

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
UKRAINIAN-AMERICAN CONCORDIA UNIVERSITY**

Faculty of Management and Business  
*Department of International Economic Relations, Business & Management*

**BACHELOR'S QUALIFICATION WORK**

**THE INTERNATIONAL MARKET FOR ORGANIC AND ECO-  
TENDENCIES IN INTERNATIONAL BUSINESS  
(based on LLC “Hitachi Energy Ukraine” case)**

Bachelor's student in the 4<sup>th</sup> year of study  
Field of Study 29 – International Relations  
Specialty 292 –  
International Economic Relations  
Educational program –  
International Business

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PhD in Economics

Kyiv – 2024

## **Abstract**

Topic – The international market for organic and eco tendencies in international business (based on LLC “Hitachi Energy Ukraine” case).

The work is focused on an investigation to analyze the international market for organic and eco-friendly products and practices, with a specific focus on their influence on Ukrainian businesses and how LLC “Hitachi Energy Ukraine” can sustainably influence our domestic market.

This study investigates the causes, patterns, and implications of the "green wave" on worldwide tactics. The work seeks to contribute to a better understanding of how firms may adapt and survive in a sustainable economic landscape by investigating its influence on customer behavior and the creation of new market possibilities based on the LCC “Hitachi Energy Ukraine” case. When making the research, establishing ways and opportunities of improving business LLC "Hitachi Energy Ukraine" towards eco-tendencies and developing the plan for the rising consumers' consciousness in Ukrainian businesses were carried out.

The work draws conclusions about the overall relevance of eco-innovation that promotes sustainable development by reducing environmental impact, increasing resource efficiency, and raising environmental consciousness. Also provides recommendations on how an established industry leader may embrace environmental trends and contribute to a more sustainable energy future in Ukraine and globally.

**Keywords:** sustainability, organic, international company, LCC “Hitachi Energy Ukraine”, eco-innovation, global challenges.

## **Анотація**

Робота зосереджена на дослідженні з метою аналізу міжнародного ринку органічних та екологічно чистих продуктів і методів, з особливим акцентом на їх вплив на український бізнес і на те, як ТОВ «Хітачі Енерджі Україна» може впливати на наш внутрішній ринок.

У цій роботі досліджуються причини, моделі та наслідки «зеленої хвилі» для світового розвитку. Робота має на меті сприяти кращому розумінню того, як компанії можуть адаптуватися та виживати в стабільному економічному

ландшафті, досліджуючи його вплив на поведінку клієнтів і створення нових ринкових можливостей на основі бізнесу ТОВ «Хітачі Енерджі Україна. При проведенні дослідження було встановлено шляхи і можливості для вдосконалення бізнесу ТОВ «Хітачі Енерджі Україна» в бік еко-тенденцій та розроблення плану підвищення споживчої свідомості українських підприємств.

У роботі зроблено висновки про загальну актуальність еко інновацій, який сприяє сталому розвитку шляхом зменшення впливу на навколишнє середовище, підвищення ефективності використання ресурсів і підвищення екологічної свідомості. Також містить рекомендації щодо того, як визнаний лідер галузі може сприйняти екологічні тенденції та зробити внесок у більш стале енергетичне майбутнє в Україні та у всьому світі.

**Ключові слова:** екологічність, органіка, міжнародна компанія, ТОВ «Хітачі Енерджі Україна», еко-інновації, глобальні виклики.

**PHEE-institute «Ukrainian-American Concordia University»**

**Faculty of Management and Business**

**Department of International Economic Relations, Business and Management**

Educational level: **Bachelor degree**  
Specialty **292 “International Economic Relations”**  
Educational program **“International Business”**

**APPROVED**

**Head of Department**

**Prof. Zharova L.V.**

“ ” 20

**TASK**

**FOR BACHELOR’S QUALIFICATION WORK OF STUDENT**

**Viktoriia Rudenko**

(Name, Surname)

**1. Topic of the bachelor’s qualification work**

**International market for organic and eco-tendencies in international business ( based on LLC "HITACHI ENERGY UKRAINE" case)**

**Supervisor of the bachelor’s qualification work Olena Zhytkevych, Ph.D. in Economics,**  
(surname, name, degree, academic rank)

Which approved by Order of University from **“25” September 2023 № 25-09/2023-5к**

**2. Deadline for bachelor’s qualification work submission “25” April 2024.**

**3. Data-out to the bachelor’s qualification work**

Materials from internship received during consultation with representatives of the company.  
Information from open resources in the Internet, official reporting of financial and economic activities of the enterprise.

**4. Contents of the explanatory note (list of issues to be developed)**

**The following tasks of the work:**

- introduce theoretical bases of eco-tendencies in business world;
- identify core components of international market for organic and eco-tendencies in international business;
- conduct an overview of the Global market and its sustainable impact;
- introduce and overview of eco startups in Ukraine for 2020-2023 years;
- analyse the company’s environment, organizational structure, financial and economic indicators of LLC “Hitachi Energy Ukraine”;
- identifying eco-tendencies and main targets of the company LLC “Hitachi Energy Ukraine”;
- describe dynamic development of the global organic products and eco-tendencies in the Global market;

- develop the plan for the rising consumers' consciousness in Ukrainian businesses;
- establish ways and opportunities of improving business LLC "Hitachi Energy Ukraine" towards eco-tendencies.

## 5. List of graphic material (with exact indication of any mandatory drawings)

*Graphs and figures for analysis of economical and statistical information on the analyzed company*

## 6. Date of issue of the assignment

### Time Schedule

№	The title of the parts of the qualification paper (work)	Deadlines	Notes
1.	I part of bachelor thesis	10.12.2023	
2.	II part of bachelor thesis	27.02.2024	Late submission
3.	Introduction, conclusions, summary	25.04.2024	
4.	Pre-defense of the thesis	30.04.2024	

Student

(signature)

Supervisor\_\_\_\_\_

(signature)

**Conclusions** (*general description of the work; participation in scientific conferences/ prepared scientific article; what grade does the student deserve*):

No participation in scientific conferences, however student showed the manuscript for approval.

The work structured and aimed to analyze and identify eco-tendencies and main targets of the company LLC “Hitachi Energy Ukraine”, however due to the shortage of statistical representation and not incorporated analytical tools and techniques lead to poor author's analysis. Theoretical base and lack of financial and statistical data analysis represented

adversely affected the practical importance of the work and suggested recommendations by author. The work meets the established academic standards (but not entirely), contains three sections, an introduction and conclusions. Despite multiple mistakes in designing work, the work can be recommended for defense.

A handwritten signature in blue ink, consisting of stylized, cursive letters that are difficult to decipher but appear to start with a capital 'S'.

Supervisor\_\_\_\_\_

(signature)

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## INTRODUCTION

The global economic landscape is adopting more sustainable behaviors, and people think more about the consequences of their actions, so we can observe increasing demand for environmentally friendly and organic products and services. This phenomenon, termed the "green wave," is changing the global trends through the business market and how they function, encouraging embracing sustainable practices and incorporating different companies into their basic objectives. This master's thesis investigates this critical movement, concentrating on its influence on Ukrainian businesses and how LLC "Hitachi Energy Ukraine" can sustainably influence our domestic market.

Starting from the community clean-up to educational workshops, businesses all around the world are implementing practical eco-solutions, and the main goal remains the same – a healthier planet for all. It seems that in 2024 renewable energy is set to reach a major milestone. My work shows an increasing worldwide trend toward sustainable behaviors with businesses and consumers understanding the advantages of renewable energy. Sustainability can help businesses innovate and grow while also addressing environmental and societal challenges that pose significant risks to the future existence of businesses (API Day, 2024).

In Ukraine there is booming green startup culture and success in the organic food export business, despite the continuing war. It shows our country as resilient and inventive, actively pursuing a sustainable future. While domestic sales of organic goods fell in 2022 owing to economic upheavals, a possible return is anticipated in the future, fueled by postwar recovery and worldwide interest in sustainability.

My work begins with a thorough research of the global market for organic and environmentally friendly products. This written work will go into the essential components of this dynamic economy, revealing the trends that are driving its future. To demonstrate this changing tendency, we will look at different kinds of charts, and tables with statistical overview of the growing worldwide demand for sustainable solutions and practices. This study will take a worldwide perspective, presenting an overview of the international market and its long-term influence. However, our attention will subsequently shift,



narrowing down on the Ukrainian situation. We'll look at the rise of eco-startups in Ukraine from 2020 to 2023, domestic consumption of organic products and increasing indicators of Ukrainian producers of eco-friendly producers, providing vital insights into the country's growing green movement. The growing worldwide interest in sustainability may drive up demand for organic products in Ukraine.

Ukraine already has an established history in organic production: globally it is ranked 6th in organic oilseed production and 8th in organic wheat. There are already 635 organic operators in Ukraine (including 501 agricultural producers) compared to 182 in 2014, taking into account the difficult situation in the country: Russian invasion of Ukraine.

The Russian invasion of Ukraine has had a significant negative impact on the country's environment, resulting in industrial and chemical pollution, territorial mining, reduction and deterioration of natural ecosystems, landscape destruction, biodiversity damage, and the destruction of industry and agriculture. However, there is a positive impact: it promotes innovation in the fields of energy conservation and renewable energy. LLC "Hitachi Energy Ukraine" can help Ukraine achieve its energy independence and environmental goals. While the emphasis is on renewable energy, LLC "Hitachi Energy Ukraine" is likely active in other areas of the energy sector, such as grid upgrading and substation modifications. Their contributions in these sectors are also critical to Ukraine's overall energy infrastructure development. A successful and expanding LLC "Hitachi Energy Ukraine" may help to Ukraine's economic growth by: creating employment and recruiting qualified individuals; promoting the development of a robust and sustainable energy industry; attracting foreign investment through its partnership with a major brand such as Hitachi. The firm can contribute significantly to Ukraine's economic recovery and long-term energy security.

The purpose of this investigation was to look at the importance of eco-innovations for the long-term growth of Ukrainian businesses, particularly in light of the repercussions of the armed invasion against Ukraine in 2022.

The following tasks were set to achieve the aim of my work:

- introducing theoretical bases of eco-tendencies in the business world;

- identifying core components of international market for organic and eco-tendencies in international business;
- conducting an overview of the Global market and its sustainable impact;
- introduce eco startups in Ukraine for 2020-2023 years and overview of Ukrainian market for eco-tendencies;
- analyse the company's environment, organizational structure, financial and economic indicators of LLC "Hitachi Energy Ukraine";
- identifying eco-tendencies and main targets of the company LLC "Hitachi Energy Ukraine";
- describe the dynamic development of global organic products and eco-tendencies in the Global market;
- develop the plan for the rising consumers' consciousness in Ukrainian businesses;
- establish ways and opportunities of improving business LLC "Hitachi Energy Ukraine" towards eco-tendencies.

This work's methodological basis comprises peer-reviewed journal articles, acclaimed internet publications, and personal data analysis and calculations.

The research object is the integration of eco-friendly tendencies into the business strategies of Ukrainian companies.

The research subject is a set of theoretical, methodological, and practical approaches to establish the ways of business development improvement and define company competitiveness for LLC "Hitachi Energy Ukraine".

The aim of my work is to analyze the international market for organic and eco-friendly products and practices, with a specific focus on their integration into the business strategies of Ukrainian companies.

This study investigates the causes, patterns, and implications of the "green wave" on worldwide tactics. This thesis seeks to contribute to a better understanding of how firms may adapt and survive in a sustainable economic landscape by investigating its influence on customer behavior and the creation of new market possibilities based on LLC "Hitachi Energy Ukraine" case.

The Bachelor thesis consists of an introduction, 3 chapters, a conclusion, a list of references, and annexes. Work is carried out on 60 sheets, containing tables and figures. References include 61 literature sources, and there are 2 annexes.

## **CHAPTER 1. INTRODUCING THEORETICAL BASES OF ECOTENDENCIES IN BUSINESS WORLD**

### **1.1 Identifying core components of international market for organic and ecotendencies in international business**

Ecology is a discipline of biology that investigates the interactions between organisms and their environments. Ecological practices take into account all creatures and landscapes in a given ecosystem, with the goal of maintaining a balance between nature and human activity. This phenomenon "green wave" is changing global trends, encouraging people to embrace sustainable practices and incorporating them into their basic objectives (Kumar, V., 2017).

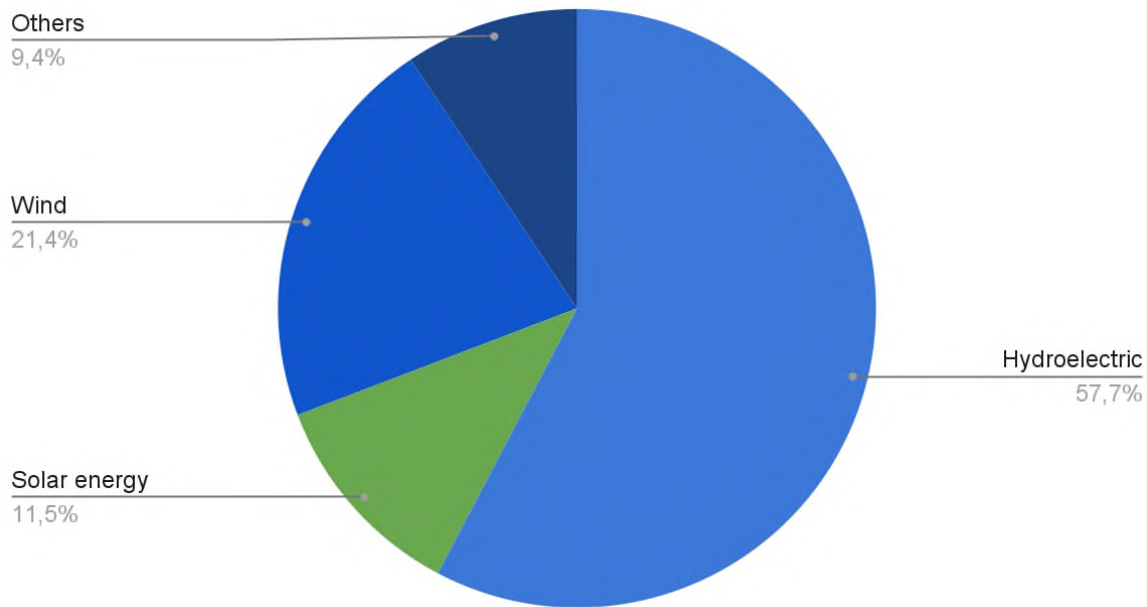
To put it simply, living ecologically involves thinking about not just ourselves but also the environment. An eco-friendly product is one that is made without using toxic chemicals or procedures that might affect the environment, ecosystems, or human health. Eco-friendly methods are strongly linked to the idea of organic. Organic products respect both the environment and animal welfare. Ecological methods are more detailed, ensuring that everything considered ecological is also naturally organic, whereas the opposite is not necessarily true. Although the phrases "ecological" and "sustainable" are not legally protected, ecological goods are frequently accompanied by certified organic labels that are protected (Kumar, V., 2017).

Consumers are becoming more mindful of the environment and expecting eco-friendly products and services. They select brands that share their beliefs and promote sustainability. Businesses who respond to this need by providing environmentally friendly options gain a competitive edge, fostering long-term consumer loyalty and contributing to a more sustainable future. The implementation of eco-friendly methods also gives organizations a competitive advantage. Companies that embrace sustainability attract environmentally sensitive clients while also gaining a great reputation. This reputation may lead to greater sales, better brand perception, and a devoted customer base, resulting in long-term success. Technological improvements play an important role in allowing and

improving environmentally friendly activities. Green technology and renewable energy are two areas of significant technical innovation.

When it comes to environmentally friendly activities, two key components play a critical part in achieving a sustainable future: renewable resources and a minimal carbon footprint. Renewable resources are an essential component of eco-friendliness. Solar energy, wind power, and biofuels are examples of renewable resources that can be regenerated over time. By adopting renewable resources, we may lessen our dependency on scarce resources such as fossil fuels while minimizing our environmental effect. Solar energy, for example, uses the sun's power to create electricity, making it a cleaner and more sustainable alternative to existing energy sources. Wind power is another renewable energy source that has become popular in recent years. Wind turbines transform the kinetic energy of the wind into electricity, delivering a sustainable and emission-free source of power. This technology might change the way how we generate power lowering gas emissions (Gray Group International, 2020).

Biofuels, which are made from organic stuff like plants and algae, are another type of renewable resource. These fuels may be used to power automobiles and industry, providing a cleaner alternative to conventional fossil fuels. Using biofuels allows us to drastically cut carbon emissions and battle air pollution, resulting in a healthier and cleaner world. The primary components of environmentally friendly operations are the use of renewable resources and the maintenance of a minimal carbon footprint. By adopting solar energy it can stand as a cornerstone in the transition to renewable energy sources. As outlined, it offers a multitude of benefits that extend beyond simply reducing carbon emissions. Solar power provides long-term energy assurance, drawing from an infinite source of energy—the sun—ensuring its availability for centuries to come. This reliability contributes to a sustainable energy future, aligning with the principle of meeting present needs without compromising those of future generations. Solar energy significantly and favorably affects the environment (API Day, 2024).

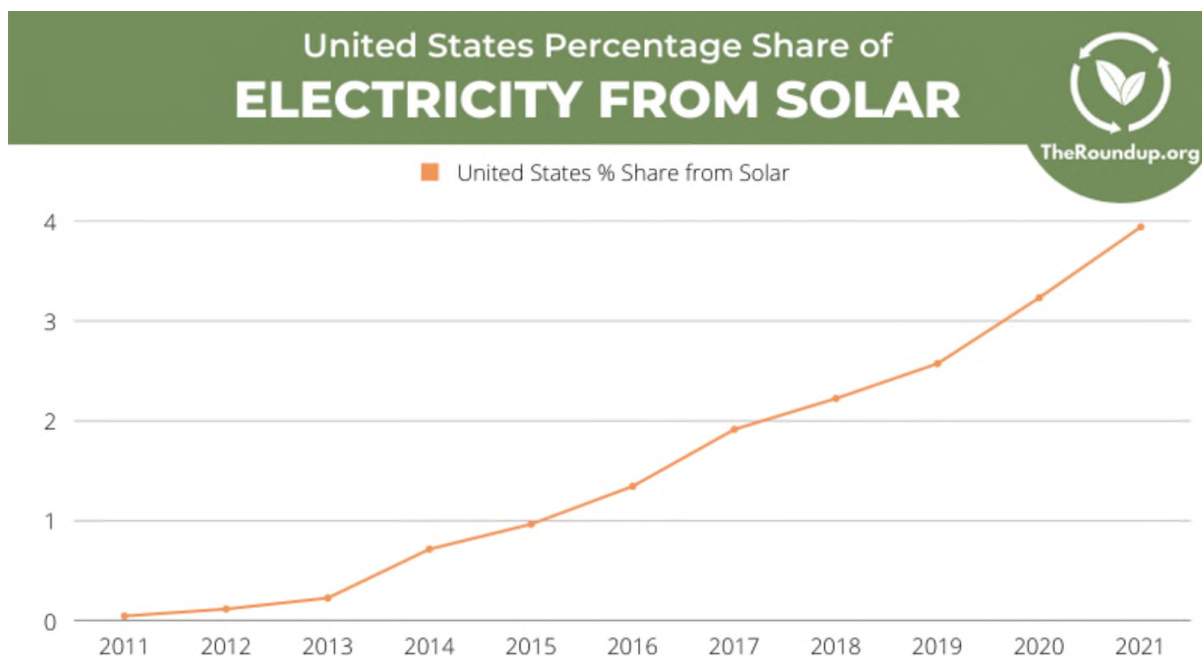


**Figure 1.1.** “Global generation of renewable energy for 2023”

*Source: compiled by the author.*

Global generation of renewable energy for 2023. 11.5% of all renewable energy all around the world energy comes from solar power. The largest renewable source is currently hydroelectric (57.7%) followed by wind (21.4%), according to the BP Renewable Energy Review (API Day, 2024). However, solar capacity is expanding at a much faster rate than any other renewable energy source, which means its share will increase in the future (API Day, 2024).

As the world prioritizes sustainability and carbon reduction, the role of renewable energy, especially solar power, is becoming even more world-acceptable and popular. The investment and innovation in renewable technologies are essential to achieve sustainable global climate goals.



**Figure 1.2.** ‘United States percentage share of electricity from solar’

Source: <https://theroundup.org/solar-power-statistics/>

According to the most recent 2021 annual figures, solar power accounts for 3.9% of total US energy generation, up from 3.2% the year before. In 2015, solar generated 0.95% of US power, compared to only 0.03% in 2010. Although solar currently accounts for a small percentage of power, the trend shows that its use is increasing year after year, and this is anticipated to continue in the next decades as we aim to reduce our dependency on fossil fuels (API Day, 2024).

In the United States, the percentage of energy generated by solar power has climbed dramatically from 0.03% in 2010 to 3.9% in 2021, indicating a continuous reduction in reliance on fossil fuels.

The international market for organic and eco-trends is built on two key components: renewable resources and a low carbon footprint. Accepting and continuous use of renewable resources like solar energy, wind power, and biofuels not only lessens our reliance on finite fossil fuels, but it also has a substantial environmental impact. Solar energy, in particular, emerges as a key component in this shift, providing long-term energy security while minimizing the negative consequences associated with traditional energy sources. The path to a sustainable future seems optimistic, as indicated by rising

worldwide renewable energy output and fast increase of solar capacity. With continued attempts to shift away from fossil fuels and embrace renewable alternatives, the route to environmental sustainability in international business looks both plausible and essential.

To summarize, the evidence presented demonstrates a favorable trend toward a greener future, aided by the growing use of renewable resources. Solar energy generates 11.5% of all renewable energy worldwide, and its capacity is growing faster than any other renewable source. This data shows an increasing worldwide trend toward sustainable behaviors. The growing use of solar electricity reflects a shift in the global economy, with businesses and consumers understanding the advantages of renewable energy.

## **1.2. Conducting an overview of the Global market and its sustainable impact**

In a world where nature harm is becoming an increasingly urgent issue, businesses and consumers are adopting more sustainable practices.

The rise of organic and eco-tendencies: a statistical snapshot. A survey of 10,281 global consumers in 2024 showed that: sustainable products account for 17% of the market and 32% of growth. Products branded as sustainable increased 2.7 times faster than those that weren't. 75% of sustainable products sell better online than in stores (The Roundup, 2024).

78% of customers believe sustainability is essential. 62% of individuals say they always or often strive to purchase things that are sustainable. 55% of people are prepared to pay more for environmentally friendly products. 84% of customers believe that bad environmental policies will drive them away from a brand or organization (The Roundup, 2024).

Sustainable products have a growing worldwide market share. According to data, sustainable products have a larger market share and a much higher growth rate than non-sustainable ones (The Roundup, 2024).

Products categorized as sustainable currently account for 17% of total market value. This is a 3.3% increase since 2015. Sustainable products account for 32% of market growth. They increased 2.7 times quicker than typical items (The Roundup, 2024).



Searches for sustainable goods have grown rapidly. There is an increased interest in studying and purchasing sustainable items online. Between 2017 and 2022, global Google searches for sustainable products climbed by around 130%. Searches conducted in the United States followed a similar pattern, growing by 117% throughout the same period. Sales of carbon-labeled products grew twice in one year. A lot of consumers want to decrease their carbon footprint, and they tend to see the emissions connected with the things they buy as a crucial aspect of doing so. Carbon-labeled products (such as those with 1% For the Planet or Climate Neutral Certification) earned more than \$3.4 billion in revenue in 2021, more than double the previous year (The Roundup, 2024).

Statistics show that sustainable products are less popular in-store than online. Brands that offer eco-friendly products, such as zero-waste retailers, are more likely to succeed online than in-store. Product categories saw sustainable items outperform in terms of market share when offered online vs in-store at 75%. This might be influenced by the number of people who shop online, as well as the greater amount of physical space available to display a product's eco-credentials on a website rather than a shopping shelf (The Roundup, 2024).



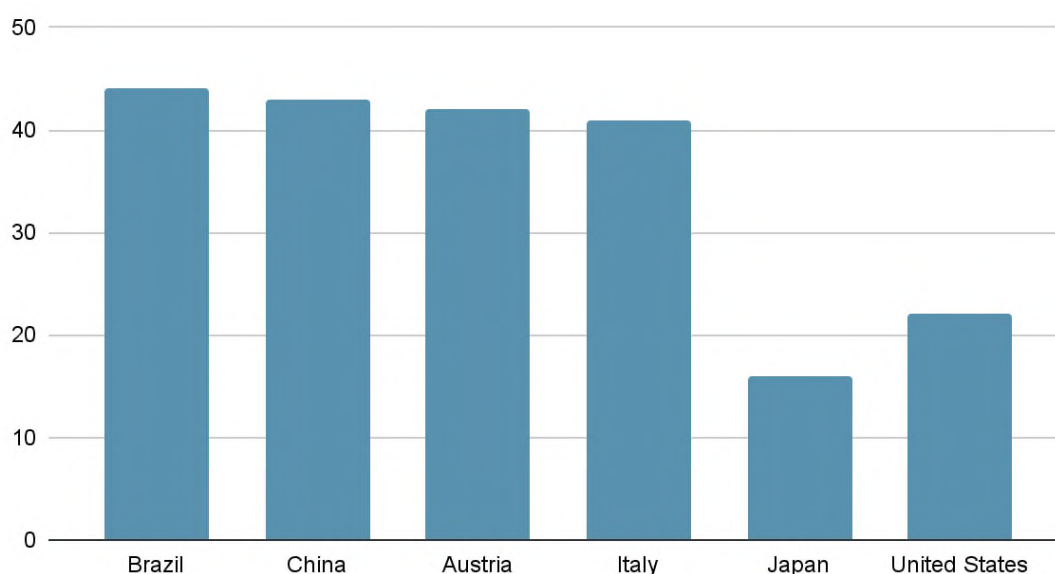
**Figure 1.3.** “Consumer attitudes to sustainability”

Source: <https://theroundup.org/environmentally-conscious-consumer-statistics/#Sources>

A poll of 10,281 global consumers in 2022 revealed that: 78% believe that environmental sustainability is essential, that the notion appeals to them, and that they wish to live more sustainably. 63% have made moderate or considerable measures to change their lifestyle, such as adopting greener purchasing habits, in order to become more sustainable (The Roundup, 2024).

A separate 2023 study of 2,414 U.S. adults indicated a similar shift in shopping behavior. 62% of individuals believe they "always or often" look for environmentally friendly items, up from 27% in 2021.

Millennials are more driven to engage in sustainable shopping practices. There is a generation difference among clients who have changed their behaviors. Baby Boomers (59%), with Gen X (62%) and Millennials (67%) demonstrating higher adoption (The Roundup, 2024).



**Figure 1.4.** “Variation of consumer attitudes by country”

*Source: compiled by the author.*

Figure 1.4 demonstrates that consumer attitudes vary by country. Regional perspectives on sustainability vary substantially. Consumers in Brazil (44%), China (43%), Austria (42%), and Italy (41%), are the most likely to have made an extensive or complete move toward a more sustainable lifestyle; at present, respondents from Brazil and China are younger and better educated. Japan (16%) had the lowest percentage of customers who have implemented sustainability measures. The United States (22%) dropped behind, with one of the highest percentages of customers making no changes (21%) (The Roundup, 2024).

In recent years, consumer tastes have shifted significantly toward healthier and more sustainable products. This tendency has resulted in the rapid expansion of the organic goods industry globally. Organic products are produced and processed with no synthetic chemicals, pesticides, or genetically modified organisms (GMOs). The global organic products gives a lot of benefits to consumers and the environment (Wang, J., & Azam, W., 2024).

The rise of organic products: demand for organic products is constantly expanding all over the world. Consumers are becoming aware of the possible health dangers connected with traditional farming techniques, such as pesticide residues and antibiotic use. This knowledge has spurred the expansion of the organic products industry, which encompasses food, drinks, personal care items, clothes, and home goods. Factors driving market growth: a number of factors contribute to the growth of the organic products market. To begin, consumers' increased health and environmental concerns has resulted in a higher demand for organic alternatives. Second, strong government rules and certifications assure the integrity and quality of organic products, giving customers trust. Furthermore, the proliferation of e-commerce and online platforms has made it simpler for customers to find and buy organic products from anywhere in the globe.

The organic goods industry is defined by continuous trends and innovation. One significant trend is the increase in organic cosmetics and personal care products as customers seek natural alternatives to synthetic components. Sustainable packaging is also gaining popularity, with several firms using eco-friendly materials to lessen their environmental impact. Furthermore, the farm-to-table concept and direct trade techniques are gaining appeal among customers who prefer transparency and support for local farmers (Chekima, B., Oswald, A. I., Wafa, S. A. W. S. K., & Chekima, K., 2017).

Benefits to consumers and the environment choosing organic goods has various advantages. Organic food is frequently regarded more nutritious and devoid of dangerous chemicals, resulting in better health benefits. Organic agricultural techniques improve soil fertility, biodiversity, and minimize water pollution, resulting in a better ecosystem. Furthermore, organic products are mostly manufactured using fair trade principles, farmers

are fairly compensated for their efforts and work (Chekima, B., Oswald, A. I., Wafa, S. A. W. S. K., & Chekima, K., 2017).

In conclusion, the data reveals a clear picture of a worldwide market that is more concerned with sustainability. This data also indicates a substantial shift in consumer behavior toward sustainability. As people become more conscious of the environmental effects of old behaviors, there is a greater demand for eco-friendly alternatives. The growing popularity of organic products, as well as online sites dedicated to sustainable goods, reinforces this trend. The figures present a positive picture of a greener future. Consumer preferences are forcing corporations to embrace sustainable methods, pointing to a future in which eco-friendly items are the standard.

### **1.3. Introduction of eco startups in Ukraine for 2020-2023 years and overview of Ukrainian market for eco-tendencies**

Ukrainian green startups shine at Green Pitch Day. Kyiv fosters a new generation of eco-innovators. On August 12th 2023, Kyiv played host to Green Pitch Day, a vibrant event that united talented Ukrainian entrepreneurs and laid the groundwork for a thriving community of green innovators. The event showcased the ideas of 20 teams in the pre-seed and seed funding stages. These climate-friendly company concepts got useful comments from a panel of professional judges and competed for the championship title (Greencubator, 2023).

Ukrainian green startups battle for green lory. The first part of Green Pitch Day highlighted the innovative ideas presented by teams participating in ClimateLaunchpad, a global competition organized by Greencubator in Ukraine for the eighth consecutive year. The National Selection winners for the forthcoming Regional Final were revealed, and they will have the opportunity to represent Ukraine (Greencubator, 2023).

ClimateLaunchpad Regional Finalists from Ukraine.

1<sup>st</sup> Place: Melt Water Club (technology for producing drinking water).

2<sup>nd</sup> Place: Mycelia Tech (materials from mycelium and agricultural waste).

3<sup>rd</sup> Place: TomorrowPack (reusable eco-boxes for online deliveries).

The second block featured presentations from the inaugural Greencubator.Academy cohort. This program focuses on training and accelerating startups from the initial idea stage. Here, the teams showcased their business ideas, models, solutions, and overall green business approaches (Greencubator, 2023).

Greencubator.Academy Top Pitches.

1<sup>st</sup> Place: Rekava (biodegradable products made from coffee grounds).

2<sup>nd</sup> Place: SOLAR PLEX (solar panel hybridization).

3<sup>rd</sup> Place: FlushWave (water reuse system).

Green Pitch Day brought together a diverse group of green entrepreneurs, with the following teams presenting their innovative business concepts:

TomorrowPack (reusable eco-boxes for online deliveries).

LUAZ Care (electric utility vehicles for people with disabilities).

Sistan Varvara (clothing made from recycled fabrics)

Melt Water Club (technology for premium drinking water production)

Skat Energy (Virtual Power Plant technology for battery owners)

SEVEC (parking charging stations for electric micro-mobility vehicles)

Greenmaker (tree-planting inventory and event map for volunteers and eco-projects)

Plasma Chemical Method (water conservation using plasma technology)

Mycelia Tech (eco-friendly materials from mycelium)

WildfireUA (forest fire analysis tool combining satellite data, fire forecasting, and emissions modeling)

Rekava (biodegradable products, tableware, and candles made from coffee grounds)

Brayton Power (cogeneration plant with 10 kW thermal and 1 kW electrical capacity)

FlushWave (automated system for reusing water from handwashing and washing machines)

Eco-Soap Dish (production of eco-friendly soap dishes from recycled plastic)

Green Planet (production of paving stones and street tiles from recycled materials)

SOLAR PLEX (service to upgrade regular solar panels into hybrid ones)

The event concluded with an informal networking session, where participants, judges, investors, and guests exchanged ideas and fostered connections. This collaborative spirit is crucial for the development of both individual businesses and the green startup ecosystem as a whole. Green Pitch Day successfully showcased the burgeoning talent pool of Ukrainian eco-innovators and provided a glimpse into the transformation of green business ideas into sustainable realities. This event shows Ukrainian continuous progress toward green innovations, solutions, and practices (Greencubator, 2023).

Looking ahead - top sustainability trends for 2024 in Ukraine:

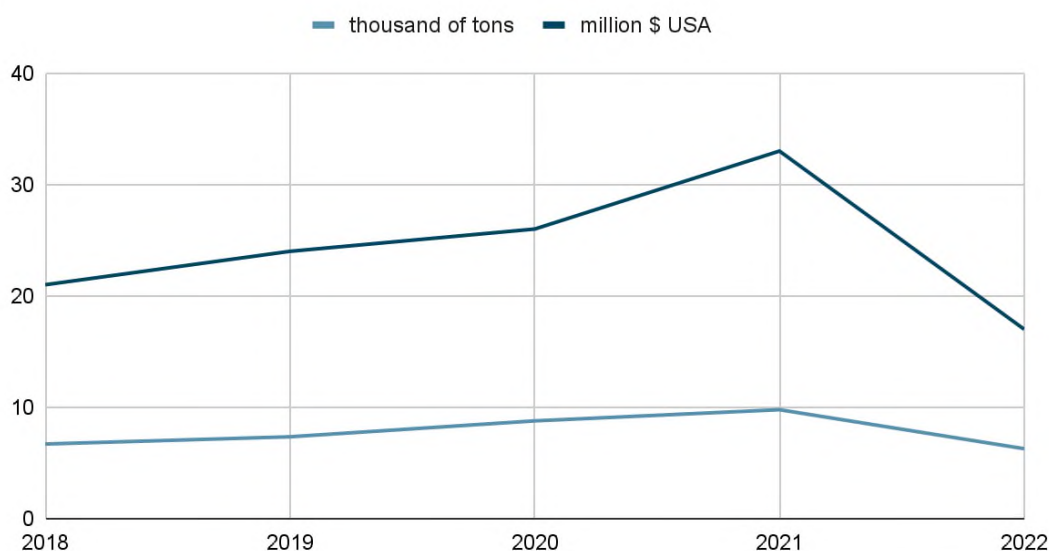
Renewable energy sources (RES): expected to become the most cost-effective source of electricity production globally, with a projected 80-90% share of total electricity generation by 2050.

Low-carbon construction: the construction industry is increasingly focused on minimizing carbon emissions.

Next-generation transportation: the transport sector is embracing clean technologies, particularly electric vehicles. Technologies for energy storage, utilization, and collection gain traction (Cases.media, 2023).

Ukraine sets new record for organic product exports despite challenges. According to the latest industry report, "The World of Organic Agriculture 2024," Ukraine has achieved a record high in organic agri-food exports for 2022. This accomplishment comes despite the ongoing full-scale Russian invasion. The report reveals that Ukraine's organic exports reached a value of €208 million, surpassing the previous peak of €188 million in 2021 (Ukrainian Export Promotion Agency, April 2024). Additionally, data from the European Commission shows a strengthened position for Ukraine within the EU market. In 2022, Ukraine ranked third among suppliers of organic food to the EU, exporting a volume of 219,000 tons. This marks a significant improvement from 2021, when Ukraine held the fifth position with exports of 189,000 tons (Ukrainian Export Promotion Agency, April 2024).

## Points scored



**Figure 1.5.** “Sales of organic products for 2018-2022: domestic market”

Source: compiled by the author based on <https://organicinfo.ua/infographics/domestic-market-2018-2022/>

In figure 1.5 demonstrated sales of organic products for 2018-2022: domestic market. 2018-2021 sales tonnage and income show a significant increase trend from 2018 (6700 tons, \$21 million) to 2021 (9780 tons, \$33 million). This demonstrates the expanding domestic demand for organic products in Ukraine. For 2022 (6280 tons, \$17 million), the number is significantly lower than in 2021. This reduction is due to Russia's continuing invasion of Ukraine, which has impacted economic activity and consumer spending.

Future outlook 2023-2024: it's worth noting that statistics for 2023 and 2024 are not yet available. However, given the pre-war growth history, we might cautiously predict on a possible sales rebound:

- post-war recovery: If the conflict ends and the Ukrainian economy recovers, organic product sales may exceed 2021 levels.
- growing worldwide interest in sustainability may drive up demand for organic products in Ukraine.

To summarize, the subchapter shows Ukraine as resilient and inventive, actively pursuing a sustainable future. It also shows Ukraine's booming green startup culture and success in the organic food export business, despite the continuing war. Green Pitch Day celebrated Ukrainian eco-entrepreneurs' innovation and potential, showcasing new solutions such as water reuse systems and biodegradable coffee grounds. The event promoted collaboration while highlighting critical environmental themes such as renewable energy and low-carbon development. Ukraine's organic food exports reached a new high in 2022, displaying a robust European market presence despite the conflict. While domestic sales of organic goods fell in 2022 owing to economic upheavals, a possible return is anticipated in the future, fueled by postwar recovery and worldwide interest in sustainability.



## **CHAPTER 2. STUDY OF LLC “HITACHI ENERGY UKRAINE” TOWARDS A SUSTAINABLE ENERGY FUTURE**

### **2.1. Analysis of the company’s environment, organizational structure, financial and economic indicators**

LLC "Hitachi Energy" provides clients across the functionality, sector, and construction industries with innovative solutions and services throughout their value chain. Together with stakeholders and customers, the organization develops solutions and facilitates the digital shift necessary to speed the energy transformation to a carbon-neutral future (Hitachi Energy, 2024).

LLC "Hitachi Energy" strives to make the global energy system more environmentally friendly, adaptable, and secure while harmonizing social, environmental, and economic value. LLC "Hitachi Energy" has an established track record and an unrivaled installed base in over 140 countries. It is headquartered in Switzerland and employs around 40,000 people in 90 countries, with annual sales exceeding USD 10 billion. "Hitachi Energy" is a limited liability company. (Hitachi Energy, 2024).

Beyond technical innovation, the company also looks to its impact on societies and how it can improve lives and inspire others. LLC “Hitachi Energy”’s spirit remains at the heart of the company. This philosophy is based on three words that guide how it operates. Wa (Harmony): accepting others' ideas and debating issues openly, but also fairly and objectively. Makoto (Sincerity): addressing challenges in an open, honest, and courteous manner, in the spirit of real collaboration. Kaitakusha-seishin (Pioneering Spirit): trying to lead in our fields of competence, fostering individuals' infinite potential while chasing new challenges and loftier aims. These ideals serve as the cornerstone for LLC "Hitachi Energy" choices and connect group enterprises across the world. They cultivate a varied and fulfilling culture that encourages creativity and motivates others to do the same. The organization has the best employees, and they get to work on some of the coolest projects on the globe (Hitachi Energy, 2024).

LLC “Hitachi Energy Ukraine” is involved in multiple large-scale projects, including substation reconstruction and renewable energy integration. This suggests they have a presence in the Ukrainian market and secure contracts, potentially indicating a healthy business operation. "Ukrenergo" has started the comprehensive reconstruction of substations in the western region of Ukraine - "Kovel" with a voltage of 330 kV, and "Borislav" with a voltage of 220 kV (Hitachi Energy, 2024).

For these substations, LLC “Hitachi Energy Ukraine” supplies AIS switchgear, including circuit breakers, disconnectors, and surge arresters. Such a reconstruction increases the reliability of the region's transmission system, reduces technological losses of electricity, significantly reduces operating costs, and transfers substations to automated operation with the possibility of remote control from the main dispatch center. The project is a component of the comprehensive substation automation program, which involves the reconstruction of all Ukrenergo substations with the introduction of automated process control systems (CCPs). The program is aimed at improving the reliability of the power transmission system, creating a technical base for the implementation of smart grid technology in trunk networks, and ensuring the level of network reliability and security following the requirements of ENTSO-E (Hitachi Energy, 2024).

LLC “Hitachi Energy Ukraine” supports the integration of wind energy into the network of Ukraine "Aquilon", Kherson region, 150 kV overhead power line (PL) with a length of approximately 40 km and 330 kV overhead power line (PL) with a length of approximately 1 km will help connect the 600 MW wind farm to the grid (Hitachi Energy, 2024).

For the construction of the substation, LLC “Hitachi Energy Ukraine” will supply AIS switchgear, including circuit breakers, disconnectors, surge arresters, and current transformers. The construction of the substation will ensure the use of new generating capacities, as well as increase the reliability of energy supply and the quality of electricity in the Kherson region. This initiative encompasses several significant aspects of their economic activity: reconstruction of key substations: LLC “Hitachi Energy Ukraine” is contributing to the reconstruction of substations such as "Kovel" and "Borislav" with different voltage capacities, aiming to enhance the reliability and performance of these

critical components in the region's energy transmission infrastructure (Hitachi Energy, 2024).

Enhanced reliability and reduced Losses: the comprehensive reconstruction efforts significantly enhance the reliability of the region's transmission system. Moreover, they help minimize technological losses of electricity, ultimately leading to cost savings for Ukrenergo. The substations are also being upgraded to support automated operations and remote monitoring, thereby streamlining management and ensuring rapid responses to grid conditions from the main dispatch center (Hitachi Energy, 2024).

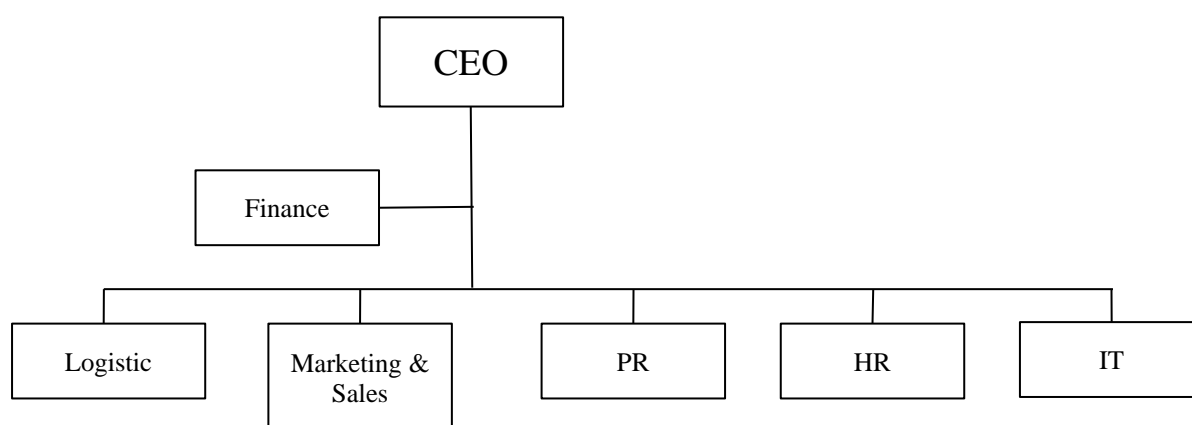
Part of a substation automation program: the project aligns with a broader initiative, the comprehensive substation automation program. This program encompasses the modernization of various Ukrenergo substations, integrating automated process control systems (CCPs). The primary objective is to bolster the reliability of the power transmission system, establish the technical foundation for smart grid technologies in trunk networks, and meet the network reliability and security standards set by the European Network of Transmission System Operators for Electricity (ENTSO-E) (Hitachi Energy, 2024).

Support for renewable energy integration: LLC “Hitachi Energy Ukraine” also plays a vital role in supporting the integration of renewable energy sources, such as wind energy, into Ukraine's power grid. The involvement in projects like "Aquilon" in the Kherson region signifies their commitment to expanding the country's clean energy capacity. The 150 kV overhead power line with a length of about 40 km will help connect a substantial 600 MW wind farm to the grid. A 330 kV overhead power line with a length of approximately 1 km is also part of the integration efforts (Hitachi Energy, 2024).

In summary, the economic activity of LLC “Hitachi Energy Ukraine” is centered around modernizing and fortifying Ukraine's energy infrastructure. Through the reconstruction of critical substations, the supply of advanced switchgear, and support for renewable energy integration, LLC “Hitachi Energy Ukraine” is contributing to a more reliable, efficient, and sustainable energy ecosystem in Ukraine.

Overview of management structure. LLC “Hitachi Energy Ukraine” counts more than 25 employees now, compared to over 50 before the full-scale invasion of Ukraine.

The management system is rather bureaucratic and complicated. Every morning of my internship starts with a team meeting, then department leaders have their separate team meetings where they discuss urgent questions, and then the department leader clears out new information for all members of the department. The organizational structure of the enterprise is based on a linear functional principle. This principle is based on the direct flow of authority from the CEO to lower-level management, where activities are divided into different departments based on specialization.



**Figure 2.1.** “Linear functional organizational structure of LLC "Hitachi Energy Ukraine"”

*Source: compiled by the author.*

Figure 2.1 describes that LLC "Hitachi Energy Ukraine" has a linear functional organizational structure. This usual strategy creates a clear line of command, with decision-making authority passing from the Board of Directors to department heads and staff. Functional departments, each specialized in a certain field such as marketing or finance, facilitate the effective completion of diverse responsibilities. This approach enables LLC “Hitachi Energy Ukraine” to utilize knowledge while preserving centralized management. However, it is critical to assess if this linear strategy provides the agility and flexibility required in today's changing business landscape.

**Table 2.1. Analysis of financial and economic indicators of LLC “Hitachi Energy Ukraine” for 2021-2022 years**

LLC “Hitachi Energy Ukraine” 2021-2022			
REVENUE		2022 (in thousand UAH)	2021 (in thousand UAH)
	<i>Net Sales Revenue</i>	3000	4000
	<i>Other Operating Income</i>	176235,2	54356,2
	<i>Other Income</i>	5236,7	99,6
	<i>Total Revenue</i>	183116,7	61461,3
EXPENSES			
	<i>Costs of Goods Sold</i>	126620	34930,3
	<i>Other Operating Expenses</i>	28204,8	31148,9
	<i>Other Expenses</i>	642,8	148,5
	<i>Total Expenses</i>	158467,6	66227,7
PROFIT			
	<i>Profit Before Tax</i>	24649,1	4766,4
	<i>Income Tax</i>	3795,6	-1676,5
	<i>Net Profit</i>	20853,5	3089,9
PROFITABILITY			
	<i>ROS</i>	11,39%	5,03%
	<i>ROA</i>	14,74%	2,18%
EFFICIENCY OF FUNDS UTILIZATIONS			
	<i>Assets turnover</i>	1,29	0,43
	<i>Accounts Receivable</i>	5,91	4,11

	<b>Turnovers</b>		
<b>LIQUIDITY</b>			
	<b>Current Ratio</b>	2,21	1,31

*Source: compiled by the author.*

In table 2.1. demonstrated 2021 financial performance of LLC “Hitachi Energy Ukraine”: LLC “Hitachi Energy Ukraine” experienced significant growth in 2022 compared to 2021. The company's total revenue increased almost threefold, driven by a surge in other operating income. Net profit also increased substantially, indicating improved profitability. Financial ratios: the company's financial ratios demonstrate a strong financial position.

**Table 2.2. Financial performance for 2020-2023 of the LLC “Hitachi Energy Ukraine”**

Year	Revenue (UAH)	Net Profit (UAH)	Assets (UAH)	Liabilities (UAH)	Number of Employees
2023	446,820,700	59,990,800	406,180,900	240,403,600	28
2022	278,490,000	-12,185,200	316,682,600	222,712,500	33
2021	247,789,900	24,188,200	254,665,400	193,739,000	30

*Source: <https://opendatabot.ua/c/43151343?from=search>*

Based on Table 2.2. we can see such company’s indicators:

Revenue: LLC “Hitachi Energy Ukraine”'s revenue increased significantly from 2021 to 2022, by 12.2% in 2021 and 63.5% in 2022. This expansion may likely be attributable to rising demand for their energy solutions and services, presumably driven by factors such as infrastructure development, energy efficiency measures, and the growing acceptance of renewable energy sources. LLC “Hitachi Energy Ukraine”'s net profit varied over the period, with a drop of 50.2% in 2022 compared to 2021. This might be attributed to a variety of things, including increasing operational costs, changes in tax

regulations, or economic situations. The company's assets expanded steadily from 2021 to 2022, indicating a growth in investments in equipment, inventories, or other assets that support its operations. Liabilities also grew throughout the time, suggesting that LLC “Hitachi Energy Ukraine” may have taken on additional debt or other financial commitments to support its expansion or activities. The number of workers declined from 33 in 2022 to 28 in 2023, potentially owing to restructuring, efficiency initiatives, or changes in company demands.

**Table 2.3. Ratio calculations for LLC “Hitachi Energy Ukraine” for 2021-2023 years  
based on Table 2.2**

Year	ROI	ROS	ROE
2021	9,498031535	9,761576239	39,70068804
2022	-3,847764291	-4,375453338	-12,96710337
2023	14,76947833	13,4261461	36,18758419

*Source: compiled by author based on data from*

<https://opendatabot.ua/c/43151343?from=search>

$$ROI \text{ Net profit} = \text{Net profit}/\text{Assets} * 100$$

$$ROS \text{ Net profit} = \text{Net profit}/\text{Revenue} * 100$$

$$ROE \text{ Net profit} = \text{Net profit}/\text{Equity} * 100$$

$$\text{Equity} = \text{Assets} - \text{Liabilities}$$

LLC "Hitachi Energy Ukraine" had a positive ROI and ROS in 2021 and 2023, demonstrating their potential to create profits from assets and revenues.

Overall, LLC “Hitachi Energy Ukraine” performed an important role in supporting Ukraine in 2022. They prioritized orders for transformers vital for restoring electricity following damage caused by the war. This might have affected their total revenue structure compared to past years. The 2023 was mediocre. While sales growth is good, the drop in net profit raises questions about the company's viability. The company's financial situation is pretty good, but it will be vital to monitor its ability to reduce spending and preserve profitability in the future.

LLC “Hitachi Energy Ukraine” can improve its profitability, fortify its position in the market, and accomplish long-term, steady growth by putting these suggestions into practice: analyzing operational costs to identify opportunities for streamlining processes, reducing waste, and negotiating better deals with suppliers; assess pricing plans to make sure they maintain market competitiveness while capturing the whole value offer; increase the number of high-margin services you offer, such as upgrades, maintenance, and consulting, to create more lucrative revenue streams; cut labor expenses and increase operational efficiency, take into account automation and technological solutions; look into and possibly enter markets with significant room for expansion for their goods and services, provide competitive compensation packages and make investments in career development programs to attract and retain skilled workers; provide outstanding customer service to establish enduring client relationships and win repeat business.

Overall, if LLC "Hitachi Energy Ukraine" can leverage on the growing demand for sustainable energy solutions, the company's future looks bright. The war's long-term economic impact on Ukraine and foreign investment is questionable. Rebuilding initiatives might create substantial opportunity. By positioning itself as a pioneer in renewable energy integration, LLC "Hitachi Energy Ukraine" can help Ukraine achieve its energy independence and environmental goals. While the emphasis is on renewable energy, LLC "Hitachi Energy Ukraine" is likely active in other areas of the energy sector, such as grid upgrading and substation modifications. Their contributions in these sectors are also critical to Ukraine's overall energy infrastructure development. A successful and expanding LLC "Hitachi Energy Ukraine" may help to Ukraine's economic growth by: creating employment and recruiting qualified individuals; promoting the development of a robust and sustainable energy industry; Attracting foreign investment through its partnership with a major brand such as Hitachi.

To sum up, LLC "Hitachi Energy Ukraine" looks to be a well-established corporation with promising growth prospects. By focusing on cost control, capitalizing on the green energy trend, and navigating the post-war climate, the firm can contribute significantly to Ukraine's economic recovery and long-term energy security.



## 2.2. Identifying eco-tendencies in the company LLC “Hitachi Energy Ukraine”

LLC “Hitachi Energy Ukraine” is deeply committed to a strong value system that is incorporated into all their activities and that everyone from their leaders to employees is expected to follow. These core values include sincerity, fairness, commitment to the environment and society, respect for human rights transparency, and ethics of conduct (Hitachi Energy, 2024).

The world is confronting environmental issues that are growing increasingly serious with each passing day. Following LLC “Hitachi Energy Ukraine”’s mission to “contribute to society through the development of superior, original technology and products”, they pursue their Social Innovation Business by leveraging core strengths to help build sustainable societies. To respond to the increasingly complex global issues of recent years, they must conduct management from a long-term perspective and maximize LLC “Hitachi Energy”’ diverse management resources to achieve further evolution in their Social Innovation Business (Hitachi Energy, 2024).

**Table 2.2. “Eco-tendencies in LLC “Hitachi Energy” corporate based on its materiality”**

<b>Materiality</b>	<b>Eco-tendencies in the company LLC “Hitachi Energy”</b>
Environment <ul style="list-style-type: none"> <li>Contributing to decarbonization and resource circulation</li> </ul>	As a climate change innovator, LLC “Hitachi Energy” will contribute to the realization of a carbon neutral society with Hitachi's superior green technologies, by providing value to customers in all business segments. We will also promote resource efficiency toward the transition to a circular economy.
Resilience <ul style="list-style-type: none"> <li>Contributing to the maintenance and</li> </ul>	LLC “Hitachi Energy” helps people live safely by contributing to the rapid recovery

rapid recovery of social infrastructure	of supply chains and the maintenance of social infrastructure by providing system solutions that can respond immediately to risks, such as natural disasters, pandemics, and cyberattacks.
<p>Safety &amp; Security</p> <ul style="list-style-type: none"> <li>Contributing to safe and secure societybuilding</li> </ul>	LLC “Hitachi Energy” contributes to the realization of comfortable and active lifestyles for people by providing solutions in the building, mobility, and security fields that support urban development for safe and secure living.
<p>Quality of Life</p> <ul style="list-style-type: none"> <li>Contributing to physical and mental wellness and a prosperous life.</li> </ul>	LLC “Hitachi Energy” is harnessing our healthcare and digital technologies to help more people develop bonds and enjoy healthier, more prosperous lives. We will also continue to pursue the happiness and wellbeing of our employees, as we believe that their happiness and wellbeing is the ground on which Hitachi's future will flourish even more fully.
<p>Business with Integrity</p> <ul style="list-style-type: none"> <li>Adhering to ethical standards as well as respect human rights</li> </ul>	As a Group responsible for social infrastructure around the world, Hitachi will manage its business with honesty and integrity, trusted by society, respect human rights and provide a safe workplace. We will reflect a system of ethical and responsible business conduct, including respect for human rights, in our business activities and decisionmaking standards, working together with our employees,

	collaborative partners and communities throughout the supply chain.
Diversity, Equity and Inclusion (DEI) Contributing to a society where everyone can shine	LLC “Hitachi Energy” has a place for everyone, welcoming differences in colleagues’ background, age, gender, sexuality, family status, disability, race, nationality, ethnicity, and religion. At LLC “Hitachi Energy”, we treat everyone fairly, recognizing differences to allow everyone to perform at their full potential. We respect and value these and other differences because only through them we can understand our markets, create better ideas and drive innovation.

*Source: compiled by author based on Hitachi Sustainability Report, 2022*

LLC “Hitachi Energy Ukraine” implements these environmental tendencies in its work in Ukraine promoting such tendencies in our society. It could help Ukrainian communities reduce their reliance on fossil fuels and transition to more renewable energy sources. This would help to improve air quality and reduce greenhouse gas emissions. These eco-tendencies will help Ukrainian communities implement energy-saving measures in homes and businesses reducing energy costs and conserving resources. LLC “Hitachi Energy Ukraine” development of a green economy could create new jobs and businesses in Ukraine. The company could play a role in this by supporting the development of renewable energy technologies and energy efficiency solutions.

LLC "Hitachi Energy Ukraine" keeps developing throughout sectors while dealing with societal challenges by using the three global trends of digital, green, and connectivity as change drivers. LLC "Hitachi Energy Ukraine" seeks to address ever more complicated societal concerns through its company while valuing planetary limitations and achieving well-being for all citizens (Hitachi Energy, 2024).

LLC “Hitachi Energy Ukraine” serves customers in the utility, industry, and infrastructure sectors with innovative solutions and services across the value chain. Together with customers and partners, it pioneers technologies and enables the digital transformation required to accelerate the energy transition towards a carbon-neutral future. LLC “Hitachi Energy Ukraine” is advancing the world’s energy system to become more sustainable, flexible, and secure whilst balancing social, environmental and economic value (Hitachi Energy, 2024).

Overall, LLC "Hitachi Energy Ukraine" looks to be a forward-thinking organization that understands the value of sustainability and social responsibility. They are well-positioned to lead Ukraine's energy transformation and social development by harnessing these ideals and technological competence.

### **2.3. Studying of main targets of LLC “Hitachi Energy Ukraine” toward sustainability**

LLC "Hitachi Energy" has a strategy named "Sustainability 2030: Towards a Sustainable Energy Future. Sustainability 2030 is LLC "Hitachi Energy"'s tactics plan for long-term sustainability, outlining the company's core promises to act and drive business responsibly. Based on four pillars: Planet, People, Peace, and Partnerships, its approach takes from the UN's Sustainable Development Goals (SDGs). Each pillar has associated objectives that drive the company to generate humanitarian, ecological, and financial value (Hitachi Energy, 2024).

To address the difficulties posed by climate change, society must transition to a carbon-neutral energy future. Following the epidemic, governments, business, and the general public have increased their emphasis on the environment. Climate objectives have been established on all continents, and ambition levels are higher than ever before. The energy transition is critical to building a sustainable future on social, environmental, and economic levels. Electricity is quickly becoming the foundation of the global energy system (Hitachi Energy, 2024).

Decarbonization relies heavily on clean energy generation, network infrastructure, and end-use sector electrification. To fulfill the changing requirements of a rising population while limiting climate change, huge amounts of variable energy provided by renewable sources (such as wind and solar) must be efficiently integrated into the global energy system. To meet demand, the electrification of the transportation, industrial, and construction sectors will continue to accelerate. The energy environment is changing rapidly. A sustainability strategy focused on achieving net-zero emissions is critical to our company's development and long-term success. We have placed sustainability at the center of our mission: to advance a sustainable energy future for everybody. We are contributing to the world's energy system more sustainable, adaptable, and secure. As the pioneering technological leader, we cooperate with customers and partners to create a sustainable energy future—for today's generations and those who will follow (Hitachi Energy, 2024).

**Table 2.3. “Regarding fiscal 2030 and fiscal 2050 decarbonization targets, single-year targets are set Groupwide and for each BU”**

	<b>Sustainability targets</b>
<b>Decarbonization</b>	<ul style="list-style-type: none"> <li>• Efforts to realize carbon neutrality in business sites (factories and offices) by fiscal 2030</li> <li>• Efforts to achieve carbon neutrality by fiscal 2050 throughout the value chain</li> </ul>
<b>Resource efficiency</b>	<ul style="list-style-type: none"> <li>• Efforts related to resource efficiency</li> </ul>
<b>Occupational health and safety</b>	<ul style="list-style-type: none"> <li>• Zero fatal accidents</li> <li>• Wellbeing initiatives</li> </ul>
<b>Product quality</b>	<ul style="list-style-type: none"> <li>• Efforts to enhance product quality</li> </ul>

*Source: compiled by author based on Hitachi Sustainability Report, 2022*

To reach zero emissions in LLC "Hitachi Energy" operations, the initial phase is to make investments in fossil-free electricity and energy efficiency, ensuring that its facilities

work as effectively as possible. In January 2022, LLC "Hitachi Energy" fulfilled its first-step target of using 100% fossil-free electricity in its own activities, indicating significant progress toward its Sustainability 2030 goal of being carbon-neutral. By using 100% fossil-free power in operations, LLC "Hitachi Energy" lowered its CO<sub>2</sub> equivalent emissions by more than 50% compared to 2019. LLC "Hitachi Energy" accomplished this through initiatives that produced fossil-free power, such as installing solar roof panels, switching electricity contracts to green tariffs, purchasing Energy Attribute Certificates (EAC), and negotiating Power Purchase Agreements (PPA). LLC "Hitachi Energy" continues to invest in its road to carbon neutrality by enhancing energy efficiency and electrifying its own activities. In Ludvika, Sweden, the firm is presently employing 100% renewable electricity supplied by hydropower and, to a lesser extent, solar panels to power its activities. Ludvika, one of LLC "Hitachi Energy"'s major production facilities, has gone beyond addressing their electricity supply and is currently on track to eliminate the usage of all fossil fuels from their whole business. LLC "Hitachi Energy" advances a sustainable energy future for everybody and has a duty to enable our customers and other important stakeholders to expedite the energy transition and develop solutions that help lower the total carbon footprint (Hitachi Energy, 2024).

Partnerships for the Goals is the inspiration for LLC "Hitachi Energy"'s final Sustainability 2030 pillar. The energy transition requires strong collaboration. The company's goal is to be the preferred partner for a sustainable energy future. The organization believes that variety and cooperation result in great invention. LLC "Hitachi Energy" collaborates with customers, partners, and other important stakeholders to develop sustainable, adaptable, and secure solutions that accelerate the energy transition, advancing a sustainable energy future for all. Sustainability 2030 offers the firm a clear emphasis on how it will contribute to society and address some of the most pressing issues. Sustainability Strategy 2030 is not something that LLC "Hitachi Energy" can achieve on its alone; it requires collaboration to make it a reality. Only if LLC "Hitachi Energy" and its partners all work together, they can reach the targets. It helps to cocreating a carbon-neutral future, where electricity is the backbone of the entire energy system (Hitachi Energy, 2024).

To sum everything up, LLC “Hitachi Energy”’s "Sustainability 2030" plan provides a comprehensive and ambitious strategy for addressing climate change and ensuring a sustainable energy future. The plan acknowledges the seriousness of the problem, highlighting the need for a carbon-neutral energy system based on clean energy generation, strong infrastructure, and broad electrification. Their devotion is outstanding. LLC “Hitachi Energy” has already made tremendous progress, using 100% fossil-free power in its own operations and drastically lowering its carbon impact. Looking ahead, they intend to increase their investment in energy efficiency and electrification, as well as collaborate with partners to speed the global energy transformation. “Sustainability 2030” extends beyond internal operations. LLC “Hitachi Energy” understands its duty to help customers and stakeholders achieve their own sustainability objectives (Hitachi Energy, 2024).

In summary, the LLC "Hitachi Energy" looks to be a leader in the energy transition. Their dedication to sustainability and innovation enables them to capitalize on the rising demand for clean energy solutions and contribute to a more sustainable future.

### **CHAPTER 3. CONSIDERATION OF WAYS OF EVOLVING ECO-TENDENCIES FOR THE UKRAINIAN AND INTERNATIONAL COMPANIES**

Many elements contribute to corporate success, and nowadays, global environmental issues, natural resource depletion, global warming, and overpopulation underscore the significance of eco-innovation for long-term growth. The study's goal was to look at the importance of eco-innovations for the long-term growth of Ukrainian businesses, particularly in light of the repercussions of the armed invasion against Ukraine in 2022. Analyzing, synthesizing, abstracting, generalizing, and explaining are common research procedures (Berrone, P., Fosfuri, A., & Gelabert, L., 2016).

The economic, legal, commercial, and socio-environmental pressures on business provide the prerequisites for the introduction of eco-innovations. The consequences of eco-innovations are classified into three categories (environmental, economic, and social), and the benefits and drawbacks of implementing them for business are thoroughly discussed. In accordance to analysis and demonstrated global examples, eco-innovations enhance customer and employee loyalty, raise revenues, and improve corporate image, among other benefits (Berrone, P., Fosfuri, A., & Gelabert, L., 2016).

At the same time, the following drawbacks are listed: significant expenses; technical, technological, and regulatory challenges; growing commodity prices; and extra unique impediments in Ukraine. Although many Ukrainian enterprises effectively incorporate innovations, studies suggest that they lag behind corporations in industrialized nations in terms of technical efficiency and high-tech product sales. Ukraine has already gained major places in the Environment Performance Index 2022, indicating that it is on track to execute the European Green Deal.

However, Russia's invasion of Ukraine in 2022 had a tremendous economic, environmental, and scientific consequence. The planet's resources are fast depleting. According to projections, by 2050, mankind (approximately 9.6 billion people) will require three planets similar to Earth to sustain a contemporary way of life. In sum, half a trillion tons of primary resources were exploited to fulfill public demands between 2018 and 2023, which is 70% more than the land can safely replace. Consequently,



environmentally conscious development (which "meets the needs of the current generation without compromising future generations' capacity to meet their own needs") has grown into a worldwide phenomenon. Young individuals show especially significant alterations in attitudes and actions based on notions such as sustainability, organicity, and environmental friendliness. Customers who buy eco-products want to help the environment while also improving their personal health. Environmental innovations for sustainable development should address not just items or enterprises, but also industries, regions, and nations, combining economic success with environmental and social added value for customers, workers, and society.

The UN Climate Change Conference (COP27) in Egypt and the Biodiversity Conference (COP15) in Montreal emphasized the importance of business in limiting human effect on environment and climate. The COVID-19 epidemic, Russia's invasion on Ukraine, which resulted in another wave of migrants, growing prices, and a shortage of energy supplies have all raised concerns about governments' ability to promote sustainable and equitable growth of countries.

M. Siswoyo et al. (2020) and S. Balamurugan (2022) investigated eco-innovation as a potentially important factor in improving an enterprise's competitiveness. A.S. Immawati & A. Nugroho (2020): The benefits and cons of incorporating eco-innovations into enterprises. At present time, the qualities and usefulness of eco-innovations for long-term business growth, particularly in developing countries, demand more active study, particularly on the specifics and effects of their implementation. The study's objective was to evaluate the essence, relevance, characteristics, and prospects of applying eco-innovations for the sustainable growth of Ukrainian firms, with a special focus on the implications of armed action against Ukraine in 2022.

To achieve sustainable growth and appropriate livelihoods now and in the future, mankind must radically alter its consumption and production practices. Finally, customers' purchasing habits have a significant impact on value chains and supply networks, as well as global economic, social, and environmental issues. On the other hand, producers and marketers have the capacity to alter the conditions of production and sale of goods/services. Eco-education, improved knowledge, and eco-marketing all have a

positive impact on consumer behaviour. Thus, environmental and social labelling of commodities reflects sustainable development factors throughout manufacturing and promotes responsible consumption. At the same time, it encourages businesses to intentionally design production and supply networks with an emphasis on sustainability.

Companies committed to sustainable development should engage the public and disclose clearly on their goals and efforts to lessen their environmental effect. According to the 2022 Environmental Performance Index (EPI), Ukraine scored 52nd out of 180 nations analyzed. EPI is an international index that assesses nations' environmental performance and sustainability using 40 factors such as climate change efficacy, environmental health, and ecosystem viability (Abramova, A.G., & Myroshnyk, Yu.A., 2020).

The Russian invasion of Ukraine has had a significant negative impact on the country's environment, resulting in industrial and chemical pollution, territorial mining, reduction and deterioration of natural ecosystems, landscape destruction, biodiversity damage, and the destruction of industry and agriculture.

At the same time, attacks on Ukraine's vital infrastructure and global energy markets are temporarily moving the attention away from the environmental component of ESG and onto energy security. However, there is a positive impact: it promotes innovation in the fields of energy conservation and renewable energy. The conflict also had a huge impact on the country's economy: according to the Ministry of Economy, GDP in 2022 fell by 30.4%, the greatest reduction in Ukraine's recent history. Ukraine's economic losses by the end of 2022 totaled more than USD 700 billion. Science and innovation also experienced major losses: roughly 15% of the investigation structure of educational and scientific institutions was devastated, including unique scientific equipment, research laboratories, and centers for collaborative use of scientific equipment (Ministry of Education and Science of Ukraine, 2022).

As a result, Ukraine has the onerous job of recovering the economy, ecology, research, and innovation, particularly through the European Green Deal and innovative eco-approaches. Certain measures are now being introduced. For instance, on July 4-5, 2022, the Ukraine Recovery Conference (2023) in Lugano, Switzerland, accepted the

"Restoring a Clean and Protected Environment" program, requiring the implementation of 76 green initiatives in Ukraine worth EUR 25.5 billion (Abramova, A.G., & Myroshnyk, Yu.A., 2020). The Verkhovna Rada enacted a waste disposal law (Ukraine No. 2320-IX, 2022) as well as a national register of pollution emissions and transfers (Ukraine No. 2614-IX, 2022). The "New EU Forest Strategy for 2030" (European Commission, 2019) is expected to become the most significant document regarding forests. To green society, the interdepartmental program "Environmental education and information for sustainable development of Ukraine for 2022-2032" will be designed and implemented.

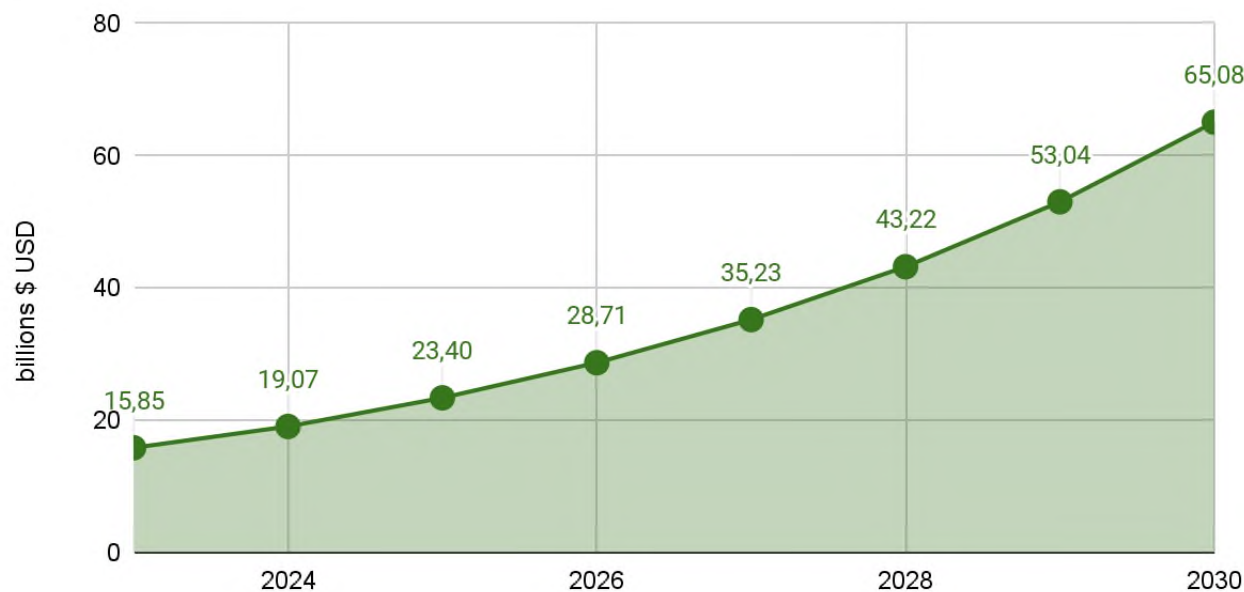
Other researchers have concentrated their attention on examining different aspects and sectors related to eco-innovation adoption. L.G. Lipych et al. (2022) investigated the core concepts and importance of green innovation through the prism of closed-loop economics, whereas M.V. Odrekhivskiy and U.I. Kohut (2022) proposed the methodical approach to eco-innovation policy. O.F. Hryshenko and S.O. Kostornova (2017) highlighted eco-innovation prospects in tourism, whereas A.G. Abramova and Yu.A. Myroshnyk (2020) focused on the hotel and restaurant business (Balamurugan, S., 2022).

In summary, the information above underlines the importance of a two-pronged approach: government backing for green initiatives and a shift toward eco-innovation among Ukrainian enterprises. This will be important to Ukraine's postwar rehabilitation and long-term development.

### **3.1. Dynamic development of the global organic products and eco-tendencies in the Global market**

The market is predicted to expand as both businesses and people become more conscious of environmental issues including global warming. Green technology protects the environment by utilizing a variety of sustainable energy sources. Solar panels, LED lighting, wind energy, vertical farming, electric vehicles, and composting are some examples of green technology (Grand View Research, 2023).

### The global green technology & sustainability market size estimation



**Figure 3.1.** “The global green technology & sustainability market size estimation”

*Source: compiled by the author*

Figure 3.1 shows that the worldwide green technology and sustainability market was valued at USD 15.85 billion in 2023 and is predicted to grow to USD 19.07 billion by 2024. It is estimated to increase at a CAGR of 22.7% between 2023 and 2030, reaching USD 65.08 billion by 2030.

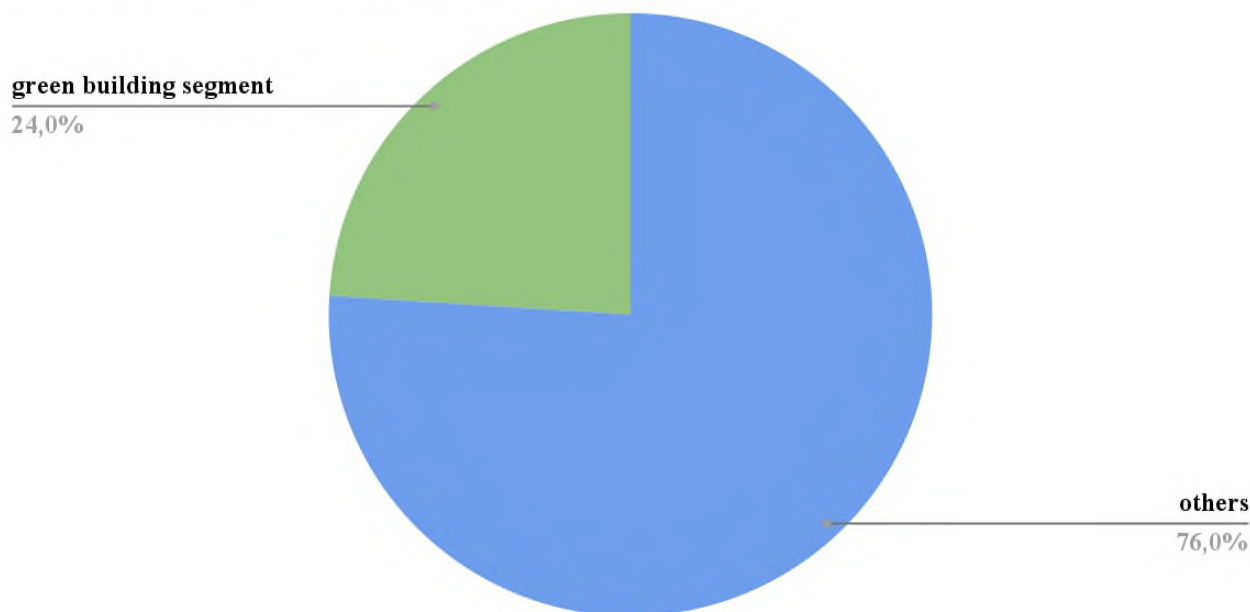
More and more businesses are incorporating approaches for sustainable development, particularly eco-innovation, into their operations. First and foremost, they are concerned with the origin and usage of raw materials in production. Such businesses are growing more profitable as they reduce both their own expenses and their environmental effect. As a result, practically every company and brand is attempting to encourage sustainable manufacturing, including energy and automobile corporations, fast food conglomerates, and chemical firms that emit considerable volumes of CO<sub>2</sub>. At the same time, a coating of green paint and a series of quality markings and certificates on the box are no longer sufficient. Environmental innovations may and should apply to many elements of a product, including production, packaging, promotion, and distribution (Balamurugan, S., 2022).

These include, in particular, sustainable manufacturing; the use of recycled materials; a carbon-neutral footprint; water-saving production; renewable raw materials/materials; post-use product recycling; zero waste or zero plastic production; local or regional production; fair production, and so on. In general, eco-innovation is a type of invention that has the potential to significantly contribute to sustainable development. It might be about decreasing environmental damage, making better use of natural resources, promoting environmental awareness, and so on. This concept, first presented in 1996 in the book "Driving Eco-Innovation: A Breakthrough Discipline for Innovation and Sustainability," suggests that green innovation must fulfill not less than one of these conditions: reducing negative environmental impact, effective usage of natural resources, energy efficiency, waste recycling/use of waste-free technologies, compliance to eco-standards, and use of renewable energy (Grand View Research, 2023).

Furthermore, several nations throughout the world adopt green technology to manage and recycle industrial and domestic trash. Green technology also helps businesses reduce emissions, conserve water, minimize waste, and use less energy than traditional systems. These benefits of sustainable technology have significantly influenced its global adoption (Grand View Research, 2023).

Nations throughout the world are concentrating on technical advancements to provide more sustainable solutions. With the ongoing war in Ukraine, the EU intends to accelerate its green transition to reduce its dependency on Russian fossil fuels. For example, the European Commission is anticipated to propose a new legislative package to promote renewable energy use and energy savings, even though it would continue to rely on gas imported from other countries. It will also shorten. (Grand View Research, 2023).

**The green building segment led the market in 2022 and accounted for a 24.0% share of global revenue.**



**Figure 3.1.** “The green building segment led the market in 2022 and accounted for a 24.0% share of global revenue”

*Source: compiled by the author*

The green building section topped the market in 2022, accounting for 24.0% of worldwide revenue. Green building, also known as sustainable building, is the process of planning and executing processes and structures that are ecologically responsible and resource-efficient throughout their entire life cycle, from site selection to design, maintenance, construction, operation, renovation, and demolition. It blends elements of economy, durability, use, and comfort into conventional building design. When constructing a green building, crucial issues to consider are energy and water efficiency, as well as resource efficiency (Grand View Research, 2023).

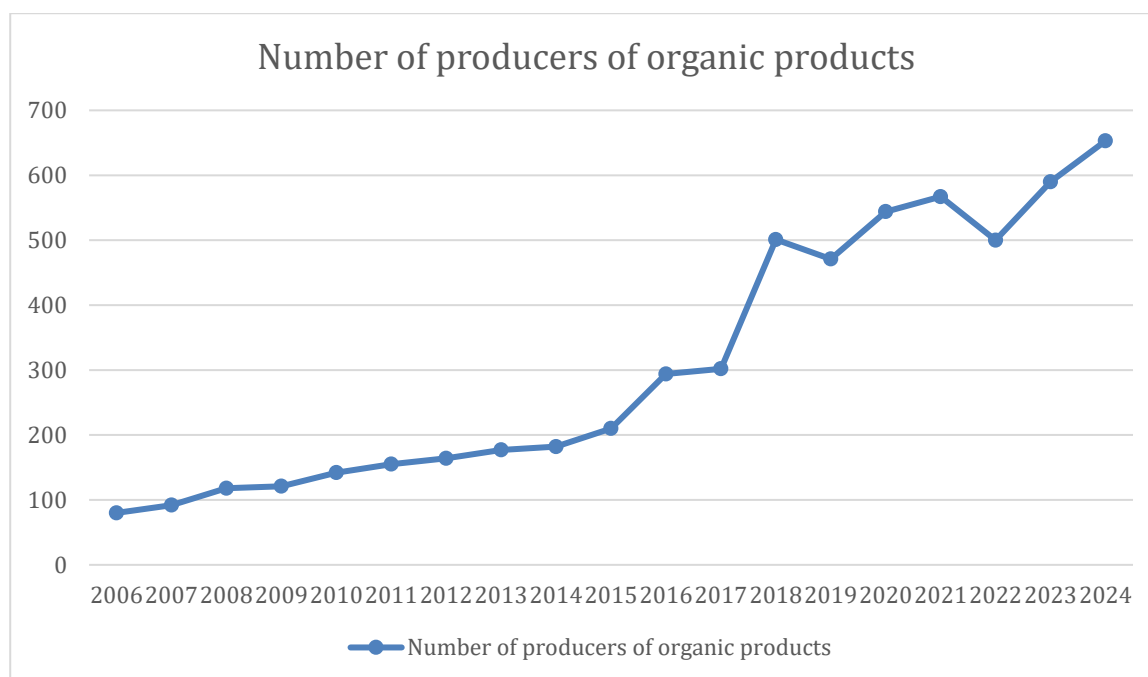
To sum up, the worldwide green technology and sustainability market is predicted to develop rapidly (at a CAGR of 22.7%) as environmental concerns rise and businesses adopt new technologies. This trend is being driven by several factors: consumers and businesses are becoming more aware of environmental issues, creating a demand for sustainable solutions; green technologies provide benefits such as reduced energy consumption, waste minimization, and lower operational costs; and businesses are

incorporating eco-friendly practices throughout their operations, with a focus on sustainable materials and manufacturing processes. Many nations are establishing laws and legislation to promote green technology and renewable energy sources. The green building category now has the biggest market share, emphasizing the importance of environmentally friendly construction processes. With the ongoing fighting in Ukraine, the EU's campaign for a speedier green transition continues.

### **3.2 Developing the plan for the rising consumers' consciousness in Ukrainian businesses**

The growing worldwide understanding of environmentally friendly activities is reaching Ukraine, and customers are increasingly looking for sustainable alternatives. However, disparities in understanding and accessibility may impede this good development. This strategy describes measures for empowering Ukrainian consumers to be more conscious about organic products' consumption.

Ukraine is poised to be the next organic agricultural powerhouse. The global organic market is developing dynamically as the demand for organic produce continues to grow. Ukraine, with its vast swathes of fertile land and geographical location between Europe and Asia is poised to be a key supplier in the market. Ukraine is ranked 14th in Europe according to the volume of organic agricultural area amounting 879 000 hectares: 233 500 hectares of fully converted land + 75 600 hectares of agricultural land in conversion + 570 000 hectares of wild area. Ukraine has outstanding potential to become a major global supplier of organic products as only 0.7% of its total farmland is now organic. Currently, under a national moratorium there are 41.5 million hectares of agricultural land of which 7% is not cultivated at all. Those lands that have been idle for decades are now being put to productive use with a focus on organic farming (ProOrganica, 2024). At the same time, Ukraine strengthens its position on the world market every year, which testifies to the positive dynamics of such development.



**Figure 3.2.** ‘The number of organic operators in Ukraine’

*Source: compiled by the author*

Ukraine already has an established history in organic production: globally it is ranked 6th in organic oilseed production and 8th in organic wheat. There are already 635 organic operators in Ukraine (including 501 agricultural producers). The majority of the organic operators in Ukraine are certified according to the EU organic standard, equivalent to the European Organic Regulations (EC) 834/2007 and 889/2008 applied for the export of organic products. Ukrainian organic operators are also often certified in accordance with the US National Organic Program (NOP) and/or Canada Organic Regime (COR). Other organic standards used in Ukraine include: Bio Suisse (Switzerland), Bioland and Naturland (Germany), JAS (Japan) and KRAV (Sweden).

So, it is important to make Ukrainian consumers educated, environmentally conscious due to the rise of area of land occupied by organic sector in Ukraine. The strategy has its challenges and opportunities: many customers have a basic grasp of eco-labels, sustainable practices, and the environmental effect of various items. Limited availability: eco-friendly items may be harder to get or more expensive, especially outside of big cities. Infrastructure gaps: inadequate recycling facilities and composting programs might inhibit sustainable waste management.



Strategies for increasing consumer awareness: educational campaigns - collaborate with schools, colleges, and NGOs to include eco-awareness initiatives into curriculum. Use mass media such as television, radio, and social media platforms to launch educational campaigns about eco-labeling, responsible consumption, and the environmental advantages of sustainable choices. Create interesting web materials, applications, and interactive technologies that teach people about environmentally responsible options. Advocate for clear, uniform eco-labeling methods that consumers can easily understand. These labels should cover topics such as material origin, production procedures, and recyclability. Encourage firms to be open about their supplier chains and environmental initiatives. This might include releasing sustainability reports, carrying out life-cycle evaluations, and reporting environmental impact data. Collaborate with consumer protection groups to monitor greenwashing techniques and ensure that accurate information is easily accessible.

Promote accessibility and affordability by incentivizing local firms that produce eco-friendly items. Tax incentives and subsidies can assist to increase the competitiveness of certain items. Encourage major stores to create a dedicated space for eco-friendly items, assuring visibility and simple access. Promote the notion of "green swaps" by showcasing low-cost alternatives to traditional items such as reusable bags or water bottles.

Leveraging technology. Create mobile apps that read product barcodes and provide information on environmental effect, ingredients, and recycling choices. Use augmented reality (AR) or virtual reality (VR) technology to build immersive experiences that demonstrate the environmental repercussions of various decisions. Investigate blockchain technology to monitor the origin and travel of items, guaranteeing transparency along the supply chain.

To address infrastructure gaps: collaboration with local authorities to build and improve recycling infrastructure, such as trash sorting and composting programs. Encourage the usage of reusable shopping bags and containers to decrease single-use trash. Advocate for policies that encourage corporations to use sustainable packaging and invest in biodegradable alternatives.

Collaborate with companies to develop awareness campaigns that promote responsible consumption habits and emphasize the benefits of environmentally friendly goods. Create training programs for organizations in eco-marketing, sustainable product design, and life-cycle evaluation methods. Encourage companies to provide incentives such as discounts or loyalty programs to entice customers to make environmentally responsible purchases.

Perform regular surveys and focus groups to assess consumer awareness and knowledge of eco-friendly activities to evaluate the progress. Track the market share of environmentally friendly items to assess customer demand and the effectiveness of awareness initiatives. Monitor the rate at which households adopt sustainable activities such as trash reduction and recycling.

Empowering Ukrainian consumers with information and tools is critical for accelerating the transition to a more sustainable future. By employing these tactics, we can bridge the gap between consumer awareness and action, making environmentally responsible options available and desired to all Ukrainians. This united effort will not only assist the environment, but will also enable Ukrainian consumers to take an active role in defining their country's sustainable future.

In summary, raise awareness through campaigns, educational materials, and explicit eco-labeling. Encouraging local production, promoting green swaps, and providing easy access to sustainable alternatives. Using mobile apps, AR/VR, and blockchain to promote transparency and informed decision-making. Working with governments, corporations, and non-governmental organizations (NGOs) to enhance infrastructure, promote responsible consumption, and encourage sustainable behaviors. This plan presents a comprehensive strategy for empowering Ukrainian consumers to make sustainable decisions. It responds to the increased demand for environmentally friendly products while recognizing current limitations such as limited supply and infrastructure shortages.

### **3.3 Establishment of ways and opportunities of improving business LLC “Hitachi Energy Ukraine”**

LLC “Hitachi Energy Ukraine” is a major player in the country's power industry, making important contributions to grid modernization and renewable energy integration. While their existing activities reflect a dedication to developing a more robust and efficient energy system, there are chances to connect their practices with the rising relevance of environmental concerns.

Opportunities for improving business LLC “Hitachi Energy Ukraine”: as I described in 2.1 subchapter, 2023 year was mediocre for the company.

**Table 3.3. Solutions of improving business LLC “Hitachi Energy Ukraine”**

Indicator for 2023	Suggestion how to improve the indicators
Revenue was 446,820,700 UAH.	Expanding into new markets with accent on renewable energy solutions. Encouraging sustainable practices throughout workshops and seminars, share their knowledge and best practices with other industry participants to get more interested consumers and to increase demand.
Net profit was 59,990,800 UAH.	Provide an optimization of operational efficiency and reduce costs. Invest in automation of the processes where it is possible. For example, implement software solutions to handle invoicing, payments, and other financial transactions to reduce manual errors and processing time. Also, use CRM systems to automate customer interactions, track sales, and manage customer data efficiently. Implement systems to monitor and optimize energy

	usage in manufacturing and office facilities, reducing energy costs.
Assets was 406,180,900 UAH.	The company should analyze assets utilization and ensure that they all are used efficiently. Also, perform a detailed audit to list all physical and intangible assets, including current condition, location, and usage status.
Liabilities was 240,403,600 UAH.	Reduction of liabilities by negotiating with suppliers and creditors for refinancing debt at lower interest rates highlighting the benefits of long-term partnership and reliability. Also, refinance existing high-interest loans with new loans that have lower interest rates. For instance, replacing a loan with a 10% interest rate with 5%.
Numbers of employees was 28.	Conduct workshops focused on technical skills relevant to the industry, such as renewable energy technologies, advanced manufacturing techniques, and automation. Offer training on communication, teamwork, problem-solving, and leadership to enhance overall workplace efficiency. Make soft skills training a part of the onboarding process and continuous development plan. Set clear performance targets and regularly assess employee performance against these targets. Distribute bonuses based on the achievement of these targets.

	“When your employees are happy at work, they do a better job”.
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*Source: compiled by the author*

Table 3.3 proposes different solutions how to improve the company's financial indicators and efficiency of business LLC “Hitachi Energy Ukraine” in the Ukrainian market. This will help to significantly improve its performance.

LLC “Hitachi Energy Ukraine”'s expertise in substation automation complements the rising emphasis on smart grids. They may use their knowledge to encourage greater use of smart grid technologies such as demand-side management and distributed generation. This can improve energy efficiency, lower peak loads, and better integrate renewable energy sources, resulting in a cleaner energy mix.

Energy efficiency upgrades: modernization initiatives should go beyond automation and incorporate energy efficiency upgrades. Replacing obsolete equipment with more efficient transformers and conductors may considerably reduce transmission and distribution losses while reducing environmental impact and operating costs.

Expanding renewable energy integration solutions: while LLC “Hitachi Energy Ukraine” provides wind farm integration, they may broaden their service to include other renewable sources such as solar and biomass. Developing expertise in grid integration solutions for these technologies will put them in a crucial position for Ukraine's energy future.

Storage solutions: the intermittent nature of renewable energy output poses a significant obstacle to integration. LLC “Hitachi Energy Ukraine” might consider implementing energy storage technologies such as batteries into their project portfolios. This will improve grid stability and enable more effective use of renewable energy sources. Sustainable procurement and operations: by incorporating life cycle assessment into their procurement methods, LLC “Hitachi Energy Ukraine” can better identify and obtain environmentally acceptable materials for switchgear and other equipment. This strategy takes into account the environmental effect of the whole product life cycle, from raw material extraction to disposal. Sustainable supply chain management: working with

suppliers who promote eco-friendly practices will help LLC “Hitachi Energy Ukraine” lower its total environmental impact. Waste reduction and recycling: LLC “Hitachi Energy Ukraine” may adopt waste reduction and recycling initiatives throughout its activities. This may include appropriate disposal of hazardous items such as old transformer oil and recycling components from retired equipment.

LLC “Hitachi Energy Ukraine” may use its industry experience to lobby for legislation and regulations that support eco-friendly practices in the energy sector. Public engagement: LLC “Hitachi Energy Ukraine” may work with the general public to promote awareness about the necessity of grid modernization and renewable energy integration for a sustainable future. This may increase public support for investments in these areas. By embracing these eco-trends, LLC “Hitachi Energy Ukraine” can strengthen its position as a pioneer in building Ukraine's more sustainable and ecologically responsible energy industry. This will not only improve the environment, but will also promote long-term company success and contribute to the country's cleaner and more secure energy future.

Overall, LLC “Hitachi Energy Ukraine” can help Ukraine shift to a more sustainable energy future. They can encourage energy efficiency, expand the integration of renewable energy sources, and investigate storage technologies by leveraging their grid modernization experience. Furthermore, concentrating on sustainable procurement, supply chain management, and waste reduction will help them cement their position as a pioneer in developing a cleaner and more secure energy business in Ukraine.

## CONCLUSION AND PROPOSALS

The global "green wave" is reshaping enterprises throughout the world, including Ukraine. Consumers are expecting more environmentally friendly solutions, and businesses must adapt to remain competitive and contribute to a sustainable future. This thesis explored the incorporation of eco-friendly trends into Ukrainian enterprises' business strategies, with a particular emphasis on LLC "Hitachi Energy Ukraine" as a case study.

The study underlined the growing relevance of eco-innovation, a type of invention that promotes sustainable development by reducing environmental impact, increasing resource efficiency, and raising environmental consciousness. While Ukraine has achieved progress in environmental performance, the Russian invasion in 2022 had a substantial influence on the country's ecology, economy, research, and innovation capacity. However, the country has the potential to rebuild with an emphasis on sustainability, using the European Green Deal and cutting-edge eco-strategies.

The case study of LLC "Hitachi Energy Ukraine" explains how established industry leaders may embrace environmental trends and contribute to a more sustainable energy future. Their present contributions to grid modernization and renewable energy integration form a solid basis.

This study took a worldwide perspective, presenting an overview of the international market and its long-term influence. However, our attention subsequently shifted, narrowing down on the Ukrainian situation. We looked at the rise of eco-startups in Ukraine from 2020 to 2023, providing vital insights into the country's growing green movement. My work shows Ukraine as resilient and inventive, actively pursuing a sustainable future. Ukraine's organic food exports reached a new high in 2022, displaying a robust European market presence despite the conflict. While domestic sales of organic goods fell in 2022 owing to economic upheavals, a possible return is anticipated in the future, fueled by postwar recovery and worldwide interest in sustainability. It also shows Ukraine's booming green startup culture and success in the organic food export business, despite the continuing war.

The purpose of this investigation was to look at the importance of eco-innovations for the long-term growth of Ukrainian businesses, particularly in light of the repercussions of the armed invasion against Ukraine in 2022.

The following tasks were set and described during my work:

- looked through theoretical bases of eco-tendencies in business world;
- identified core components of international market for organic and eco-tendencies in international business;
- overviewed the Global market and its sustainable impact;
- looked through eco startups in Ukraine for 2020-2023 years;
- analysed the company's environment, organizational structure, financial and economic indicators of LLC "Hitachi Energy Ukraine", calculated ratios and make some suggestions for improvement of the financial state;
- identified eco-tendencies and main targets of the company LLC "Hitachi Energy Ukraine";
- described the dynamic development of global organic products and eco-tendencies in the Global market;
- develop the plan for the rising consumers' consciousness in Ukrainian businesses;
- established ways and opportunities of improving business LLC "Hitachi Energy Ukraine" towards eco-tendencies.

Beyond internal operations, LLC "Hitachi Energy Ukraine" may play an important role in lobbying for environmentally sustainable practices in the energy sector. They may use their industry knowledge to advance legislation and regulations that support sustainable development. Sharing information and best practices through workshops and seminars has the potential to influence other industry players. Engaging the public to promote awareness about the necessity of grid modernization and renewable energy integration can help to increase public support for these investments.

LLC "Hitachi Energy Ukraine" can strengthen its position as a pioneer in building Ukraine's more sustainable and ecologically responsible energy industry. This will not only improve the environment, but will also promote long-term company success and



contribute to the country's cleaner and more secure energy future. Businesses, consumers, and governments must all work together to create a more sustainable future. The study provided in this thesis provides a road map for LLC “Hitachi Energy Ukraine” and other industry stakeholders to contribute to this collaborative effort. Finally, a dedication to eco-innovation will not only provide environmental advantages, but will also pave the way for Ukraine's future prosperity and security.

My work analyzed the international market for organic and eco-friendly products and practices, with a specific focus on their integration into the business strategies of Ukrainian companies.

This study investigated the causes, patterns, and implications of the "green wave" on worldwide marketing tactics. This thesis seeks to contribute to a better understanding of how firms may adapt and survive in a sustainable economic landscape by investigating its influence on customer behavior and the creation of new market possibilities based on LCC “Hitachi Energy Ukraine” case.

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## ANNEXES

### Annex 2.1. “2030 sustainable targets of LLC “Hitachi Energy Ukraine” toward planet, people, peace and partnership”

#### Our 2030 Targets

##### Planet

Carbon-neutral in our own operations<sup>1</sup>

↓ 50% reduction of CO<sub>2</sub> equivalent emissions<sup>2</sup> along the value chain

↓ 50% reduction of waste disposed<sup>3</sup>

↓ 25% reduction of freshwater use<sup>3</sup>

↓ 25% reduction of hazardous substances and chemicals<sup>4</sup>

##### People

Zero harm

Top quartile health absence rates

Life-long learning culture

Increase female diversity from 19% to 25% by 2025

##### Peace

Zero incidents of corruption and bribery

##### Partnerships

Increase involvement in multi-stakeholder partnerships

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### Annex 2.2.

#### SWOT analysis of LLC “Hitachi Energy Ukraine”

<b>Strengths:</b> <ul style="list-style-type: none"> <li>- leader in the industry;</li> <li>- innovative solutions and services across the green energy;</li> </ul>	<b>Weaknesses:</b> <ul style="list-style-type: none"> <li>- may be dependent on economic downturns or market fluctuations, affecting their financial performance;</li> </ul>
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<ul style="list-style-type: none"> <li>- Global presence: in over 140 countries;</li> <li>- focus on sustainability;</li> <li>- wide range of products and services.</li> </ul>	<ul style="list-style-type: none"> <li>- risks related to legislative changes, technical improvements, and market competition.</li> </ul>
<p>Opportunities:</p> <ul style="list-style-type: none"> <li>- growing demand for renewable energy;</li> <li>- strategic partnerships and collaborations;</li> <li>- expanding to new sectors.</li> </ul>	<p>Threats:</p> <ul style="list-style-type: none"> <li>- intensive competition;</li> <li>- regulatory changes;</li> <li>- economic instability.</li> </ul>