions of volatile organic compounds when using organic solvents.</p> <p>Directive 2004/35 / EC on civil liability for environmental pollution.</p>
<p>The Law of Ukraine "On the Fundamentals of Urban Development" requires the development and implementation of urban planning documentation to comply with the main objectives and activities to ensure the sustainable development of human settlements and environmental safety areas.</p>	<p>Directive 1999/13 / EC limitation of emissions of volatile organic compounds, resulting from the use of organic solvents in decorative PWM, as well as in coatings for automobiles.</p>



5.2.2. Thermal insulation materials

National legislation and program	Other tools
<p>The Law of Ukraine "On Environmental Protection Ukraine" requires the design, siting, construction, commissioning of new and reconstruction of existing enterprises, buildings and other facilities, the improvement of existing and introduction of new technological processes and equipment, as well as in the operation of these facilities to ensure environmental safety, rational use of natural resources, respect standards for harmful effects on the environment. This should be provided trapping, recycling, disposal of hazardous substances and wastes, or their complete elimination, other requirements for the protection of the environment and human health.</p> <p>The Law of Ukraine "On the Fundamentals of Urban Development" requires the development and implementation of urban planning documentation to comply with the main objectives and activities to ensure the sustainable development of human settlements and environmental safety areas.</p>	<p>Directive 2002/91 / EC on the energy performance of buildings.</p> <p>Directive 2002/49 / EC on the assessment and management of noise in the environment.</p> <p>This Directive is aimed at controlling the noise, which fall under the people in construction zones in public parks or other quiet areas in quiet areas in open country, near schools, hospitals and other buildings and areas that are sensitive to noise. This Directive does not apply to noise that is caused by the most exposed person, noise that is associated with domestic activities, noise that creates the neighbors, noise at work places or inside means of transport or noise related to military activities in military areas.</p>
<p>Scientific and technical program "Energy Saving in Construction"</p> <p>It provides updating of standards to improve the thermal protection qualities of houses, translation construction industry, concrete panel, block and brick construction using energy-efficient multi-layer construction of the outer walls of solid heat insulating materials.</p>	



Law of Ukraine "On Energy Saving" provides for the creation of energy-efficient structure of production of goods on the basis of a comprehensive solution of issues of economy and energy efficiency, taking into account environmental requirements, the widespread introduction of new energy-saving technologies.

Defined as one of the objectives of economic energy saving mechanism - stimulation of efficient use and saving of energy resources, the establishment of production and the widespread use of energy-efficient production processes, equipment and materials.

In accordance with the provisions of the Act standardization in energy saving is carried out to establish the set of mandatory norms, rules, requirements for the rational use and saving of energy resources. The standards for energy saving are the basis for the application of economic sanctions for the irrational use of energy resources, the production of energy-inefficient equipment and materials.

Order of the Cabinet of Ministers of Ukraine on May 25, 2011 № 577-p "On approval of the National Action Plan for the Environment 2011-2015" p. 7. Carrying out awareness campaign to promote modern technologies in the field of energy efficiency and resource conservation.

Sustainable human settlements **provides socially, economically and environmentally balanced development of them, aimed at creating economic potential**, complete living environment for present and future generations on the basis of rational use of resources, technological re-equipment and restructuring of enterprises, improvement of social, industrial, transport, communication and information, engineering infrastructure.

Environmental security areas provides for compliance with established environmental legislation requirements on environmental protection, conservation and rational use of natural resources, health and sanitation requirements for the protection of human health, the implementation of measures on neutralization, recycling, destruction or recycling of hazardous substances and wastes.

5.2.3. Detergents

National legislation and program	Other tools
<p>Technical regulation on detergents approved by the Cabinet of Ministers of Ukraine dated August 20, 2008 № 717. It establishes requirements for detergents and surface-</p>	<p>Directive 2004/35 / EC on civil liability for environmental pollution.</p>



active substances contained in them. One of the main requirements of the detergent, the use of which could harm the environment and the health of the consumer, is the ability of the primary and total biodegradability of surfactants included in its composition.

Some detergents requirements apply to limit the content of phosphates and other phosphorous compounds.

From 12/25/2014 for detergents total phosphorus content must not be greater than or 0.5 g the recommended amount and / or quantity of detergent for use in the main loop of the washing in hard water for a standard load of the washing machine; detergent for household dishwashers with 01/01/2017 is no more 0.3 g in a unit dose detergent for use in the main wash cycle of the dishwasher to load a table set for 12 people).

5.3. Majour SPP barriers and opportunities of manufacturing sector review

The main obstacles to implement SPP in Ukraine, taking into account the legislation and the results of a survey of customer organizations of public sector, include:

- regulatory restrictions (Law "On public procurement" establishes a limited list of qualification requirements and criteria for evaluating the bids, the main criterion - the price;
- lack of information and knowledge about the SPP;
- lack of interest and commitment of users of the procurement system;
- lack of clearly defined environmental and social criteria to be used in public procurement;
- the lack of information (guidelines) on how to develop environmental and social criteria and to apply them in government procurement.

Table 11 shows the matrix of risk assessment for prioritized product categories.

<i>N u m b e r</i>	<i>Group</i>	<i>The total value of contracts</i>	<i>Share in total value (%)</i>	<i>Evaluation, share in the total cost of / 10</i>	<i>Environm ental Impact / 8</i>	<i>Socio- economic effects / 2</i>	<i>In total</i>	<i>Score in% of total</i>
1	PWM	9088.99	2.09	6	7	1	14	35.8
2	Detergents	7278.39	1.67	3	8	1	12	30.7
3	Thermal insulation materials	5918.5	2.39	7	5	1	13	33.4
							39	100

The methodology for calculating: Product group with the highest proportion was awarded 10 points, respectively, and in proportion to the scores were assigned to other product groups. Environmental impacts evaluated for each group of products based on the impact indicators defined in Annex 3 to the report on the setting of priorities.

Group 1: PWM. Experts of the market of PWM note lack of awareness of painting works. Even given the fact that water soluble dyes are less toxic and less costs than enamel, the user is guided predominantly experience masters.

Group 2: Detergents and maintenance. The Ukrainian market of household chemicals is quite promising for the development and shows a positive growth trend. But the number of companies producing environmentally priority means is little. Among the most urgent problems of the Ukrainian market of synthetic detergents is a high proportion of counterfeits. Thus, the segment of household chemicals about 30% is filled with counterfeit products. Some market analysts maintain that their share is much larger and reaches about 50% of all sold goods.

Group 3: Thermal insulation materials. The main problem in the market is poor "culture of assembly" for consumers. Often the installation is carried out in violation of the technology, which reduces the functional and quality characteristics of the product. The trend of a regular increase in the price of products is a classic for the industry. Manufacturers attribute the rise in prices rise in price of energy resources, as well as the import of materials and / or ingredients for the manufacture of finished products.

Given the above, the ability to use SPP approach on priority product categories are:

- conformity with public policy;
- availability of incentive instruments;
- mass demand increase;
- ensuring state regulation of the use of environmental labels and responsibility for their application, which in turn is associated with trust in the Ukrainian program of eco-labeling type I;
- the existence and development of the criteria in the Ukrainian environmental labeling program by adapting to the requirements of the criteria of the EU and other countries of Europe eco-labeling programs;
- conducting educational and explanatory works with manufacturers and customers.



CONCLUSIONS AND RECOMMENDATIONS

The study was conducted to determine the readiness of the market on priority product categories for the introduction of SPP approach in Ukraine.

Based on the results of the study it can be concluded that all three groups of products are available at both the national and international markets and are able to meet the demand in the market.

Given the types and characteristics of the groups Product experts recommend priority categories considered as a potentially sustainable products as follows:

- *PWM* : on the base of polycondensation and polymer resins; on the basis of natural resins; cellulose ether; water paints;

- *detergents (detergents)*: synthetic detergents and detergents on oleochemical basis;

- *heat insulation materials (HIM)*: organic and mineral HIM.

Regarding the difference of sustainable products, allocated in priority product groups with conventional materials or devices similar functionality and class, the difference is 10% -20%.

Development potential of the market, especially the products of Ukrainian origin is observed for all three groups.

The report displays problems for the implementation of SPP which producers and buyers face: regulatory constraints; lack of information and knowledge about the SPP; the lack of information (guidelines) on how to develop environmental and social criteria and to apply them in government procurement.

It is necessary to integrate SPP policy in the system of public procurement, to develop and ensure the implementation of a comprehensive plan to SPP approach, which would include changes in the regulatory framework for strengthening the capacity of SPP, adaptation SPP approach to the management, control and monitoring of public procurement, the relevant guidelines for buyers, development of a database of environmental and social standards, environmental criteria Ukrainian environmental labeling program, as well as information and training on the SPP.

Public procurement in view of the environmental aspects of products will affect:

- a more responsible approach government and other organizations on the effectiveness of the planning, acquisition and use of goods and disposal of waste;
- achieving economies of scale ("wave effect") of the market development of products with improved environmental performance ("green products"), which in turn will affect the development of competition and lower prices for such products;
- the creation of an additional impetus for the development of environmental investments, including attract foreign investment;
- promotion of better conditions for work and life of citizens.

The main directions of improvement of the mechanism of economic and energy assessment of technologies at the enterprises of industrial infrastructure is the development of new and adaptation of existing indicators in the current market conditions with a view to their effective use in the justification of technological solutions.

The analysis of readiness of the two priority sectors of Ukrainian economy Expert Group proposes to implement SPP policies with the recommendation included in the tender documentation and compliance with environmental criteria, confirming the quality and improve the environmental performance of the subject of procurement or carrying out of actions for environmental protection.

In order to ensure effective market access for all market participants, including new, non-discriminatory control mechanisms are needed. The development of sustainability criteria for priority product groups will identify the technical, environmental, economic and social characteristics.

As the basis of sustainability criteria, experts suggest to consider updated environmental criteria environmental labeling program in accordance with the requirements of ISO 14024 and the Technical Regulations on Environmental Labelling.

With in-depth approach to evaluation of product parameters should be guided by national law, applicable international and national standards, technical documentation, test results and certification, environmental food declarations etc.

With the introduction of SPP approach it is necessary to pay attention to this aspect of the price of sustainable products. It is possible to effect the pricing with the aim of reducing by:

- developing economic instruments of environmental policy, including and stimulating;
- creating a stable complex investment financing mechanisms and motivation to use and modernization of energy efficient technologies and cleaner production;
- regulating and supporting healthy competition in the market.

It should also be noted that the prospects of the Ukrainian market of sustainable products are large enough. More over it should be noted that the corresponding sustainability criteria Ukrainian manufacturer increases its export potential.

To integrate the principles of sustainability in public procurement it is recommended:

- the inclusion of criteria related to the environment and environmental characteristics of products in the technical specifications;
- creating the conditions for the application of the principles of SPP at every level of public procurement;
- ensuring dialogue with suppliers and monitoring of the market;
- training providers and manufacturers of sustainability criteria and SPP;
- strengthening of SPP in priority sectors and experience in implementation of SPP spread to other sectors;
- conduct surveys of suppliers and buyers, to obtain the necessary feedback and advice on the application of the principles of SPP.
- monitoring of public procurement with regard to the criteria inherent in the SPP approach, as well as providing information on best practices of the SPP approach.

The data obtained by analyzing the market readiness of the evaluation group could serve as a basis for the development of a national action plan concerning the SPP priority product groups and measures to strengthen the capacity of SPP in Ukraine.



APPENDIXES

CONTENTS

Appendix A: Questionnaire results

Appendix B: PWM subcategories and use (operating conditions) labelling

Appendix C: List of certification of priority product groups accredited for compliance with the requirements

Appendix D: The basic tools to test the stability of the priority product groups for compliance with the current legislation of Ukraine



Appendix A: Questionnaire results

In order to determine the level of readiness of the market to SPP implementation, assessment of existing capacities for sustainable goods and services, as well as the analysis of the potential responsiveness of the market to the tendering approach with SPP, it was surveyed 75 organizations that carry out purchases for the budget.

Analysis of the survey results helped to evaluate the organization's position in relation to sustainable procurement, identify constraints and opportunities faced by the market players. It was important for project experts to obtain information on the analysis of the sectors and the potential of innovative offers of various commodity groups.

It has been established that the national market for sustainable products is in its formative stages.

Among the main problems of application SPP approach the organizations noted the following:

- Lack of knowledge on the SPP approach;
- The uncertainty of product sustainability criteria;
- High purchase price for products with improved performance relative to its energy efficiency and environmental performance, which essentially eliminates the offer more sustainable products for public procurement;
- The need for regulatory SPP approach with appropriate explanations regarding its application for each of the individual product groups and others.

National public policies in the field of public procurement do not create barriers to imported products and, accordingly, does not effect the regulation of the balance of imports and domestic production of sustainable products.

In July 2014 the body of environmental labelling (certification body) NGO "Zhyva Planeta (Living Planet)"²¹ held a survey on the satisfaction of licensees Ukrainian environmental labelling program.

Among the 58 surveyed organizations there were presented enterprises of various sectors of the economy, including manufacturers of building materials and PWM (LLC "Aerok", LLC "Knauf Gips Donbass" and LLC "Knauf Gypsum Kiev", LLC "Henkel Bautechnik Ukraine", JSC with foreign investments "Slabozhanskaya building ceramics", LLC "Tikurilla", LLC "Faydal Ukraine", LLC "San - Gobain Construction Products Ukraine" and others.), detergents (LLC "De la Marck", LLC "Piranha", PJSC "Crimean Soda Plant" PAT AK "Kyivvodocanal" and others.

Full list of surveyed organizations is: SE "Ukragroleasing" USEPC "Ukrposhta" GAZHTU "Ukrzaliznytsia" JSC "Savings Bank", PJSC "State Export-Import Bank of Ukraine", LLC "TV and Radio Company" Ukraine ", " Kyivstar ", PJSC " Ukrtelecom ", NEC " Ukrenergo " PAT AK "Kyivvodocanal" SE "Ukrekoresursy" UDBK "Ukrbud", "Antonov" Printing Plant "Ukraine", SE "UKRNDNTS" ICC "Artek" KP "Pharmacy" SI "Institute of Urology Adetergents of Ukraine, State Gosgidrografii, Kyiv National University of Trade and Economics, kindergarten number 89, "Kyiv Zoo", JSC "MK" Azovstal ", JSC" Oriana "UkrNIINP" MASMA "DKVO" Seeds of Ukraine ", State Enterprise of" Kyivkhib "" Bakery № 2 "State pilot plant bacterial starter cultures," Alba Timmy ", JSC" Kyiv yeast factory "SE" Santreyd ", JSC" Odessa baby food cannery "DP" Milkiland-Ukraine "company" Volyn-Kalvis "PAT "AK Kyivvodocanal", PJSC Ukrvtorchormet, State Enterprise Company "Octane", PAO HC "Kyivmiskbud", PJSC "Volyn-Cement", PJSC "MHP" Factory cartons "Blitz-Pack" SE "Tetra Pak Ukraine" National industrial and agricultural association "Massandra", PJSC "Vinnytsia flavoring factory", PJSC "Ukratnafta", "Naftogaz", PJSC "DSS", Ukrainian state enterprise "Ukrhimtransammiak" Open Joint Stock Company "Dneproshina" State Enterprise "Eastern Mining - obogatitelny Plant ", JSC" Plant of building materials number 1 "(Mr. New Kakhovka), State Enterprise "Eastern Mining and Processing Plant" State Enterprise Sea trading port "South", Illichivsk Commercial Sea Port, State international airport "Borispol", State Enterprise "Berdiansk sea trading port", Limited Liability Company "Morservice "State enterprise" Mariupol sea trading port ", State Enterprise" Odessa Commercial

²¹

ecolabelling body (the certification body) NGO "Living Planet" www.ecolabel.org.ua

Sea Port, the State enterprise "Sevastopol Sea Commercial Port" State Establishment "Recreation" Concha Zaspá "the Ministry of Finance (Control BV" Concha Zaspá) State Gemological Center of Ukraine (GGTSU), Dnepropetrovsk state enterprise of assay control (Dnepropetrovsk PBPC), State Enterprise "Management of operating the property complex" (SE "UzEMK") State Enterprise "The main design and production and service centers Computer Financial Technologies "Ministry of Finance, (Golovfinteh), State Enterprise Kyiv offset factory (GP COF).

According to the results of the survey goals, performance indicators and activities that, according to the environmentally oriented businesses could increase the potential of products with improved environmental characteristics were identified.

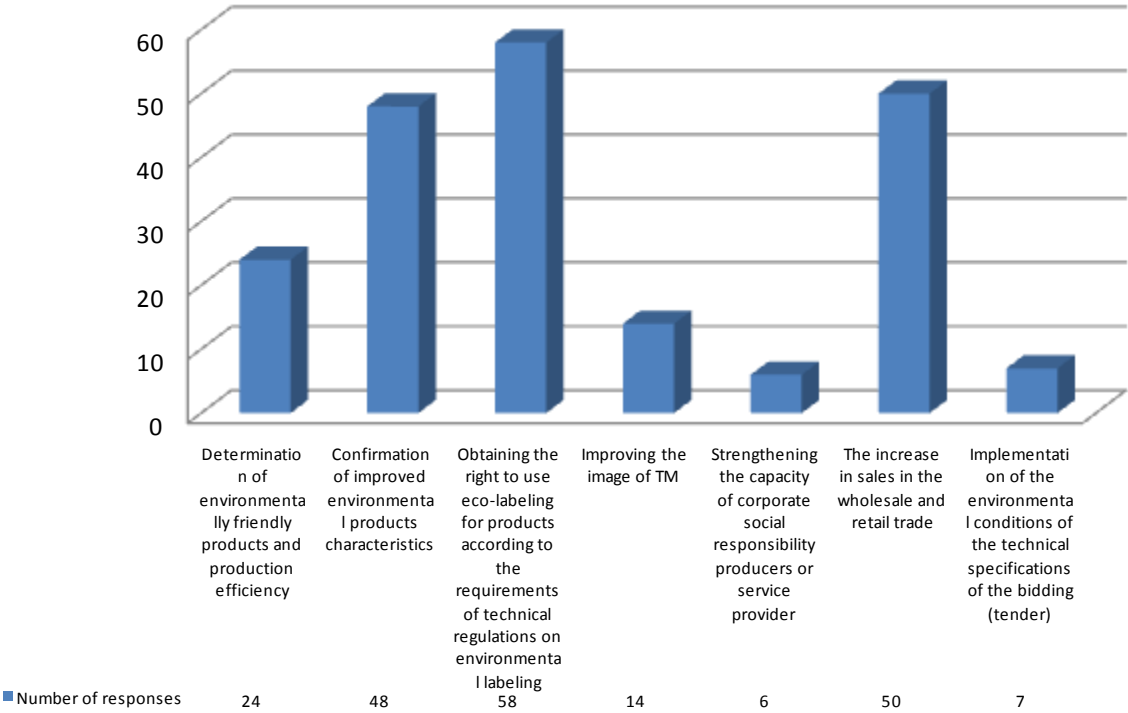


Fig. 1 - The purpose of environmental certification and labelling in accordance with ISO 14024²²

22

Poll licensees on the initiative of the NGO "Living Planet" 2014.

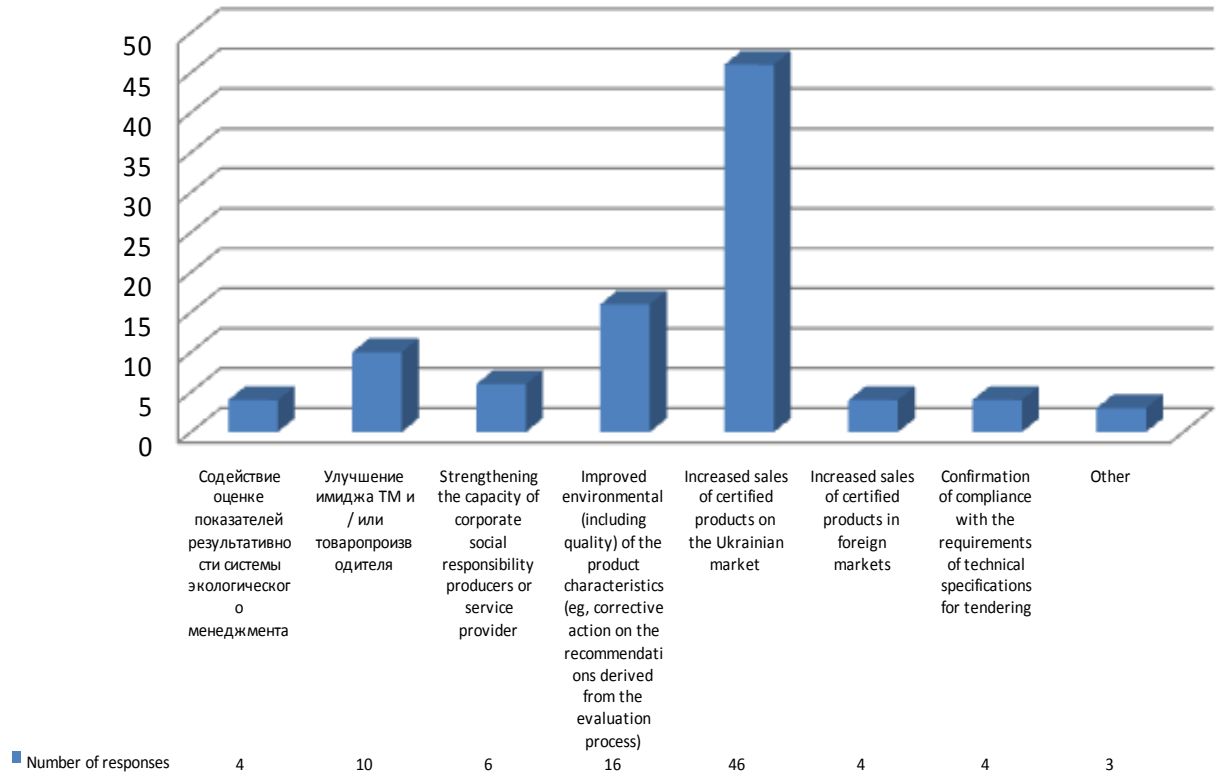


Fig. 2 - Evaluation of the results of the application of environmental certification and labelling²³

²³

Poll licensees on the initiative of the NGO "Living Planet" 2014.

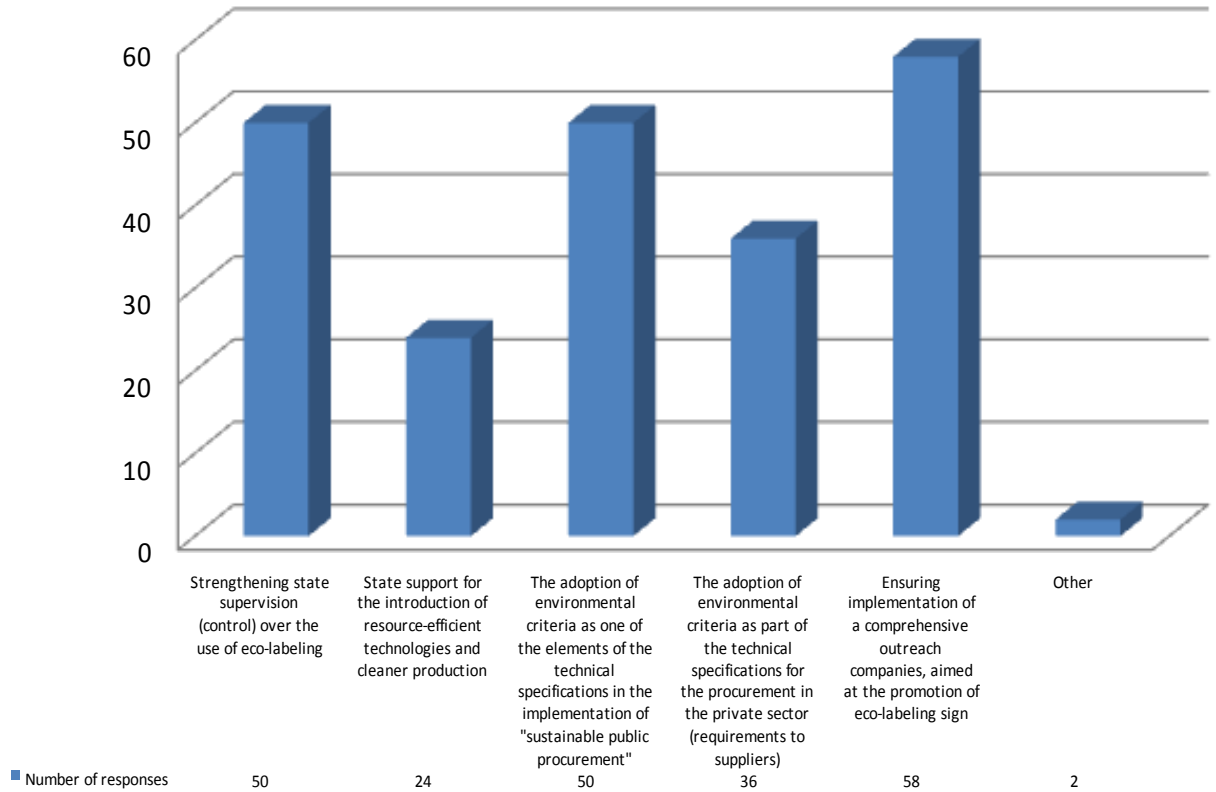


Fig. 3 - Measures which, according to the licensee, should strengthen the development potential of the market of environmentally friendly products²⁴

Overall, the study showed that the purchase prices for sustainable products can be at the level of average prices in the framework of a certain group of products specific functionality or more. The difference in price can exceed an average of 15%, but in some cases, this figure may reach 90%. As a rule, the procurement price of imported products is 1.5-2.5 times higher compared with the products of Ukrainian origin.

²⁴

Poll licensees on the initiative of the NGO "Living Planet" 2014.



Appendix B: PWM subcategory and use (operating conditions) labelling:

Paintwork materials based on polycondensation resins	Paintwork materials based on polycondensation resins
AU – alkyd-urethane UR - polyurethane GP - gliptal FA - fenoloalkid OS - organosilicone FL - phenolic ML - melamine CH - cyclohexanone UL - ureal (carbamide) EP - epoxy SP - saturated polyester UP - unsaturated polyester ET - etriol PN - pentaerythritol EE - epoxy-ether	AC - polyacrylate OS - oil-styrenated alkyd PVA - polyvinyl-acetate PP – polymeric-petroleum VA - polyvinyl-acetal FP - fluoroplastic VC - based on vinyl acetate copolymers CC - based vinyl chloride copolymers PVC - chlorinated polyvinylchloride RB - rubber
Paintwork materials based on natural resins	Paintwork materials based on cellulose ethers
AC - alkyd-acrylic AS - asphalt SHL - shellac CP - colophony AM - amber OL - oil	AB - acetobutyrate-cellulose NC – nitrat- cellulose AC - acetylcellulose EC - ethyl-cellulose
<p>The first digit after the letter code designates the appointment of paint or resistance to certain conditions:</p> <ul style="list-style-type: none"> 1 - weatherproof 2 - proof indoor 3 - for the preservation of metal 4 - resistant to hot water 5 - for the non-solid surfaces 6 - resistant to petroleum products 7 - resistant to aggressive environments 8 - heat 9 - insulating <p>0 - paint, primer, semi-finished 00 - plaster</p>	<p>Sometimes, to clarify the specific properties of the paint after the number put alphabetic index: B - highly viscous; M - matt; H - with a filler; PM - semi; PG - low flammability.</p> <p>For putties and primers after zero or zeros indicates at which drying oil it is made:</p> <ul style="list-style-type: none"> 1 - natural linseed oil 2 - linseed oil "Oksol" 3 - glyptal linseed 4 - pentaphthalic linseed 5 - combined drying oil



Appendix C: List of priority product groups certification bodies which are accredited to compliance with the requirements of DSTU EN 45011-2001 / ISO / IEC 17065: 2012⁶

Title	Address	Passport number	Scope of accreditation
Product Certification Body "UkrSEPROprombud" State Enterprise Certification Body "Center of certification of building materials, products and structures, adhesives and paints UkrSEPROprombud"	01135 Ukraine, Kyiv, Str. Pavlovskaya, d. 29	1O084	Building materials, products and structures
The certification body of Ukrainian public organization "Living Planet"	03061 Ukraine, Kyiv, Str. Nikolskaya Sloboda, 2d	1O156	Building paints; for compliance with environmental criteria, developed in accordance with DSTU ISO 14024-2002 (ISO 14024: 1999)
The State Enterprise "certification body of oil products and quality systems" MASMA-SEPRO "	03680, Ukraine, Kyiv, ave. Palladin, 46	1O076	Detergents
The body of conformity assessment of products SE "Ukrmetrteststandart"	03680 Ukraine, Kyiv, 680, Str. Metrological 4	1O023	Detergents
The certification body of the State Enterprise "Vinnitsa Research and Production Center of Standardization, Metrology and Certification"	21011 Vinnitsa, Str. Vatutina, 23/2	1O196	Products subject to the technical regulation of detergents, building products and buildings
Conformity Assessment Body of the State Enterprise "Nikolaev Research and Production Center of Standardization, Metrology and Certification"	54010, Mykolayiv region., Nikolaev, Lenin Prospect, 11	1O176	Products subject to the technical regulation of detergents, building products and buildings
The certification body of SE "Kharkiv Research and Production Center of Standardization, Metrology and Certification"	33028 Rivne, str. Castle, 31	1O190	Building materials, products and structures
Institute of conformity assessment of the State Enterprise "Ukrainian Research and Training Center of Standardization, Certification and Quality"	03115 Ukraine, Kyiv, Str. Svyatoshinskaya 2	1O209	Detergents
Conformity Assessment Body of "certification body PROdetergentsTANDART"	49000 Dnepropetrovsk, st. Komsomolskaya, 56, app. 2.3	1O223	Detergents

⁶ <http://naau.org.ua/rejestr-akreditovanix-oo/>



State enterprise "Krivoy Rog Research and Production Center of Standardization, Metrology and Certification"	50005, Dnipropetrovsk region, Krivoy Rog Str. Ordzhonikidze, 23	1O033	Detergents
State enterprise "Poltava regional scientific and technical center of standardization, metrology and certification"	36000 Poltava, Str. General Dukhov 16	1O056	Detergents
Conformity Assessment Body of the State Enterprise "Lviv Research and Production Center of Standardization, Metrology and Certification"	39617, Poltava region., Kremenchuk, Str. Chapaeva, 73	1O210	Detergents
State enterprise "Dnipropetrovsk Regional State Scientific and Technical Center of Standardization, Metrology and Certification"	79005, L'viv, Str. Prince Roman, 38	1O083	Detergents
The certification body of SE "Chernihiv Scientific-Production Center of Standardization, Metrology and Certification"	14005, Chernigov, Str. Pyatnitskaya, 110-A	1O247	Detergents
Conformity Assessment Body NPP "IND LTD"	04210 Ukraine, Kyiv, Str. Heroes of Stalingrad, d. 4, Building 8, Apt. 1	1O234	Detergents
Product Certification Body LLC "Product Certification Body" Certification Information Centre "	Address CAB: 03150 Ukraine, Kyiv, Str. Tverskaya, 16	1O085	Synthetic detergents, household chemicals


**List of certification of personnel,
accredited for compliance with ISO / IEC 17024: 2012**


Title	Address	Passport number	Scope of accreditation
Ltd. "The certification body personnel Ukrainian Quality Association	02002 Ukraine, Kyiv, Str. Nikolsko-Slobidska, 6	6O010	Personnel Certification in Management



Appendix D: The basic tools to test the stability of the priority product groups for compliance with the current legislation of Ukraine


Table - D-1. The basic tools for verifying the stability of PWM





№ p / p	Stability criterion	A document specifying the criteria and the specifics of the conformity assessment	Labelling	Available on the market	The difference in price compared with conventional products
1	Energy efficiency of the production process	<p>The results of the energy audit (e.g., validated report) in accordance with ISO 5001</p> <p>The complexity of evaluating compliance with this criterion is that:</p> <p>a) Not all manufacturers conduct external audits in accordance with ISO 5001 and have validated indicators;</p> <p>b) it is practically impossible to assess with respect to imported products</p>	X	<p>The predominant majority of paint manufacturers are introducing energy-saving technologies and energy efficiency measures due to the significant rise in price of energy.</p> <p>AT2013. compared with 2012. energy consumption in the production cycle to T coatings (the national average) decreased by 67% 1.</p>	
2	Resource-efficient technologies for cleaner production	<p>The results of the analysis of environmental performance indicators (for example, report an environmental auditor, certified in accordance with the requirements of the Law of Ukraine "On Environmental Audit")</p> <p>The complexity of evaluating compliance with this criterion is that:</p> <p>c) Not all manufacturers conducted by external environmental audits;</p> <p>b) it is practically impossible to assess with respect to imported products</p>	X	<p>In particular:</p> <p>a) The heat consumption in 2013 by m. PWM was 2.6 kg TOE that 45.6% less than 2012 (5.7 kg TOE);</p>	

				<p>b) electricity consumption 2013 by m. PWM was 192.1 kW · h., which is 88.4% less than in 2012. (217.2 kW · h).</p> <p>During the period 2001-2009. 40% Ukrainian producers of PWM showed innovative activities associated with the modernization of Prospect Island and the creation of new products with improved environmental karakteristikami2</p>	
3	Without the volatile organic compounds (VOCs)	<p>Technical conditions of production (or routings), test products</p> <p>Specificity assessment of compliance with this criterion is that it is not suitable for all priority subgroups that can fully ensure all customer needs</p>	<p>Labeling consumer packaging relative% VOC</p> <p>(manufacturer's declaration)</p> 	<p>Almost all the water-dispersion paints do not contain VOCs</p>	<p>Hardly ever. Price may vary by +/- 35%, depending on other performance waterborne paints.</p>

					
4	VOC content is restricted	<p>Technical conditions of production (or routings), test products</p> <p>The specifics of the application of this criterion is to determine the need and justification for the figure VOC limits for each of the priority sub-coatings</p> <p>As a measure limiting VOC can use the targets set:</p> <p>a) environmental criteria Ukrainian environmental labeling program (SDA OEM3 08.002.12.019);</p> <p>b) Directive 2004/42 / EC on the limitation of emissions of VOCs in organic solvents in certain PWM products for motor vehicles and amending Directive 1999/13 / EC</p> <p>You can also take into account the indicators of compliance with internal corporate standards paint manufacturers. For example, the standard of <i>Caparol</i> (including Ukraine) limits contents VOC in the range up to 1 g / l (0.7 g / kg), which on average 30 times higher than that required for similar subgroups LMB established Directive 2004/42 / EC</p>	<p>Labeling consumer packaging relative% VOC (manufacturer's declaration)</p>	<p>80% of paints based on organic solvents are VOC figures below the state standards</p>	<p>The price is not significantly different. Sometimes the price of paints with reduced VOC can be cheaper than paint with a high content of VOC. This is due to the cost of the organic solvent.</p> <p>Price within one subgroup PWM can vary +/- 5%.</p>

					
5	PWM with organic solvents	<p>Technical conditions of production (or routings), test products</p> <p>Compliance with this criterion indicates that the coatings produced with the organic solvent without the specifics of its bases and% content in the final product</p>		Coatings based on organic solvents account for 45% of the market PWM.	On average, the price of paints based on organic solvents are 2-6 times the price of waterborne paints. Therefore, in determining the subject of the purchase is necessary to clearly define the needs and the ability to replace paints based on organic solvents, water-dispersed
6	PWM based on natural resins	<p>Technical conditions of production (or routings), test products</p> <p>Compliance with this criterion indicates that the coatings produced on the basis of natural resins, which indicates a general characteristic item purchases.</p>	<p>The marking on the label consumer packaging:</p> <p>AC - alkyd-acrylic AS - asphalt SHL - shellac CP - colophony AM - amber OL - oil</p>	Coatings based on organic solvents make up 7% of the market PWM.	Depending on the class and destination physicochemical binding-in, have a wide range in price. On average, more expensive than others. Coatings based on organic solvents + 25-300%

7	Narrow emission of VOCs during the coating operation	<p>Test reports and evaluation of the level of emissions in enclosed spaces in accordance with ISO 16000.</p> <p>As an indicator, you can be guided by indicators of VOC emissions, in accordance with Directive 2004/42 / EC.</p>	 <p>INDOOR AIR QUALITY* A+ *ISO 16000/AFFSET</p>	<p>80% of paints based on organic solvents are VOC figures below the state standards.</p> <p>Note. In accordance with the Association Agreement Ukraine - EU Directive 2004/42 / EC should be implement by 2019</p>	<p>It does not differ significantly and may vary within +/- 5%</p>
8	Water-dispersion paints	<p>Technical conditions of production (or routings), test products</p> <p>Compliance with this criterion indicates the type of paint and a general description of the subject of procurement</p>	<p>Marking labels of consumer packaging (manufacturer's declaration)</p>	<p>Water-dispersion paints account for 45% of the market PWM</p>	<p>The price is significantly lower than coatings based on organic solvents.</p> <p>Within sub price may vary +/- 35% depending on the quality, environmental x k and physicochemical binding-in.</p>
9	Hiding power and stability of the coating	<p>Technical conditions of production (or routings), test coverage in accordance with ISO 1998</p> <p>As an indicator of the stability parameters can be used in accordance with the class of coating stability to washing (grade 2 or higher)</p>	<p>Marking labels of consumer packaging (manufacturer's declaration)</p>	<p>The high rate of compliance with this criterion is provided PWM "premium" class, which is 10% of the market PWM-based organic solvent and 25% for waterborne paints</p>	<p>Depending on the sub-coatings +/- 25 - 150%</p>

10	<p>Common environmental advantages, including referred to in paragraphs. 3-9, applicable to various priority subgroups</p>	<p>Technical conditions of production (or routings), energy intensity and environmental impact of production, test products and coatings in accordance with the SDA OEM 08.002.12.0194, EPD5</p> <p>Multi-criteria approach environmental certification in accordance with the ISO 14024 It allows you to comprehensively assess the environmental performance paintwork at all stages of the life cycle of an independent third party (the body of eco-labeling)</p> <p>Also, as indicators to assess compliance with the MCS OEM 08.002.12.019. Reports can be viewed EPD in accordance with ISO 140257</p> <p>This approach provides an analysis of indicators specified in the EPD for compliance with environmental criteria SDA OEM 08.002.12.019</p>	<p>Eco-labeling type I, in accordance with ISO 140246:</p>  <p>EC</p>  <p>Ukraine</p>  <p>Germany</p>  <p>Nordic countries</p>	<p>On the Ukrainian market 25% PWM various subcategories have environmental certification and labeling. At the same time 20% - manufactured at the production facilities of domestic producers (mainly with the help of foreign investment), and 5% of imports mainly from the EU)</p>	<p>Given the same physical and technical Holy Island in one sub-category:</p> <p>b) for the products of Ukrainian origin: + 15%;</p> <p>b) for imported products: + 45%</p>
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Conclusions:

1. **The criteria for "energy efficiency of the production process" and "resource-efficient technologies for cleaner production"** significant relative improvement in the environmental performance of the production process, the appropriate tools to implement the energy and environmental policy in Ukraine. But in this case the application of these criteria as a separate requirement for SPP is impossible due to:

- a) the complexity of the identification and validation of indicators of compliance with this criterion;
- b) the fact that those criteria are relevant to production and can be seen as the stage of the life cycle "production".

Note. Indicators of these criteria can be set in qualifying for the supplier, which is contrary to the Law of Ukraine "On public procurement", which clearly defines as:

- Qualification requirements for the provider, which does not include the criteria;
- The absence of the principle of discrimination (relative to imports).

2. **The criterion of "no volatile organic compounds (VOCs)"** are applicable only for waterborne paints.

3. **Criteria "VOC content is restricted" and "limited emission of toxic-in in the in-service coverage"** are interconnected. These criteria are applicable for SPP provided a clear definition of the indicator limit VOC content for each of the priority sub-coatings. As these criteria can be considered parameters set out in Directive 2004/42 / EC. Application performance limitations of VOCs as one of the criteria for the SPP in accordance with Directive 2004/42 / EC will ensure the promotion of Ukrainian producers to transition to European standards of content and emissions of VOCs, which must be approved in Ukraine at the level of generally accepted government standards until 2019.

4. **Criteria "paints with organic solvents", "paints based on natural resins", "Water-dispersion ink" "cover endurance and stability of coating"** connected with safety and physical and technical properties of the object of purchase. In implementing the SPP they must be used in determining the technical specifications of the subject of procurement, as well as analysis of possible alternatives. Criteria "coverability and stability of the coating" can be considered in conjunction with other indicators of stability of the subject procurement.

5. **Environmental criteria Ukrainian environmental labeling program in accordance with ISO 14024** possible to assess the environmental performance of such improved coatings on clear indicators on:

- *production staff*: Establish additional limitations or exceptions to such ingredients and formulations as white pigments, VOC, *volatile* aromatic substance, heavy metals, hazardous substances according to the phases of risk to the environment and human health (including substances used in organic solvents);
- *production processes*: Set limits on the emissions of hazardous substances phases of the risk to human health and the environment;
- *consumer packaging*: Establish an optimum range of volume requirements for the labeling and processing.

It should be noted the need to review the JMA 08.002.12.019. in order to adapt to the requirements of the new edition of the ecological criteria for the PWM in the framework of the EU eco-labelling approved by the decision of the EU Commission Decision 2014/312 / EC of 28 May 2014. Revision of the environmental criteria for

the PWM must also take into account the common basic criteria GEN⁸, in conjunction with the development of guidelines for the use of environmental criteria in the preparation of bidding documents for public zakupok⁹.

Given the above, coupled with the current Ukrainian energy and environmental policy, the provisions of the Law of Ukraine "On public procurement" project experts came to the conclusion that **the first stage of SPP in Ukraine optimally as sustainability criteria for PWM considering the following:**



a) for the definition of the object of procurement specify the name of the subgroup paint, selecting the best sustainable products with the necessary protective and physical and chemical properties of the coating;

b) to define the technical specifications for the procurement subject in the field of environmental protection apply:


- Criteria of "VOC content is restricted" and / or "limited emissions of VOCs in the coating process of exploitation", indicating reasonable indicator of VOCs and conformity assessment methods;
- The criterion of "no volatile organic compounds (VOCs)" for the procurement of waterborne paints;
- Environmental criteria in accordance with the SOU 08.002.12.019 providing review as described in Sec. 5.





Table - D-2. The basic tools verify the stability of detergent (detergents)





№ p / p	Stability criterion	A document specifying the criteria and the specifics of the conformity assessment	Labelling	Available on the market	The difference in price compared with conventional products
1	Energy efficiency of the production process	The results of the energy audit (e.g., validated report) in accordance with ISO 5001 The complexity of evaluating compliance with this criterion is that: a) Not all manufacturers conduct external audits in accordance with ISO 5001 and have validated indicators; b) it is practically impossible to assess with respect to	X	The predominant majority of manufacturers of detergents introduce energy-saving technologies and energy efficiency measures due to the significant rise in price of energy. During the period 2001-2009, 60% Ukrainian producers of	The difference on this criterion can not be determined. The reduction of energy consumption, emissions reduction and sustainable waste management is definitely associated with a reduced cost per unit of

		imported products		detergents showed innovative activities related to energy efficiency and modernization of production modernization.	output, but you must take into account the volume of capital investments in the modernization of production
2	Resource efficiency-technologies of cleaner production	<p>The results of the analysis of environmental performance indicators (for example, report an environmental auditor, certified in accordance with the requirements of the Law of Ukraine "On Environmental Audit").</p> <p>The complexity of evaluating compliance with this criterion is that:</p> <p>a) Not all manufacturers conducted by external environmental audits;</p> <p>b) it is practically impossible to assess with respect to imported products.</p>	X		
3	Complete biodegradation	<p>Test protocols biodegradability of surfactants included in the detergent composition</p> <p>Information on biodegradation can be supplied in accordance with ISO 1402110.</p> <p>In accordance with the Technical Regulations on the detergents¹¹ at least ≥80% of surfactants belonging to the detergents, should be subjected to primary biodegradability.</p>	<p>Labeling consumer packaging concerning the biodegradation detergents (manufacturer's declaration)</p> <p>"To be biodegradable"</p>  	5%	Hardly ever. The price may vary +/- 12 depending on others. detergents on the oleochemical basis
4	Concentrated matter	<p>Indicators of concentration-in, members of the IPU, test products.</p> <p>The criterion is applicable only with respect to liquid detergents.</p> <p>Specificity assessment of this indicator depends on a</p>	<p>Labelling consumer container / packaging in accordance with the requirements of technical regulations on detergents</p>	60% of the market of liquid concentrates with detergents are different levels of concentration	<p>Price concentrated detergents is always higher than the ready-to-eat</p> <p>detergents varied within certain functionality, depending on the</p>

		<p>clear definition of the critical level of concentration.</p> <p>This is due to the fact that:</p> <p>a) in a concentrated of cheaper, economical to use, including does not require extra costs for packaging / packaging;</p> <p>b) a high level of concentration associated with the possible high levels of toxicity in the islands, depending on its composition.</p> <p>As indicators of the concentration limit can be considered indicators and methods of their determination in accordance with the environmental criteria Ukrainian environmental labelling program - SOU OEM 08.002.12.06512.</p>	"Concentrated matter"		<p>concentration</p> <p>+/- 30</p> <p>It should be noted that the value of 1 liter detergents concentrated in any case lower as compared with ready to use within the -</p> <p>10 - 50%</p>
5	Without phosphates and other products containing phosphorus	<p>Technical conditions of production (or routings), test products</p> <p>It should also be noted that in accordance with the technical regulations for detergents (amended by the Cabinet of Ministers of Ukraine from June 12, 2013 № 408) limiting the total phosphorus content:</p> <p>a) of 06.12.2014 for washing powder: is 0.5 g in the recommended amount, and / or dosage to be used in the main wash cycle of brackish water for a standard load of the washing machine;</p> <p>b) to 01/01/2017 was for domestic dishwashers is 0.3 g in a unit dose detergent for use in the main wash cycle of the dishwasher to load a table set for 12 people</p>	Labelling consumer container / packaging on the composition of the detergents in accordance with the requirements of technical regulations on detergents	For detergents without phosphate and other drugs containing phosphorus - 60% market share for the other detergents - 2-5%	<p>Price is not significantly different and may vary detergents within a certain functionality ready to use</p> <p>+/- 15%</p>
6	It does not contain substances harmful to the environment	<p>Test reports and Holy Island in the chemical, in which part of the product.</p> <p>As an indicator of the phases of risk to the</p>	Labelling in accordance with GHS14		+/- 35%

7		<p>environment and human health can be used indicators established by Regulation (EC) № 1907/2006 (REACH) and Regulations CLP13</p> <p>The difficulty with this criterion is the absence in Ukraine of the management of chemicals in accordance with the Regulation (EC) № 1907/2006 (REACH) and the CLP Regulation</p>			
			<p>The marking on the label consumer container / packaging in accordance with the requirements of technical regulations on detergents</p>	<p>~ 60% of washing powder and liquid detergent / cleaning products represent a wide range of volume of consumer packaging / packaging.</p> <p>detergents appropriate other functionalities (e.g. cleaning of carpets, furniture, etc.) are presented in the packaging / packaging limited range in volume, due to the specific conditions of their safety during storage / application</p>	<p>The larger package, the lower the unit price. products.</p> <p>For example the difference in price of washing powder of the same name in the package 5 kg and 1 kg can be up to 25%</p>
9	<p>Consumer packaging / containers made of material containing secondary raw materials / materials</p>	<p>Information regarding the contents in the container / packaging recycled materials / raw materials in accordance with ISO 14021.</p>	<p>Marking labels of consumer packaging / packaging</p>  <p>(manufacturer's declaration)</p> <p>According to ISO 14021 manufacturer of containers / packaging must indicate under this</p>	<p>Almost 100% of the packaging material containing cellulose (paper), made of a material containing waste paper</p> <p>When this point is difficult% recycled paper as a part of the packaging material</p> <p>It is also difficult to specify% containers / packaging made from others. Materials (preferably polymers), due to the absence of such data</p>	<p>The difference in the price on this criterion can not be determined</p> <p>But it is obvious that the packaging / packaging from recycled materials cheaper than similar produced from primary resources</p>

			sign marking% recycled materials in the composition of packaging materials		
10	Packing material is produced from renewable timber	Value of raw materials for the production of packaging with the standards of FSC14 This criterion is only applicable to materials for packaging comprising cellulose FSC considers the only way to confirm compliance with the requirements of its standards - certification body accredited in the FSC system		Practically not found on the packaging of detergents in Ukraine Neither detergents Ukrainian production is not certified in the FSC system packaging	The difference in the price on this criterion can not be determined
11	Containers / packaging is recyclable	Information about the possibility of recycling containers / packaging in accordance with ISO 14021	Marking labels of consumer packaging / packaging  (manufacturer's declaration)   (manufacturer's declaration, which indicates the composition of the material of	100%	It does not effect the price

			<p>construction of the packaging / packaging that facilitates further processing as secondary raw material)</p>		
12	<p>Common environmental advantages, including referred to in paragraphs 1,2, 4, 6-9, 11, applicable to different priority subgroups</p>	<p>Technical conditions of production (or routings), energy intensity and environmental impact of production, test production in accordance with the SOU OEM 08.002.12.065, EPD</p> <p>Multi-criteria approach environmental certification in accordance with the ISO 14024 It allows you to comprehensively assess the environmental performance detergents at all stages of the life cycle of an independent third party (the body of eco-labeling)</p> <p>Also, as indicators to assess compliance with the SOU OEM 08.002.12.065 EPD reports can be viewed in accordance with ISO 14025</p> <p>This approach provides an analysis of indicators specified in the EPD for compliance with environmental criteria SOU OEM 08.002.12.065</p>	<p>Eco-labeling type I, in accordance with ISO 14024:</p>  <p>EC</p>  <p>Ukraine</p>  <p>Nordic countries</p>  <p>United States</p>	<p>On the Ukrainian market of 5% MC various subcategories have environmental certification and labeling</p> <p>85% eco-certified detergents imported</p>	<p>Given the same physical and technical Holy Island in one sub-category:</p> <p>b) for the production of Ukrainian production is not a significant difference, and may vary:</p> <p>+ 10%;</p> <p>b) for imported products:</p> <p>+ 60%</p> <p>Sometimes environmentally certified products Ukrainian producer may be cheaper uncertified analogue produced at the facilities of Ukrainian enterprises due to the popularity and / or other qualitative characteristics</p>

			 <p>Canada</p>		
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Conclusions:

1. **The criteria for "energy efficiency of the production process" and "resource-efficient technologies for cleaner production"** Superior One significant relative to the environmental performance of the production process, the appropriate tools to implement the energy and environmental policy in Ukraine. But in this case the application of these criteria as a separate requirement for SPP impossible due to:

- a) the complexity of the identification and validation of indicators of compliance with this criterion;
- b) the fact that those criteria are relevant to production and can be seen as the stage of the life cycle "production".

Note. Indicators of these criteria can be set in qualifying for the supplier, which is contrary to the Law of Ukraine "On public procurement", which clearly defines:

- Qualification requirements for the provider, which does not include the criteria;
- The absence of the principle of discrimination (relative to imports).

2. **Criteria "complete biodegradation", "without phosphates and other phosphorus-containing preparations"** clearly define the environmental characteristics and useful as a stability criterion. It is important to consider the feasibility of this criterion in the framework of a particular subgroup of detergents, given its functionality.

3. **Application of the criterion of "Concentrated"** due to the need to determine the limit values of concentration and as an indicator of stability can be seen in conjunction with others. criteria for improving the environmental performance of products.

4. **Application of the criterion "does not contain substances hazardous to the environment", "does not contain substances hazardous to human health"** perhaps based on labeling GHS.

5. **Criterion "Economical packaging / containers"** applied as a criterion for sustainability in conjunction with others. criteria for improved environmental performance. It is important to take into account:

- a) the required consumption of the detergents, its storage conditions and shelf life;
- b) the feasibility of this criterion in the framework of a particular subgroup of detergents, given its functionality.

6. **The criterion of "consumer packaging / containers made of material containing secondary raw materials / materials"** It points to certain environmental characteristics, and, given the importance of others, environmental performance can be considered as a criterion for sustainability in conjunction with others. Criteria for improved environmental performance of detergents.

7. **The criterion "for packaging made from renewable wood "** Considering the limited application for packing detergents in Ukraine it is not recommended to be used as a criterion for the stability of detergents. But given the popularity of certification and FSC labels in the world, this criterion can be considered in the future in conjunction with others. Criteria for improved environmental performance of detergents.

8. **The criterion of "containers / packaging is recyclable"** has more informational purposes only and does not indicate whether the containers / packaging recycled at the end of the life cycle of detergents.

9. **Environmental criteria Ukrainian environmental labeling program** in accordance with ISO 14024 allow the assessment of such improved environmental characteristics of detergents clear indicators on:

- *production staff*: Establish additional limitations or exclusions of ingredients and preparations on their phase of risk to the environment and human health, in accordance with the phases of risk-established Regulation (EC) № 1907/2006 (REACH) (including phosphates and other phosphorus-containing drugs); determining the level of biodegradability of surfactants;

- *production processes*: Set limits to emissions of hazardous-in phases of the risk to human health and the environment;

- *Product*: It determines the maximum concentration ratio and the method of its calculation for each substance;

- *Consumer packaging / packaging*: Establish an optimum range of volume requirements for the labeling and processing.

It should be noted the need to review the SOU 08.002.12.065 with a view to greater adaptation to the requirements of environmental criteria for specific groups of detergents in the framework of the EU eco-labeling approved:

Commission Decision 2011/383 / EC of 28 June 2011 on the approval of the ecological criteria for the all-purpose cleaners and sanitary cleaners;

Commission Decision 2011/263 / EC of 28 April 2011 on the approval of the environmental criteria for detergents for washing in the dishwasher;

Commission Decision 2012/720 / EC of 14 November 2012 approving the environmental criteria for detergents for washing in commercial dishwashers;

Commission Decision 2011/382 / EC of 24 June 2011 on the approval of the environmental criteria for detergents Hand dishwashing detergents;

Commission Decision 2011/264 / EC of 28 April 2011 on the approval of the environmental criteria for detergents for washing clothes;

Commission Decision 2012/721 / of 14 November 2012 approving the environmental criteria for detergents for laundry washing machines.

In the revision process necessary to take into account the adopted amendments to the environmental criteria, in particular the Commission Decision of 2014/313 / EC of 28 May 2014, introducing amendments to the Commission Decision 2011/263 / EC, 2011/264 / EC, 2011/382 / EC 2011/383 / EC, 2012/720 / EC and 2012/721 / EC.

Revision of the environmental criteria for the detergents should take into account the common basic criteria GEN in conjunction with the development of guidelines for the use of environmental criteria in the preparation of bidding documents for public procurement.

Given the above, coupled with the current Ukrainian energy and environmental policy, the provisions of the Law of Ukraine "On public procurement" project experts have concluded that the first stage of SPP in Ukraine appropriateness optimal as basic sustainability criteria for detergents to consider the following:

- a) for the definition of the object of procurement specify the name of the subgroup detergents in conjunction with a certain criterion, indicating its main characteristics (eg, "concentrate"), selecting the best sustainable products with the necessary functional properties;
- b) to define the technical specifications for the procurement subject in the field of environmental protection apply:
- Criteria for a "complete biodegradation", "without phosphates and other products containing phosphorus";
 - Environmental criteria in accordance with the SOU 08.002.12.065 provided review as described in Sec. 9.


Criteria such as the "Economy Pack" and "consumer packaging / containers made of material containing secondary raw materials / materials" may be used as an auxiliary to the basic sustainability criteria.


Table - D-3. The basic tools verify the stability of heat insulating materials (HIM)




№ p/p	Stability criterion	A document specifying the criteria and the specifics of the conformity assessment	Labelling	Available on the market	The difference in price compared with conventional products
1	Energy efficiency of the production process	<p>The results of the energy audit (e.g., validated report) in accordance with ISO 5001</p> <p>The complexity of evaluating compliance with this criterion is that:</p> <p>a) Not all manufacturers conduct external audits in accordance with ISO 5001 and have validated indicators;</p> <p>b) it is practically impossible to assess with respect to imported products</p>	X	The predominant majority of producers HIM introducing energy-saving technologies and energy efficiency measures carried out in connection with the significant rise in price of energy	<p>The difference on this criterion can not be determined.</p> <p>The reduction of energy consumption, emissions reduction and sustainable waste management is certainly due to a decrease in the cost of meals. products,</p>


2	Resource-efficient technologies for cleaner production	<p>The results of the analysis of environmental performance indicators (for example, report an environmental auditor, certified in accordance with the requirements of the Law of Ukraine "On Environmental Audit")</p> <p>The complexity of evaluating compliance with this criterion is that:</p> <p>a) Not all manufacturers conducted by external environmental audits;</p> <p>b) it is practically impossible to assess with respect to imported products.</p>	X		but should take into account the volume of investments in the modernization of production
3	Low thermal conductivity	<p>Test reports in accordance with EN 12667 and / or ISO 6946</p> <p>Thermal conductivity, i.e. ability of a material to transmit heat is the main technical characteristics of Heat insulating materials. To quantify this characteristic coefficient of thermal conductivity is used, which is equal to the amount of heat passing for 1 hour through a sample of the material thickness 1 m and the area 1 m² with a temperature difference on the opposite surfaces 1 ° C. Thermal conductivity is expressed in W / (mK) or (W / m ° C)</p> <p>The thermal conductivity of thermal Heat insulating materials depends on the density of the material, type, size, arrangement of pores, etc. It is also a strong influence on the thermal conductivity have a temperature and humidity of the material</p> <p>The difficulty with this criterion is the need to define clear indicators of the thermal</p>	<p>Technical documentation or markings on the packaging indicator (manufacturer's declaration)</p>	15%	Price may vary between + 15 - 35%

		<p>conductivity as a stability criterion for each of the priority sub-HIM.</p> <p>As these figures can be considered indicators of thermal conductivity, environmental criteria approved by the Ukrainian environmental labeling program - SDA OEM 08.002.16.04816.</p>			
4	Temperature stability	<p>Test reports of HIM according to ISO 10456:1997 and / or EN 1604 (for facade HIM)</p> <p>Temperature resistance is estimated limit temperature applications of the product. Above this temperature, the material changes its structure loses its mechanical strength and collapses, and organic materials can be ignited</p> <p>The difficulty with this criterion is the need to define clear indicators of temperature resistance as a criterion for the stability of each of the priority sub-HIM</p>	<p>Technical documentation or markings on the packaging indicator (manufacturer's declaration)</p>	40% of HIM are higher than the average temperature resistance	<p>The price is not significantly different and can vary within HIM certain functionality +/- 15%</p>
5	Heat capacity	<p>Test reports of HIM in accordance with EN 12939</p> <p>Heat capacity is essential in conditions of frequent thermal cycles, as in these circumstances it is necessary to consider the heat absorbed (accumulated) insulating layer. The heat capacity of the inorganic material ranges from 0.67 to 1 kJ / kg ° C. With the increase in moisture content of its specific heat increases dramatically because water at 4 ° C, it was 4.2 kJ / kg ° C. Increasing the heat capacity is noted and the temperature increases</p>	<p>Technical documentation or markings on the packaging indicator (manufacturer's declaration)</p>	HIM 36% have higher than average heat capacity	<p>The price is not significantly different and can vary within HIM certain functionality +/- 10%</p>

		The difficulty with this criterion is the need to identify clear indicators of the specific heat as a stability criterion for each of the priority sub-HIM			
6	Fire resistance	<p>Test reports of HIM in accordance with EN 13501-1, EN 13823, ISO 1716: 2010, ISO 11925-2</p> <p>Fire resistance characterizes the combustibility of the material, i.e., its ability to ignite and burn when exposed to an open flame</p>	<p>Technical documentation or markings on the packaging indicator</p> <p>(manufacturer's declaration)</p>	HIM 65% have higher than average fire resistance	5 + - 10%
7	No flammable material	<p>Test reports of HIM in accordance with ISO 1182</p>	<p>Technical documentation or markings on the packaging</p> <p></p> <p>(manufacturer's declaration)</p>	10%	15 + - 25%
8	Chemical and biological stability	<p>Test reports of HIM in accordance with EN 13172</p> <p>Highly porous HIM structure which facilitates penetration into fluids, gases and vapors in the environment. Their interaction with the material may cause its destruction. Organic materials or materials in their composition containing organic components (binders, starch, glue, etc.) Or fibrous fillers (wood fibers) should possess biological stability. When moisture such materials there is a danger of destruction of fungi or microorganisms</p>	<p>Technical documentation or markings on the packaging</p> <p>(manufacturer's declaration)</p>		

		The difficulty with this criterion is the need to define clear indicators of chemical and biological stability as stability criterion for each of the priority sub-HIM			
9	Limited content of dangerous substances to the environment and human health	<p>Regulation (EC) № 1907/2006 (REACH) and Regulations CLP13</p> <p>The difficulty with this criterion is the absence in Ukraine of the management of chemicals in accordance with the Regulation (EC) № 1907/2006 (REACH) and the CLP Regulation</p>	Labelling in accordance with GHS14	100% HIM imported from EU countries, accounting for 2-3% market share	The price of imported HIM above +35 - 60%
10	HIM containing secondary raw materials / materials	<p>Information regarding the contents in the container / packaging recycled materials / raw materials in accordance with ISO 14021</p> <p>The difficulty with this criterion is the need to define clear indicators of chemical and biological stability as stability criterion for each of the priority sub-HIM</p>	<p>Marking labels of consumer packaging / packaging</p>  <p>(manufacturer's declaration)</p> <p>According to ISO 14021 manufacturer of containers / packaging must indicate under this sign marking% recycled materials as part</p>	<p>Nearly 100% of the organic waste timber containing HIM</p> <p>This is difficult to specify% recycled secondary raw materials, since in most cases the manufacturer does not declare its contents%</p>	<p>The difference in the price on this criterion can not be determined</p> <p>But it is obvious that HIM-based or contain recycled raw materials / materials cheaper than on the functional characteristics, produced from primary resources</p>

			of HIM		
11	HIM is made on the basis of material from renewable timber	Value of raw material for the production of heavy metals in accordance with the standards of FSC. This criterion applies only to organic HIM		40% of imports of organic HIM have the FSC label	The difference in price for this criterion is insignificant in one subgroup of imported HIM But it should be noted that the imported HIM certain subgroups expensive Ukrainian counterparts +35 - 60%
12	Common environmental advantages, including referred to in paragraphs. 1-3, 9, 10 applicable to the various priority subgroups	Technical conditions of production (or routings), energy intensity and environmental impact of production, test production in accordance with the SOU OEM 08.002.16.048, EPD Multi-criteria approach environmental certification in accordance with the ISO 14024 It allows to evaluate comprehensively improved environmental and technical characteristics of the HIM at all stages of the life cycle of an independent third party (the body of eco-labeling) Also, as indicators to assess compliance	Eco-labeling type I, in accordance with ISO 14024:  Ukraine 	On the Ukrainian market 15% HIM various subcategories have environmental certification and labeling Mostly these are mineral HIM	Given the same physical and technical characteristics in a single subcategory price may vary a) for HIM Ukrainian Prospect Island +/- 15% b) for the import of HIM 45 + - 60%

		<p>with the SOU OEM 08,002. 16,048 EPD reports can be viewed in accordance with ISO 14025</p> <p>This approach provides an analysis of indicators specified in the EPD for compliance with environmental criteria SOU OEM 08.002.16.048</p>	<p>Germany</p>  <p>Russia</p>		
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Conclusions:

1. **The criteria for "energy efficiency of the production process" and "resource-efficient technologies for cleaner production"** Superior One significant relative to the environmental performance of the production process, the appropriate tools to implement the energy and environmental policies in Ukraine. But in this case the application of these criteria as a separate requirement for SPP is impossible due to:

- a) the complexity of the identification and validation of indicators of compliance with this criterion;
- b) the fact that those criteria are relevant to production and can be seen as the stage of the life cycle "production".

Note. Indicators of these criteria can be set in qualifying for the supplier, which is contrary to the Law of Ukraine "On public procurement", which clearly defines:

- Qualification requirements for the provider, which does not include the criteria;
- The absence of the principle of discrimination (relative to imports).

2. **Application of the criteria "Low heat conductivity", "temperature stability", "flame resistance", "chemical and biological stability"** due to the need to determine the limit values of concentration and as an indicator of stability can be seen in conjunction with other criteria for improving the environmental performance of products based on functionality and operating conditions HIM.

3. **The criterion of "non-flammable material"** clearly defines the characteristics of the HIM associated with its security, and can be considered as a criterion for sustainability in conjunction with the criteria for improving the environmental performance of HIM. It is important to consider the feasibility of this criterion in the framework of a particular subgroup of HIM.

4. **Criterion "Chemical and biological stability"** can be read in conjunction with the quality of sustainability criteria and the criteria of improved environmental performance of HIM. For example, in conjunction with the criterion of "limited content of the substances dangerous for the environment and human health." It is necessary to establish indicators of the sustainability of these criteria.

5. **Application of the criterion of "limited content of the substances dangerous for the environment and human health"** possibly based on labeling GHS.

6. **Criterion "contains secondary raw materials / materials"** points to certain environmental characteristics and may be regarded as a criterion for sustainability, with a clear definition of a minimum indicator% recycled raw materials / materials in finished products for different subgroups HIM.

7. **The criterion "for packaging made from renewable wood"** Considering the limited application of HIM in Ukraine, it is not recommended for use as one of the criteria of sustainability. But given the popularity of certification and labeling FSC, in the world of this criterion can be considered in the future in conjunction with others. Criteria for improving the environmental performance of HIM.

8. **Environmental criteria Ukrainian environmental labeling program** in accordance with ISO 14024 as of today allow the assessment of such improved environmental characteristics of heavy metals in relatively clear indicators:

- *production staff*: Impose additional restrictions or exceptions to the ingredients and preparations phase risk to the environment and human health, in accordance with the phases of risk-established Regulation (EC) № 1907/2006 (REACH) (including formaldehyde, asbestos); limit the content of heavy metals and radionuclides (in mineral HIM);

- *production processes*: Set the energy intensity of HIM production limitation of emissions of hazardous substances according to the phases of risk to human health and the environment, waste management requirements for production;

- *Product*: determine the rate of thermal conductivity for each sub-group of HIM, the requirements for the content of% recycled raw materials / materials;

- *Consumer packaging / packaging*: Establish requirements for the labeling and processing.

It should be noted the need to review the SOU 08.002.16.048. (revised 2010) with a view to updating, taking into account changes in legislation, market structure HIM (extension of the scope) based on the best industrial practices and indicators of environmental criteria for eco-labeling programs presented in GEN.

Revision of the environmental criteria for the HIM should include the development of guidelines for the use of environmental criteria in the preparation of bidding documents for public procurement.

Given the above, coupled with the current Ukrainian energy and environmental policy, the provisions of the Law of Ukraine "On public procurement" project experts have concluded that the first stage of SPP in Ukraine advisable to optimal as basic sustainability criteria for HIM to consider the following:

a) for the definition of the object of procurement specify the name of the subgroup of HIM in conjunction with a certain criterion, indicating its main characteristics (such as "non-flammable HIM"), selecting the best sustainable products with the necessary functional characteristics and operating conditions;

b) to define the technical specifications for the procurement subject in the field of environmental protection apply:

- Criteria "Chemical and biological stability", "Limited content of the substances dangerous for the environment and human health" contains of % recycled raw materials / materials" provided the definition of sustainability indicators for the criteria for each of the sub-HIM;

- Environmental criteria, in accordance with the SOU 08,002. 16,048 provided review as described in Sec. 8.

Criteria "low heat conductivity", "temperature stability", "flame resistance" are directly related to the subject of procurement. They must be applied by analyzing the needs with respect to the functional characteristics and conditions of use of HIM.

1 According to the State Statistics Committee of Ukraine. The results of fuel, heat and energy in 2013. 1 kg t TOE (conventional fuel) = 29.30 MJ = 7,000 kcal.

2 According to the research results of the "Responsible Care of the chemical industry of Ukraine" within the framework of UN «Responsible Care», 2011.

3 SDA OEM - environmental criteria in the framework of Ukrainian environmental labeling program in accordance with the requirements of technical regulations on environmental labeling, approved by the Cabinet of Ministers of Ukraine of 18.05.2011 № 529 and State Standard ISO 14024 (IDT ISO 14024). The last three digits of the serial number of the JMA indicate the serial number of the product group. Environmental criteria are determined on a scientific basis and are based on environmental characteristics, defined separately for specific groups of products, as well as additional requirements that determine the effect of such products throughout the life cycle on the environment and human health. A special feature of environmental criteria in accordance with ISO 14024 is an accounting performance lifecycle of products, which indicate the overall environmental preference for products that meet their requirements.

⁴ SDA OEM 08.002.12.019 PWM. Environmental criteria of life cycle assessment.

⁵ EPD - Environmental Product Declaration (Environmental product declaration) - is a comprehensive report on the composition and ecological characteristics of the product, prepared on the basis of an analysis of its life cycle, validated by an independent third party with respect to the reliability of the data presented in it.

⁶ Examples of signs type I environmental labeling according to ISO 14024 are based on the labeling of the product groups, the most common in the Ukrainian market. This does not preclude other signs of environmental certification systems in accordance with ISO 14024 certified within the framework of the International Programme for mutual trust and mutual recognition GENICES: http://www.globalecolabelling.net/members_associates/map/index.html

⁷ ISO 14025 Environmental labels and declarations. Environmental declaration of type III. Principles and procedures.

⁸ Common benchmarks GEN (Common Core Criteria, CCC) - the environmental criteria developed based on the methodology of the Global Network of environmental labeling (Global Ecolabelling Network, GEN). Is a document that establishes the basic requirements for certain categories of products. CCC requirements are considered as the basic platform and can be supplemented in the offices of the environmental criteria for eco-labeling programs that have adopted them.

More details about the CCC see: http://www.globalecolabelling.net/categories_7_criteria/gen_common_core_criteria/index.htm

⁹ In accordance with para. 30 of the Technical Regulations on environmental labeling (approved by the Cabinet of Ministers of Ukraine of 18.05.2011 № 529), a developer of environmental criteria, should develop guidelines for the use of environmental criteria in the preparation of bidding documents in public procurement of products of the corresponding category. This provision of the Technical Regulations came into force in 2014. At the moment, these guides are not designed for any of the groups of products that can be considered as one of the tasks in the plan for the development of SPP in Ukraine.

¹⁰ ISO 14021 Environmental labels and declarations. Self-declared environmental claims. Environmental Labeling Type II.

¹¹ Technical regulations on detergents, approved by the Cabinet of Ministers of Ukraine of 20.08.2008 № 717. These Technical regulations adapted to the requirements of Regulation № 648/2004 of the European Parliament and of the Council of 31.03.2004 on detergents.

¹² SOU OEM 08.002.12.065 Detergents. Environmental criteria of life cycle assessment.

¹³ Regulation (EC) №1907 / 2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), the establishment of the European Chemicals Agency. REACH requirements for manufacturers / importers / users of chemicals depend on the hazardous properties of these substances and their impact on the environment and human health, as well as the estimated size of their production and use. Responsibility for implementation of the main aspects of REACH brings the European Chemicals Agency, which was

opened on 1 June 2007 in Helsinki, Finland. For the production, import, sale and use within the European Union of chemical products need to undergo a mandatory registration of a particular chemical in accordance with the rules and regulations established by Regulation (EC) №1907 / 2006. Regulation CLP - a new European Regulation on classification, labeling and packaging of chemical substances and mixtures. Regulation introducing a new system of classification and labeling of chemical products in the EU, based on the Globally Harmonized System of the United Nations (GHS). CLP regulation defines hazardous chemicals and ways to inform about the dangers associated with the use of chemicals. CLP regulation is binding on the territory of EU Member States.

¹⁴ Globally Harmonized System of Classification and Labelling of Chemicals (Globally Harmonized System of Classification and Labelling of Chemicals (GHS)).

¹⁵ FSC (Forest Stewardship Council, FSC) - an international non-profit organization in the form of an association. FSC certification system controls recognized at the global level, which provides certification of enterprises, leading forestry (FSC FM); comprehensive certification of forest management and chain of custody (FSC FM / CoC); comprehensive certification of enterprises engaged in forest management for the purpose of harvesting, processing and sale of forest products on the leased forest plots (FSC FM / CoC, gives the right to use the mark FSC™); certification organizations involved in the processing, purchase or repurchase of certified wood or wood-based products (FSC CoC / CW, gives the right to use the mark FSCTM).

¹⁶SOU OEM 08,002,016,048 Sound isolation materials. Environmental criteria of lifecycle assessment.

¹⁷EN 12667 Building materials and products. Thermal characteristics. Determination of thermal resistance by the method protected thermo plate and heat meter. Products of high and medium resistance to heat transfer.

¹⁸ISO 6946 Parts and construction. Resistance to heat and heat transfer coefficient. The method of calculation.

¹⁹ISO 10456 Thermal insulation. Construction materials and products. Determination of declared and design values of the thermal properties.

²⁰EN 1604 Heat insulating products for building applications. Method for determining the dimensional stability at a predetermined temperature and humidity

²¹EN 12939 Thermal performance of building materials and products. Determination by the method of heat transfer plates and hot sealed using a heat flow meter. Thick products of high and medium heat transfer.

²²EN 13501-1-2007 Classification of fire resistance of structures and building elements. Part 1: Classification using test data on the combustion reaction in the fire test.

²³To EN 13823 Reaction to fire of construction products. Building products excluding floorings imposed against heat insulated from the source of ignition.

²⁴ISO 1716 products for construction. Reaction to fire tests. Determination of the heat of combustion.

²⁵ISO 11925-2 test to determine the reaction to fire. Flammability of building products subjected to direct reflection of the flames. Part 2: Test using a flame source.

²⁶ISO 1182 testing of the materials and products for fire danger. Method of test for flammability.

²⁷ EN 13172 Heat insulating products. Conformity assessment.