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GREEN AND COMPETITIVE

Leveraging Guarantees of Origin for Export Growth and Energy Transition in Kosovo

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LIST OF ABBREVIATIONS

AIB	Association of Issuing Bodies
AIB Hub	Central electronic platform connecting national EECS registries
CBAM	Carbon Border Adjustment Mechanism
CEN	European Committee for Standardization
CHP	Combined Heat and Power
DG TRADE	Directorate-General for Trade, European Commission
EBRD	European Bank for Reconstruction and Development
EECS	European Energy Certificate System
EEA	European Economic Area
EIB	European Investment Bank
EIF	European Investment Fund
EN16325	European Standard for Guarantees of Origin
ERO	Energy Regulatory Office (Kosovo)
ETS / EU ETS	(European Union) Emissions Trading System
EUR-Lex	European Union Law Portal
EZ-1	Energy Act of the Republic of Slovenia
GAWB	Green Agenda for the Western Balkans Action Plan Implementation Report
GHG	Greenhouse Gas
GHG Protocol	Greenhouse Gas Protocol (World Resources Institute)
GO / GOs	Guarantee(s) of Origin
GoK	Government of Kosovo
ICT	Information and Communication Technology
IFC	International Finance Corporation
IRENA	International Renewable Energy Agency
KAS	Kosovo Agency of Statistics

KIESA	Kosovo Investment and Enter'prise Support Agency
KIIs	Key Informant Interviews
MAFRD	Ministry of Agriculture, Forestry and Rural Development (Kosovo)
MIET	Ministry of Industry, Entrepreneurship and Trade (Kosovo)
MoE / ME	Ministry of Economy (Kosovo)
MSME	Micro, Small and Medium Enterprises
NDC	Nationally Determined Contribution
NECP	National Energy and Climate Plan
OECD	Organization for Economic Co-operation and Development
PPP	Public-Private Partnership
RCC	Regional Cooperation Council
RE	Renewable Energy
RECs	Renewable Energy Certificates
RED II	Renewable Energy Directive (Directive (EU) 2018/2001)
RED III	Amending Renewable Energy Directive (Directive (EU) 2023/2413)
RES	Renewable Energy Sources
SBTi	Science Based Targets initiative
SME	Small and Medium-sized Enterprise
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WBIF	Western Balkans Investment Framework
WDI	World Development Indicators (World Bank)
WEF	World Economic Forum
WRI	World Resources Institute

Executive Summary

As Global markets transition toward low-carbon production and trade, the ability of exporters to demonstrate renewable energy use through verifiable certification systems has become a defining feature of competitiveness. For Kosovo, an economy deeply integrated with the European Union, this shift creates both an urgency and an opportunity: to align its energy governance with the EU Green Deal, while opening new market pathways for domestic industries.

This study assesses how the establishment of a Guarantees of Origin system can drive that dual transition, linking clean energy deployment with export growth and compliance under EU sustainability emerging instruments and reporting standards. The analysis evaluates Kosovo's readiness to operationalize a national GO system that is harmonized with Directive (EU) 2018/2001 and its amendment Directive (EU) 2023/2413, as well as the Energy Community Treaty. It reviews the legal, institutional, and technical framework for GOs, benchmarks Kosovo's system against EU and regional practices, and explores implications for key export-oriented sectors, such as textiles, agro-business, ICT and manufacturing. The methodology combines legislative review, institutional mapping, comparative analysis, and targeted stakeholder consultations with energy and trade authorities, sector associations, and private sector.

Kosovo's new Law No. 08/L-258 on Renewable Energy Sources (2024) provides a solid legal foundation for GOs and partially transposes RED II provisions. However, the existing "2010 Rule on Certificates of Origin" is outdated and incompatible with the European Energy Certificate System - EECS. To achieve interoperability and cross-border recognition, Kosovo must adopt secondary legislation specifying GO issuance, transfer, and cancellation procedures, and ensure consistency with Directive (EU) 2023/2413. The Energy Regulatory Office - ERO is positioned to serve as the national issuing body, supported by the systems operator KOSTT and the Ministry of Economy. Pilot initiatives, including protocol digital registry developed with technical partners in 2024, demonstrate readiness for implementation. However, institutional capacity remains uneven: verification protocols, registry auditing, and data exchange standards require strengthening.

While export-oriented SMEs in Kosovo are increasingly aware of sustainability requirements, only a minority link renewable energy use to market access. Surveyed companies cite cost and procedural complexity as barriers, though

buyer inquiries on energy sourcing are rising. Sector associations and chambers could play a catalytic role by aggregating demand, facilitating certification, and curating a "GO-ready supplier" list to improve visibility in international procurement and value chains. Beyond compliance, GOs can serve as a market instrument for value creation. Companies with verifiable renewable consumption gain preferential access to green public procurement, sustainability-linked credit, and investment incentives. For Kosovo, where the EU is amongst the biggest destination of the country's exports, integrating GOs into export documentation and ESG reporting directly enhances trade resilience and access to finance.

The comparative analysis of Slovenia's GO framework, aligned with the AIB's EECS, highlights the benefits of early institutionalization, hereby increased transparency, consumer trust, and marketability of certified power. Its experience shows that coupling legal compliance with digital registry interoperability and stakeholder engagement can deliver both environmental and economic dividends. Kosovo can replicate this phased model through its recently secured AIB membership.

The findings confirm that operationalizing a Guarantees of Origin system represents one of Kosovo's most actionable steps to advance its green transition and export competitiveness simultaneously. Priority measures include:

- Completing secondary legislation to give effect to the 2024 Renewable Energy law;
- Empowering the ERO as the fully accredited issuing body;
- Establishing cross-border compatibility through full EECS/AIB membership; and
- Embedding GO use into SME support and export promotion programs.

By coupling regulatory alignment with business-oriented outreach, Kosovo can turn GOs into a functional bridge between decarbonization policy and industrial growth, enhancing its credibility as a future member of Europe's green market while attracting investment and innovation in clean energy value chains.

1. Introduction and Background

This study is carried out with the support of the "Energy transition and climate mitigation in Kosovo" project, funded by the Grand Duchy of Luxembourg and implemented by LuxDev, the Luxembourg Development Cooperation Agency. The "Energy transition and climate mitigation in Kosovo" project aims to contribute to a sustainable economic growth by supporting innovation, inclusiveness and social development in a greener Kosovo. The specific objective of the project is to promote and facilitate the adoption of energy efficiency and renewable energy sources in Kosovo's transition to clean energy. By supporting the adoption of energy efficiency practices and renewable energy sources, the project aims to optimize energy consumption, reduce carbon emissions, and foster a sustainable and environmentally friendly energy sector.

This report examines the strategic role of Guarantees of Origin - GOs, in advancing Kosovo's integration into environmentally conscious export markets. It highlights the dual challenge Kosovo faces: meeting its obligations under the Energy Community Treaty and EU renewable energy directives, while also enabling its businesses, particularly small and medium-sized enterprises (SMEs) to compete in markets where climate performance increasingly determines access. The analysis identifies legal and regulatory gaps, institutional capacity needs, and market barriers such as low SME awareness and limited cross-border recognition. In addressing these, the report sets out a roadmap that combines policy alignment with EU standards and practical measures to help Kosovo's companies leverage GOs as instruments of export competitiveness.

Why Green Certificates/Guarantees of Origin Matter?

Guarantees of Origin certify the renewable origin of electricity consumed, providing verifiable documentation for international buyers who must comply with tightening climate disclosure rules, ESG procurement standards, and carbon border adjustment mechanisms. For Kosovo, establishing a functioning GO system is more than a compliance exercise: it represents a pathway to reduce trade risks, secure access to sustainability-driven buyers, and anchor its industries in green value chains. By linking renewable electricity use with export documentation, GOs also provide companies with a credible basis to access sustainability-linked finance, enhance ESG ratings, and demonstrate compliance with emerging EU market requirements.

Methodology

The methodology combined secondary data analysis and primary field insights to assess how the operationalization of Guarantees of Origin - GOs in Kosovo could enhance the export competitiveness of local businesses by aligning with EU market sustainability standards. Through a comprehensive review of legal, institutional, and sectoral frameworks, the study identified strategic opportunities and practical steps to advance the country's clean energy transition.

The desk research examined Kosovo's legislative framework, including the Law on Energy, Law on Electricity, Law on Energy Efficiency, the 2024 Law on Renewable Energy Sources, and the secondary rule on certificates of origin, together with relevant EU and regional legislations and frameworks such as Directive (EU) 2018/2001 (RED II), its 2023 amendment, CBAM provisions, EU Green Deal and Green Agenda for the Western Balkans, and Energy Community requirements. It also assessed institutional and technical capacities, with particular attention to the EECS-compliant registry developed by Grexel in 2024 and managed by the Energy Regulatory Office - ERO, while drawing on comparative case studies such as Slovenia's GO system and its AIB Domain Protocol, highlighting lessons on governance, digital registry management, and sectoral rollout.

- Complementary sectoral analysis reviewed trade statistics, customs data, Energy Community reports, and OECD/EU studies to evaluate Kosovo's textiles, agro-business, ICT, and light manufacturing sectors. The research further evaluated global market trends and the growing significance of sustainability in shaping international trade, analyzing how environmental standards, carbon regulations, and consumer preferences were influencing export dynamics, particularly within the EU.
- Special attention was given to positioning Kosovo's businesses in this evolving landscape, identifying opportunities and competitiveness gaps. To guide Kosovo's alignment, best practices in GO implementation were examined through international models and case studies, alongside a review of national policy frameworks such as the Energy Strategy 2022 -2030 and the draft NECP. This analysis revealed institutional gaps and challenges to the development of a resilient GO system. Building on these insights, the study delivered actionable recommendations for policymakers, businesses, and institutional stakeholders to bridge regulatory gaps, enhance capacity, and expand access to green markets.

In parallel, primary data was gathered through key informant interviews (KIIs) with institutions (Ministry of Economy, ERO, MESPI, MINT/KIESA and KEEF), market actors (exporters and SMEs), intermediary organizations (chambers, associations and clusters), and donor and financial partners. These KIIs provided operational perspectives on institutional readiness, SME awareness, and financing mechanisms. The methodology was concluded by a participatory workshop with the private sector.

Research Limitations

The study faced several limitations that shape the interpretation of its findings. Limited availability and consistency of national datasets, particularly regarding renewable energy generation, SME-level energy use, and sector-specific export performance, which restricted the scope and precision of quantitative analysis. Because Kosovo's GO system is still in the design phase, (even with the GO registry completed) much of the analysis relied on legislation, regulatory plans, and stakeholder perspectives rather than operational evidence. Key informant interviews enriched the study with practical insights, yet responses were shaped by stakeholder availability and may not fully reflect the scope of SME perspectives across all export-oriented sectors, to cover this aspect as much as possible, KIIs with chambers, associations and clusters were prioritized.

Comparative experiences, such as Slovenia's GO framework, provided valuable benchmarks but cannot be directly transposed given Kosovo's different institutional and market conditions. These limitations highlight the importance of continued data collection, stakeholder consultation, and monitoring as the GO system becomes operational.

How to Use this Report as a Roadmap for Action?

The report is designed as both a policy guide and a business roadmap. For institutions, it provides concrete steps to operationalize a GO system aligned with EU recognition standards, while ensuring interoperability with regional markets. For businesses, it offers practical guidance on integrating GOs into supply chains, meeting buyer documentation requirements, and leveraging certificates for improved access to green finance and export opportunities. Ultimately, the report serves as a tool to position Kosovo's economy for the twin goals of EU market integration and sustainable competitiveness.

2. International Markets and Sustainability Context

2.1 Green Transition in International Markets

Globally, governments, industries, and financial institutions are moving towards a low-carbon economy in response to the climate crisis. Multilateral initiatives like the Paris Agreement[1] represent a global commitment to tackling climate change and curb temperature rise. This global green transition involves deep structural changes in energy systems, industrial production, and agriculture, aimed at cutting greenhouse gas (ghg) emissions, revitalizing ecosystems, and enhancing resource efficiency. Net-zero pledges now cover over 90% of global GDP[2], with many countries enacting policies that make carbon performance a decisive factor in competitiveness.

According to McKinsey Global Institute, the green transition entails significant near-term costs and risks. It will require an estimate of $3.5 trillion in additional annual investment, amounting to $275 trillion by 2050[3], alongside major structural changes across energy, industry, and transport systems. These shifts could result in the loss of about 185 million jobs in fossil fuel intensive sectors, short-term increases in electricity prices, stranded assets, and heightened vulnerability for developing economies and fossil fuel dependent regions. Nevertheless, the long-term benefits are considerable. Approximately 200 million new jobs in low-carbon industries, growth in markets for electric vehicles, hydrogen, and sustainable construction materials, eventual reductions in energy costs through renewables, greater energy security, and the avoidance of the most severe climate-related physical risks.[4]

As these shifts are increasingly reflected in trade, environmental standards, carbon pricing, and climate-aligned procurement have become embedded in global value chains. The European Union, as one of the most ambitious actors in this movement, through the EU Green Deal, has set a binding

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[1] United Nations. (2015). *The Paris Agreement*. https://unfccc.int/sites/default/files/english_paris_agreement.pdf

[2] Jonathan Woetzel et al., *The Net-Zero Transition: What It Would Cost, What It Could Bring* (McKinsey Global Institute, 2022),"

https://www.mckinsey.com/capabilities/sustainability/our-insights/the-net-zero-transition-what-it-would-cost-what-it-could-bring#/

[3] Ibid

[4] Ibid

objective of becoming climate-neutral by 2050 and a target of reducing net GHG emissions by at least 55% by 2030 compared to 1990 levels.[5]

This is not just an environmental policy, but also an economic strategy that reshapes industrial production, trade relations, and market access conditions. Thus, the EU's approach integrates climate policy into trade by introducing a number of measures, such as the European Climate Law, which legally binds climate neutrality by 2050, with interim emission reduction targets, Renewable Energy Directive (RED II) which sets a binding target for at least 32% of renewable energy in the EU's gross final consumption by 2030 (now under this target is being revised upward to 42.5% with an aspirational goal of reaching 45%),[6] and the CBAM-Carbon Border Adjustment Mechanism, where from 2026 importers of certain carbon-intensive goods (steel, aluminum, cement, fertilizers, hydrogen, and electricity) must purchase CBAM certificates reflecting GHG embedded emissions of those products. Furthermore, another policy tool has been introduced and this year revised is the Corporate Sustainability Reporting Directives. All these policies are reshaping the markets and export strategies for countries outside of the EU.

In 2024, the EU imported €2.35 trillion[7] worth of goods, with over €34.5 billion[8] coming from the Western Balkans. As these economies align with EU climate policy via the Energy Community framework[9], exporters are under pressure to provide robust proof of their carbon performance. This shift has made renewable energy traceability not only a preferred standard but a prerequisite for participation in global value chains. Exporters from countries like Kosovo must provide robust, auditable data on their energy sourcing to maintain market access to the EU and other climate-conscious economies.

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[5] European Parliament and Council, *Regulation (EU) 2023/956 Establishing a Carbon Border Adjustment Mechanism* (Brussels: European Union, 2023), https://eur-lex.europa.eu/eli/reg/2023/956/oj/eng

[6] European Commission, *Renewable Energy Targets* (Brussels: European Commission, 2025), *https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-targets_en*.

[7] Eurostat, *EU Trade in Goods in 2022* (Luxembourg: Eurostat, 2023), https://ec.europa.eu/eurostat/statistics-explained/index.php?title=International_trade_in_goods.

[8] European Commission, Directorate-General for Trade, *European Union: Trade in Goods with Western Balkans* (Brussels: European Commission, 2023), https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/western-balkans_en.

[9] Energy Community Secretariat, *Annual Implementation Report* (Vienna: Energy Community, 2023), https://www.energy-community.org/implementation/Annual_Report.html.

2.2 International (EU) Buyer Expectations

Large international buyers, especially in the textiles, food, and technology sectors, are adapting procurement strategies to align with climate targets. While many have committed to net-zero emissions, these commitments extend beyond operational emissions to cover supply chain emissions, including here Scope 2 emissions from purchased electricity. For suppliers, this means demonstrating verifiable decarbonization of electricity use is no longer a "nice-to-have" but a contractual requirement. Recent analysis highlights that specifically the CBAM and the stricter renewable energy sourcing requirements are already influencing the competitiveness of Western Balkans exports, especially in energy-intensive sectors.[10] Furthermore, the World Bank highlights that non-compliance with EU green product and procurement standards could limit participation in high-value EU supply chains.[11] As a result, aligning domestic energy and environmental practices with EU requirements, including binding renewable energy targets, robust energy efficiency standards, and transparent emissions monitoring, is becoming a prerequisite for avoiding cost penalties in EU trade.

Building on these market trends, the EU's decarbonization agenda is accelerating a shift in buyer-supplier relationships from transactional to strategic partnerships centered on climate performance. For many EU-based large corporations, GHG emissions occurring in the supply chain are 10 times higher than their own direct operational emissions, making the decarbonization efforts of suppliers critical to meeting net-zero commitments.[12] Buyers are increasingly willing to support compliant suppliers through preferential contract terms, technical assistance, and co-investment in clean technologies, but they also expect verifiable progress on renewable energy sourcing, specifically Scope 2 and Scope 3 emissions reduction.[13] In practice, this means suppliers without credible, auditable, and verifiable data, such as certified lifecycle assessments and Guarantees of Origin - GOs risk exclusion from the markets.

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10. Regional Cooperation Council, *2023 Report on the Implementation of the Green Agenda for the Western Balkans Action Plan (GARI)* (Sarajevo: RCC, 2025), https://www.rcc.int/pubs/202/2023-report-on-the-implementation-of-the-green-agenda-for-the-western-balkans-action-plan-gari.

11. World Bank Group, *Western Balkans Regular Economic Report No. 27: Adapting for Sustainable Growth* (Washington, DC: World Bank, 2025), https://documents1.worldbank.org/curated/en/099042325021511545/pdf/P506742-7e63000a-aafd-40a5-8b97-fffe2a1cc12f.pdf.

12. World Economic Forum, in collaboration with Boston Consulting Group, *Net-Zero Challenge: The Supply Chain Opportunity* (Geneva: World Economic Forum, 2021), https://www.weforum.org/publications/net-zero-challenge-the-supply-chain-opportunity/.

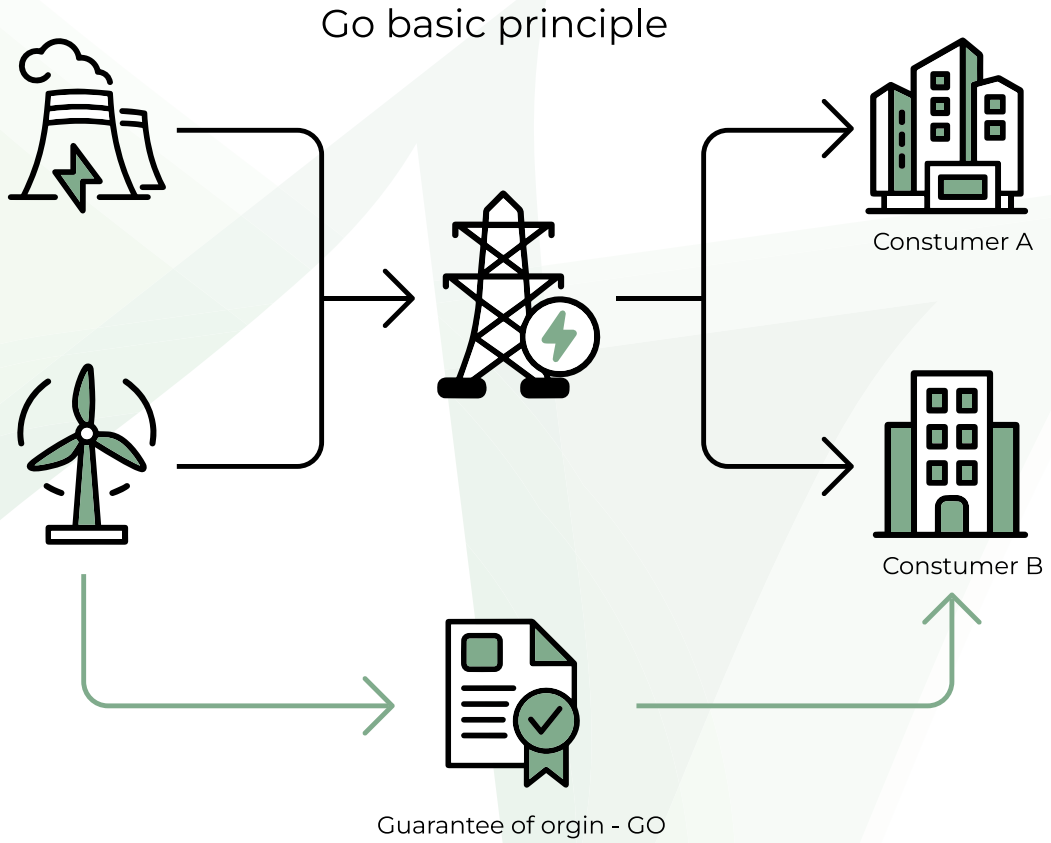
13. Ibid.

Thus, on a positive note, exporters able to meet these standards can secure preferential access to green procurement schemes, strengthen their position with environmentally conscious buyers, and qualify for sustainability-linked finance. This creates both a compliance imperative and a strategic opportunity to reposition in EU markets as reliable, low-carbon suppliers. In this context, besides penalty avoidance, aligning domestic energy and environmental practices with the EU requirements is also becoming a competitive advantage to safeguard market access and to leverage new green market niches.

2.3 Guarantees of Origin - GOs

Guarantees of Origin - GOs have emerged as the benchmark for proving renewable energy consumption in a transparent, auditable way. Guarantees of Origin are standardized electronic certificated defined under Directive (EU) 2018/2001 (RED II), used exclusively for electricity disclosure purposes. As official electronic certificates GOs provide proof to a final customer that a given quantity of electricity, measured in megawatt-hours (MWh) was produced from renewable sources.

Figure 1.1 The Basic Principle of Guarantees of Origin - GOs. Source: designed based on the AiBs - Association of Issuing Bodies GO presentation. https://www.aib-net.org/.



In the EU, one GO represents one MWH of renewable energy generated and injected into the grid. Guarantees of Origin are the primary disclosure instrument for renewable energy sourcing under the Renewable Energy Directive (RED II)[14], and they are central to ensuring transparency in energy markets, enabling both consumers and businesses to make credible environmental claims.

As shown on the figure above which illustrated the basic principle of Guarantees of Origin in the electricity market, the electricity from different production sources, be it, fossil fuel plants, renewable generators such as solar or wind farms, flow into the same interconnected grid, once inside the grid, the electricity from all sources is mixed, thus it becomes indistinguishable and is distributed together to all connected consumers. Meaning that, in physical terms, the consumer (i.e., companies) cannot know exactly how much of it comes from renewables at any given time, or trace which specific units of electricity come from which source. Thus, a GO acts as an official, standardized certificate, issued by an authorized body, confirming that a defined quantity of electricity was generated from renewable sources. 1 GO certificate released equals 1 MWh.[15]

The certificate is issued separately from the physical electricity and can be transferred to consumers, enabling them to claim renewable consumption. This principle allows the environmental value of renewable generation to be tracked and traded independently of the physical electricity, ensuring transparency, credibility, and comparability across borders through the European Energy Certificate System - EECS coordinated by the AIB.

Thus, under the European Energy Certificate System - EECS which are rules governed by the Association of Issuing Bodies - AIB, while implementation occurs through national Issuing bodies connected via the AIB Hub, each participating country designates a Competent Issuing Body, typically the national energy regulator or a legally mandated entity, responsible for registry operation, issuance, transfer, and cancellation in accordance with EECS rules. This registry, as presented in the figure below, records every stage in the lifecycle of a GO:

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[14] European Parliament and Council, *Directive (EU) 2018/2001 on the Promotion of the Use of Energy from Renewable Sources (Recast), Consolidated Version (as of 16 July 2024) (Brussels: European Union, 2024)*, EUR-Lex.

[15] AiB. EECS. “EECS and the CEN Standard EN16325. Guarantees of Origin Framework”. Source. https://www.aib-net.org/eecs.

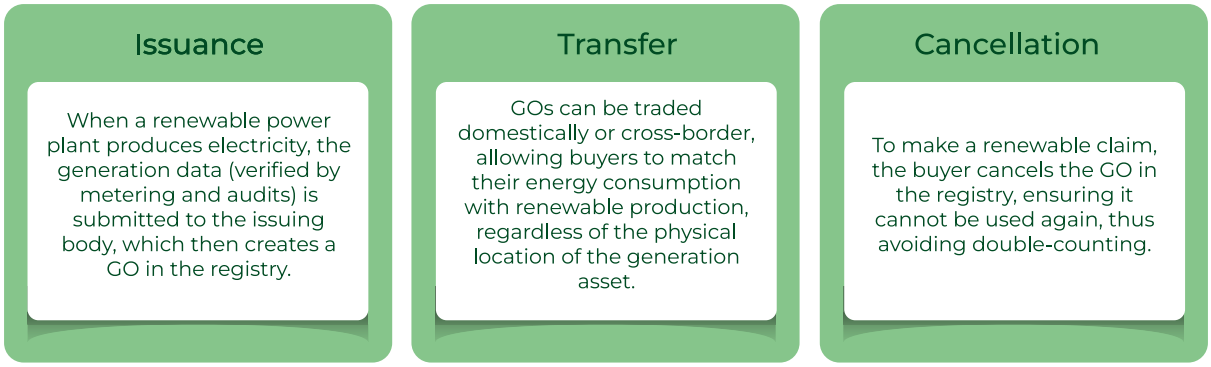

Figure 2.1.: GO issuance, transfer, and cancellation. Source: designed based on the Association of Issuing Bodies-AiB & EECS rules. https://www.aib-net.org/eecs/eecsr-rules

The EECS framework ensures that all participating registries follow the same technical standards, data definitions, and verification procedures, making cross-border GO transfers reliable and recognized across the EU. As of 2023, more than 30 countries, including all EU Member States, and several Energy Community Contracting parties are connected to the AIB hub, facilitating millions of cross-border GO transactions each year. International (EU) Buyers also consider the presence of verifiable GOs as a signal of good governance, environmental compliance, and risk reduction. In high-value sectors, companies without GOs or similar credentials are facing exclusion from tenders, contracts, and supply frameworks.[16]

The GO ecosystem has evolved to be more than a compliance mechanism; it is an enabling tool for market differentiation and ESG performance. Buyers, ranging from multinational corporations to municipalities, use GOs to substantiate claims in sustainability reports, meet Scope 2 emissions reduction targets, and qualify for green procurement schemes. Banks and institutional investors are increasingly integrating verifiable renewable consumption supported by instruments such as the GOs into ESG ratings and sustainability-linked finance. This shift reflects broader market practices, as demonstrated by the European Investment Bank's Climate and Sustainability Awareness Bonds, where auditable, taxonomy-aligned reporting serves as tangible proof of low-carbon performance and compliance with EU sustainable finance standards.[17]

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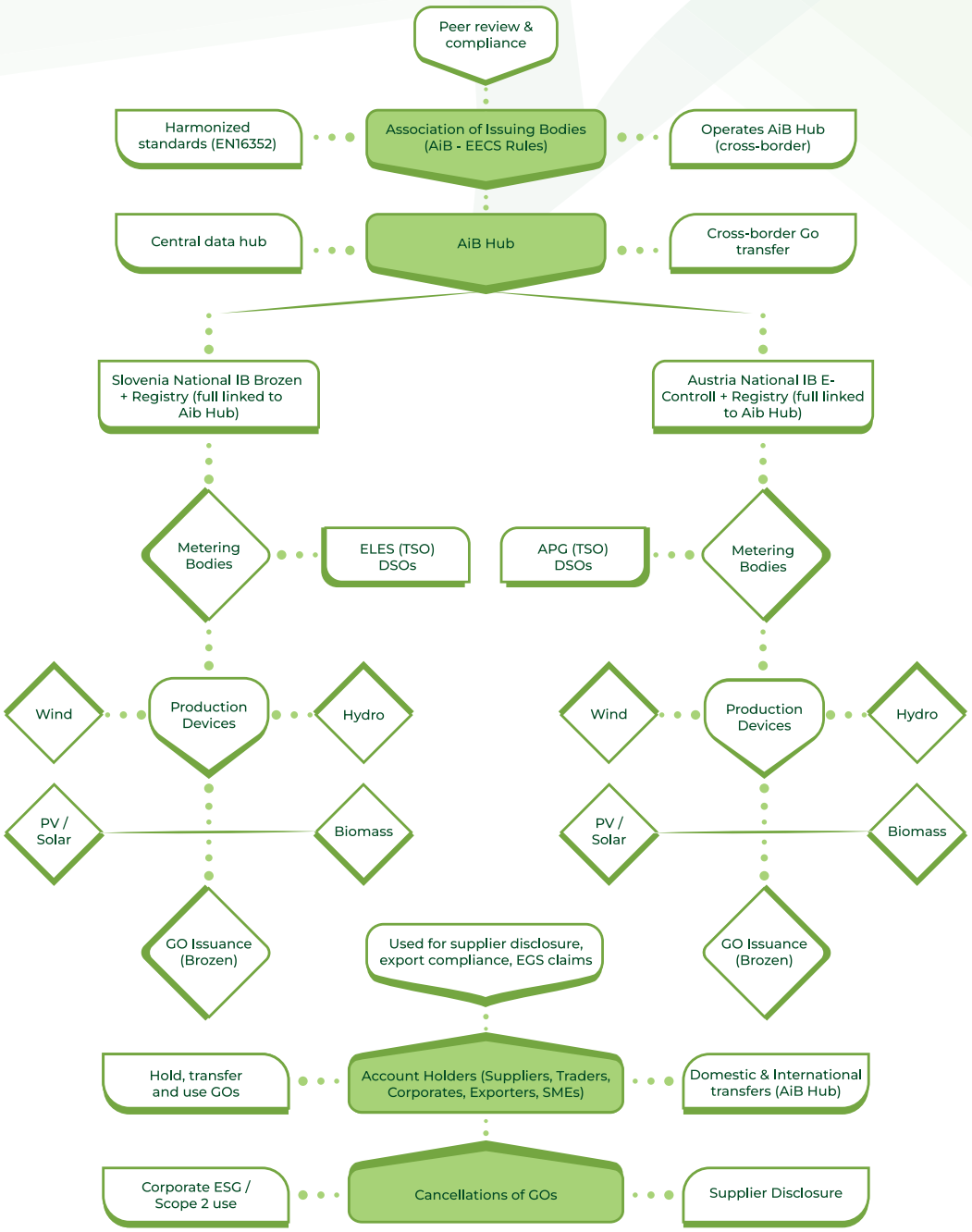
[16] European Commission. (2016). Buying Green! - A handbook on green public procurement (3rd ed.). Publications Office of the European Union. Source. https://sustainable-procurement.org/fileadmin/user_upload/layout/Documents/Buying-Green-Handbook-3rd-Edition.pdf

[17] European Investment Bank. (2024). "Climate Awareness Bonds and Sustainability Awareness Bonds in the context of evolving EU legislation on sustainable finance".https://www.eib.org/en/investor-relations/sustainable-finance/index

2.4 GO Ecosystem

Figure 3.1.: GO Ecosystem. GO Ecosystem. The Association of Issuing Bodies (AIB) governs the European Energy Certificate System (EECS) through harmonized standards and the EECS Hub, which enables secure cross-border transfers of Guarantees of Origin. Achieving AIB membership requires development of an EECS Domain Protocol, registry interoperability testing, and peer review by existing issuing bodies. Member countries designate national Issuing Bodies (i.e., Borzen in Slovenia, E-Control in Austria) that operate registries, issue GOs based on verified renewable generation, and manage their transfer and cancellation. This system ensures credibility, avoids double counting, and underpins disclosure, export compliance, and corporate sustainability claims across the EU.



3. Kosovo's Export Landscape and Green Trade Readiness

Kosovo's export profile is evolving within a rapidly changing global trade environment where environmental performance is becoming a core determinant of market access and competitiveness. The European Union, one of Kosovo's largest export destinations, is embedding sustainability criteria into trade policies, procurement frameworks, and corporate sourcing strategies. This shift is particularly relevant as the EU accelerates its Green Deal implementation, expands carbon-related measures, and increases transparency requirements across supply chains. For Kosovo, green trade readiness is no longer a marginal issue; it is a central factor in safeguarding export growth, attracting investment, and meeting the expectations of increasingly sustainability-conscious buyers. The sector scan shows that manufacturing and metals dominate export value, while agro-business, textiles, and ICT provide important complementary niches.

Export trends confirm that over one-third of Kosovo's exports go to the EU, where sustainability requirements are the strictest. CEFTA partners remain important, but they exert limited green pressure, underscoring the EU as the critical arena for competitiveness.

Awareness of these shifts is growing but uneven. Larger exporters and Global G.A.P. and Organic-certified farms show some readiness, while the majority of SMEs, especially in textiles and manufacturing companies, lack the knowledge and capacity to comply. This gap underscores the need for simple, credible tools that can bridge awareness and action.

3.1 Sector Scan: textiles, agro-business, ICT, manufacturing

Kosovo's export competitiveness is shaped by a diverse set of sectors, each facing distinct opportunities and challenges in aligning with sustainability requirements. The textiles, agro-business, ICT, and manufacturing sectors are Kosovo's most export-ready industries, generating significant employment and foreign exchange. While these sectors have built strong networks in EU markets, sustainability integration remains sporadic.

3.1.1. Textiles and Apparel

The textile and apparel sectors once represented one of Kosovo's strongest industrial bases, employing over 14,000 workers before the 1990s. Today, the industry comprises over 450 small, private companies, mostly SMEs, engaged in modest-scale production.[18] Export performance remains limited, with niche subcontracting for EU buyers, accounting for a small share of Kosovo's total exports.

Energy use is concentrated in dyeing and finishing processes, which are electricity-intensive, though many SMEs rely on less energy-demanding machinery. Certification uptake is minimal, with very few companies holding ISO 14001 or other eco standards. Key barriers include outdated machinery, limited financing, and weak branding capabilities.[19]

Despite these constraints, the sector holds medium potential for green transition uptake. European fashion retailers, including large buyers such as H&M and Inditex, are increasingly demanding renewable sourcing and traceability in their supply chains.[20] Kosovo's textile SMEs could enhance their competitiveness by adopting more green operational measures, thus creating a niche for "green textile" exports.

3.1.2. Agro-Business

Agriculture contributes around 7 - 8% of Kosovo's GDP and engages nearly 38% of the population, mostly through subsistence farming and smallholdings. The sector is highly fragmented, with low productivity and limited mechanization. Nevertheless, exports, estimated at €70 -100 million annually, play an important role, particularly in fruits, vegetables, dairy, and wine sold to EU and CEFTA markets.[21]

Energy intensity in agriculture is moderate, with greenhouse heating, irrigation, and cold storage facilities being the primary hotspots. Export-oriented farms have begun to adopt Global GAP and organic certifications, though coverage remains limited. Barriers include land fragmentation, high costs, and vulnerability to climate impacts.

Opportunities for transitioning to green are tangible. EU supermarkets and food distributors are increasingly demanding renewable-friendly sourcing in addition

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18. Riinvest Institute, *Economic Potential in Region Centre* (Prishtina: Riinvest Institute, 2016), https://www.riinvestinstitute.org/uploads/files/2016/September/20/Economic_Potentials_in_Region_Center14743711l0.pdf.

19. Primary research, data from Key Informant Interviews (KIIs).

20. H&M Group, Sustainability Disclosure 2024 (Stockholm: H&M Group, 2023), https://hmgroup.com/investors/annual-and-sustainability-report/.

21. Ministry of Agriculture, Forestry and Rural Development (MAFRD), Kosovo Agriculture in Numbers 2023 (Prishtina: MAFRD, 2023), https://www.mbpzhr-ks.net/repository/docs/Kosovo_Agriculture_in_numbers_2023.pdf.

to food safety certifications. Pairing Global GAP or organic certification with greener operations, would enhance the export positioning of Kosovo's agribusiness sector.

3.1.3. ICT

The ICT sector is Kosovo's most dynamic export engine, accounting for nearly 28 - 30% of GDP and €347 million in exports in 2024, a 21% increase from the previous year.[22] The industry employs over 13,000 people, mostly in small companies engaged in outsourcing, software development, and digital services for the EU and US markets.

Although electricity intensity is lower, ICT companies supplying ESF-sensitive clients may benefit disproportionately from renewable sourcing claims enabled by GOs. Certification and sustainability awareness remain minimal, and there is virtually no uptake or recognition of green transition among ICT exporters.

While currently the sector has low immediate relevance for green transition, including the GO adoption, niche opportunities exist. Larger outsourcing companies working with ESG-conscious clients may find value in marketing their services as "powered by renewable energy". This could become a differentiator for attracting green-conscious international contracts.

3.1.4. Manufacturing

Manufacturing is a cornerstone of Kosovo's economy, contributing 17–18% of GDP and employing over 11% of the workforce. The sector is diverse, encompassing food processing (26% of output), non-metallic minerals (12%), furniture (12%), and rubber/plastics (10%). Exports totaled €863 million in 2023, with metals, plastics, wood, and processed food as leading categories.[23]

Manufacturing is highly energy-intensive and heavily reliant on coal-based electricity, which places Kosovo's producers at a disadvantage in an increasingly carbon-conscious trade environment. Certification uptake is limited, with only a handful of companies certified under ISO 9001 or ISO 14001. Barriers include outdated equipment, high energy costs, and significant carbon intensity, coupled with skill shortages.

This sector represents the highest potential for green transition, particularly for industries exposed to the EU's Carbon Border Adjustment Mechanism - CBAM, such as steel, aluminum, and cement. By integrating green practices, Kosovo's manufacturers could reduce perceived carbon intensity, retain access to EU markets, and position themselves as early movers in the Western Balkans region for green industrial exports.

[22] GAP Institute, Export of ICT Services (2015–2024) (Prishtina: GAP Institute, 2025), https://www.institutigap.org/news/3433.

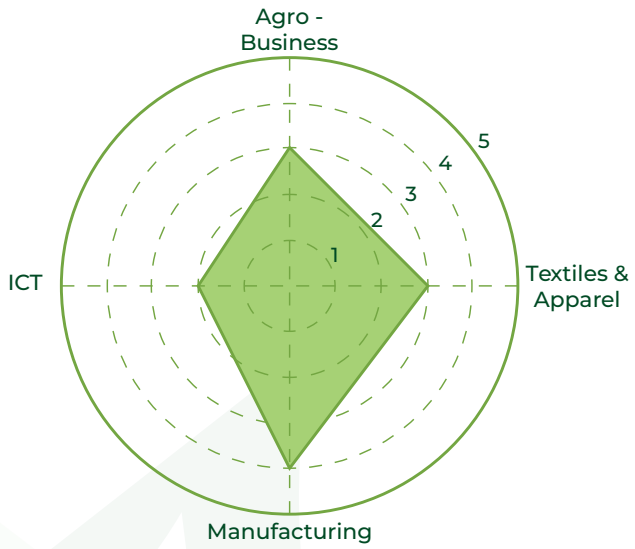
[23] Ministry of Industry, Entrepreneurship, and Trade, Annual Manufacturing Report 2023 (Prishtina: MINT, 2024), https://mint.rks-gov.net/desk/inc/media/E00B774E-0EB8-4443-8D04-064E86100919.pdf.

Category	Textiles & Apparel	Agro-Business	ICT	Manufacturing
Sector Overview	Approx. 451 companies, mostly SMEs; historically >14,000 workers, now small-scale.	7 - 8% of GDP; Approx. 38% of the population engaged; fragmented small farms.	28 - 30% of GDP; Approx. 13,000 employees; dominated by SMEs in outsourcing & digital services.	17 -18% of GDP; 11% of jobs; diverse subsectors: food, minerals, furniture, plastics.
Export Performance	Niche subcontracting for EU buyers; <5% of total exports.	€70 - 100m annually; fruits, vegetables, dairy, wine; main exports to EU & CEFTA.	€347.4m exports in 2024 (+21% YoY); main markets EU & US.	€863m exports in 2023; metals, plastics, wood, food; Approx. 22% of exports.
Energy Use & Intensity	Medium - High (dyeing, finishing).	Moderate (irrigation, cold storage, processing, greenhouses).	Low (service-based).	High (electricity-intensive, coal-dependent).
Existing Certifications	Very few ISO/eco cert.; awareness is low.	Some Global GAP & Organic; still limited coverage.	Minimal - ISO certifications; Green transition awareness absent.	Some ISO 9001/14001 in larger companies; low penetration overall.
Barriers	Small scale, outdated machinery, weak branding, and limited finance.	Land fragmentation, productivity gaps, and climate risk.	Skills mismatch, lack of scale, and no green positioning.	Outdated equipment, high costs, high emissions, and skills shortages.
Opportunities for Green Transition	EU buyers increasingly require renewable sourcing; “green textiles” niche.	EU supermarkets and Food Processors demand sustainable, traceable products. They boost credibility.	Niche: ESG-conscious outsourcing clients.	Strong need for CBAM-exposed exports (steel, cement, aluminum); key for EU access.
Readiness Score (1–5)	3/5	3/5	2/5	4/5

Table 1.0.: Kosovo Sector Scan - Export Landscape and Green Transition Readiness. Source. Based on a number of listed sources under footnotes and KIIs.

Kosovo's export base is concentrated across four sectors with very different energy profiles and exposure to green buyer demands. This sector scan, in the table above, provides an overview of each, benchmarking their economic role, export performance, energy use, existing certifications, barriers, and opportunities for integrating green practices. The comparative assessment highlights manufacturing as the most Green Transition-relevant due to high electricity intensity and EU exposure; textiles and agro-business as medium potential sectors (especially when paired with existing certifications); and ICT as a niche sector with branding opportunities in ESG-conscious markets.

Readiness Radar
Textiles, Agro, ICT, Manufacturing



Thus, Kosovo's manufacturing sector exhibits the highest readiness for green transition integration (4/5), given its electricity intensity and the exposure of its exports (metals, plastics, cement, furniture) to EU regulations like the Carbon Border Adjustment Mechanism - CBAM. Many companies in this sector already face pressure to reduce embedded carbon and report on renewable energy use, making green transition measures a critical compliance and competitiveness tool. However, outdated technologies and limited access to finance remain serious barriers.

The textiles and apparel sector shows medium readiness (3/5). While accounting for only a small share of total exports, it is highly sensitive to

buyer sustainability requirements, particularly from EU fashion retailers such as H&M and Inditex that mandate renewable energy sourcing and supplier eco-compliance. Kosovo's textile companies, mostly SMEs and subcontractors, could carve out a niche in "green textiles" if supported in adopting green transition concepts and practices.

Agro-business also scores 3/5. Exporters are familiar with certifications like Global G.A.P. and Organic standards, and several farms and agro-businesses have obtained them with donor support. Greener operations and resource efficiency could be layered onto these certifications to strengthen credibility with EU supermarket chains and food processors that increasingly combine food safety with low-carbon sourcing. Yet, land fragmentation, productivity gaps, and financing constraints limit readiness at the sector level. By contrast, the ICT sector scores lowest (2/5). While it represents a growing share of Kosovo's economy and exports, it remains largely unexposed to direct sustainability requirements, except in niche areas (outsourcing for ESG-conscious clients). ICT companies are financially stable but lack ESG systems or renewable energy strategies, making green transitioning more of a long-term branding opportunity than an immediate necessity. Manufacturing is the priority sector for early green transition pilots, followed by textiles and agro-business, while ICT remains niche. This sequencing reflects both current market demands and Kosovo's structural capacity to respond.

3.2 Export Trends and Buyer Demands

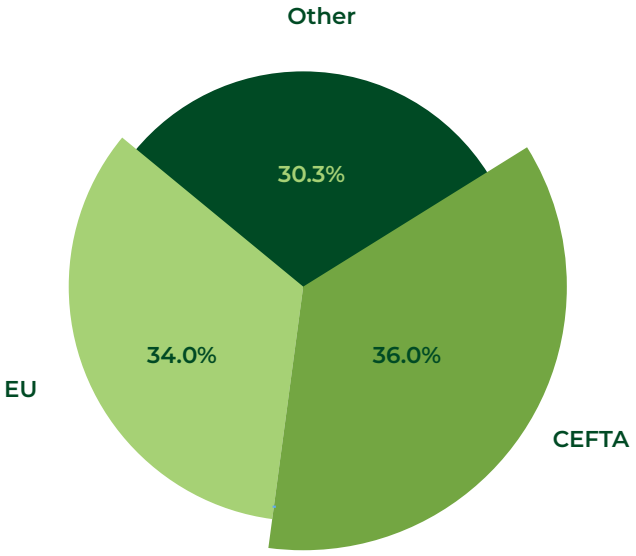
Kosovo's export growth has largely occurred in low to medium-value-added goods, with a focus on cost competitiveness. However, EU and other high-value markets are shifting towards sustainability-driven procurement.

3.2.1 Export Trends in 2023

Kosovo's export performance reveals both opportunities and risks in the context of global sustainability demands. As per the Kosovo Agency of Statistics (Yearbook/Trade, 2023), MAFRD Kosovo Agriculture in Numbers 2023, and MINT Manufacturing Industry Report 2023, in 2023, the country exported approximately €863 million worth of goods, with exports concentrated in a few product categories such as metals, plastics, wood, textiles, and agro-foods. Trade remains highly dependent on a small group of markets, with the European Union, CEFTA partners, and a handful of third countries dominating the export structure.[24]

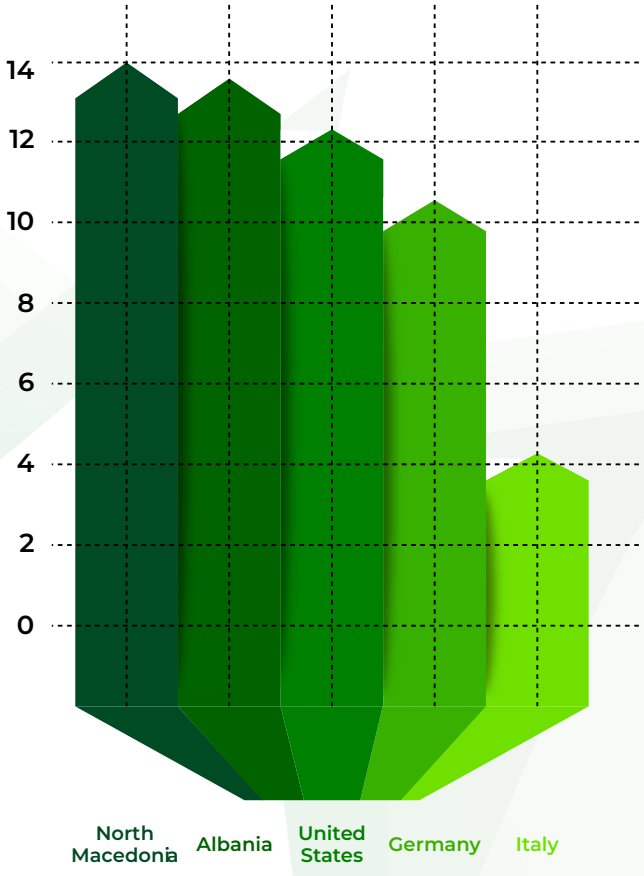
[24] Embassy of Switzerland in Kosovo, *Economic Report 2023* (Prishtina: Embassy of Switzerland in Kosovo, 2024), https://cee.swiss/wp-content/uploads/2025/01/Economic_Report_2023.pdf.

Exports by Destination (2023, % of total)



Graph 1.0 Export by destination

Top Export Partners (% of total export 2023)



Graph 2.0 Top Export Partners

The distribution of exports highlights Kosovo's dual market reality. Roughly one-third of exports (34%) go to the EU, while 36% are directed to CEFTA markets such as North Macedonia and Albania, and the remaining 30% to other partners, including the United States and Switzerland.

The top five individual trade partners, which are North Macedonia (14.1%), Albania (13.3%), the United States (12.3%), Germany (10.8%), and Italy (4.5%), account for nearly two-thirds of all exports.[25] This concentration makes Kosovo highly exposed to shifts in buyer requirements in just a handful of markets.

3.2.1.1 Sustainability Demands from Buyers

While CEFTA markets are primarily price-driven, the EU and US markets increasingly demand sustainability compliance. The European Union, through the Green Deal, has embedded environmental performance into trade rules and disclosure requirements. The Carbon Border Adjustment Mechanism - CBAM, effective from 2023, already covers products like cement, iron, steel, aluminum, fertilizers, and electricity, most of which are relevant to Kosovo's manufacturing sector.[26] In consumer-facing sectors such as textiles and agro-food, large EU buyers require renewable sourcing and certification schemes. Retailers like H&M[27] and Inditex[28] have issued supplier codes mandating renewable energy use and carbon reporting. Similarly, EU supermarkets and food processors, and distributors now expect Global G.A.P. and Organic Standard certification combined with demonstrable low-carbon or renewable-friendly production.

The US market, though less prescriptive, is guided by corporate ESG commitments. For Kosovo's ICT exporters, this translates into growing pressure from outsourcing clients to prove renewable-powered operations, especially for data centers and large-scale digital service providers.

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25. Kosovo Agency of Statistics. (2024). External Trade Statistics 2023. https://askdata.rks-gov.net/pxweb/sq/ASKdata/

26. Primary research, data from Key Informant Interviews (KIIs).

27. Science Based Targets initiative, Supplier Engagement Case Study: H&M Group (n.p.: SBTi, n.d.), https://sciencebasedtargets.org/companies-taking-action/case-studies/supplier-engagement-case-study-h-m-group.

28. Inditex, Energy Policy (Arteixo: Inditex, 2025), https://www.inditex.com/itxcomweb/api/media/81904d9c-2c6f-4537-928a-7a8bd080d5d6/EnergyPolicy.pdf.

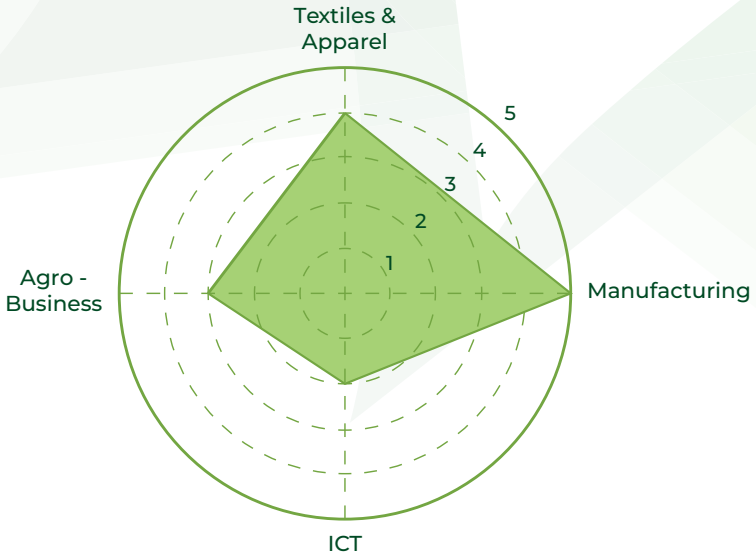
Sector	Typical Buyer Expectations	GO and Green Transition Relevance
Textiles	Renewable sourcing, eco-labels, supplier codes	High - certify renewable energy use
Agro-Business	Global G.A.P., traceability, low-carbon sourcing	Medium - complements food certifications
ICT	ESG compliance, renewable-powered IT services	Low-Medium - niche use
Manufacturing	CBAM compliance, low-carbon energy sourcing	Very High – critical for EU access

Table 2.0.: Buyers Expectations and GO and Green Transition Relevance. Source. Based on a number of listed sources under footnotes and KIIs.

3.2.1.2. Sectoral Differences in Buyer Pressure

The degree of buyer sustainability pressure varies by sector. Manufacturing faces the strongest demands (5/5)[29], given its exposure to CBAM and energy-intensive exports. Textiles also face high pressure (4/5) from global fashion chains. Agro-business experiences moderate pressure (3/5), with green sourcing increasingly tied to food safety standards. ICT, while currently less pressured (2/5), is likely to face growing ESG demands from international clients in the coming years.

Exports by Destination (2023, % of total)



Graph 3.0 Buyer Sustainability Pressure by Sector.
Source. Based on KIIs. & sector documentation.

These dynamics are captured in the buyer expectations matrix, which shows how GOs can act as a cross-sector enabler of compliance. For textiles and agro-business, GOs would complement existing certifications such as ISO, eco-labels and Global G.A.P. For ICT, they represent a niche opportunity for companies serving ESG-conscious clients. For manufacturing, they are strategically essential to maintain EU market access.

The analysis suggests that Kosovo's exporters cannot treat sustainability as optional if they wish to deepen access to EU markets. For CEFTA-oriented trade, GOs may remain less relevant in the short term. However, for EU-facing sectors, the absence of renewable energy certification poses a real competitiveness risk.

[29] Methodological note on scoring framework. This section uses qualitative scoring (1–5 scale) to assess sectoral readiness, awareness, preparedness, buyer pressure, and GO relevance. The scoring is not arbitrary; it combines statistical data, institutional reporting, and expert judgment to provide a consistent comparative framework across sectors. Buyer Pressure is the extent to which international buyers impose sustainability/renewable sourcing requirements. 1 = Negligible buyer demand; 3 = sector partially affected; 5 = buyers universally require compliance (i.e. CBAM for metals).

By enabling exporters to prove renewable electricity usage, GOs provide a low-cost, credible, and internationally recognized instrument to align with buyer expectations. Their adoption would position Kosovo not only to avoid penalties under new EU frameworks but also to differentiate exports into highly competitive value chains such as textiles and agro-food.

3.3 Awareness and Preparedness of Exporters

While Kosovo's exporters are increasingly aware of the role that sustainability plays in accessing international markets, the depth of understanding and the actual readiness to comply with buyer requirements remain limited. Surveys and business climate reports indicate that awareness is growing unevenly across sectors, but preparedness, in terms of technical capacity, financial access, and organizational structures, lags. This gap creates both a risk and an opportunity for the introduction of Guarantees of Origin - GOs, as a relatively low-cost compliance tool.

Sector	Awareness (1–5)	Preparedness (1–5)	Front-Runners
Textiles	2	2	Few subcontractors exposed to eco-label chains
Agro-Business	3	3	Few subcontractors exposed to eco-label chains
ICT	2	2	Outsourcing companies serving ESG-conscious clients
Manufacturing	3	3	ISO 14001-certified companies in metals/plastics

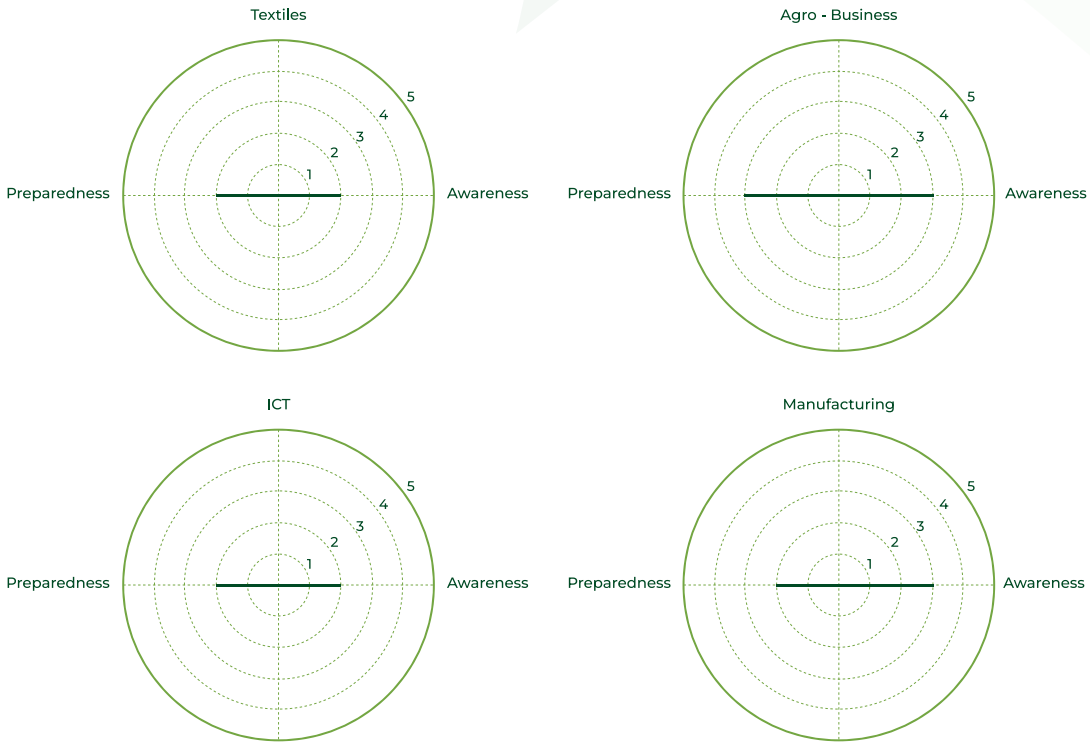
Table 3.0.: Exporter Awareness and Preparedness by Sector. Source. Based on a number of listed sources under footnotes and KIIs.

3.3.1. Awareness Levels

Findings from the Kosovo Chamber of Commerce (KCC) and other associations and clusters highlight that awareness[30] of sustainability obligations is concentrated among larger exporters, while the majority of SMEs have limited knowledge of EU Green Deal, CBAM, or renewable energy certification requirements.

- Agro-business exporters show the highest awareness, largely due to their exposure to GlobalG.A.P. and Organic certification demanded by EU buyers.
- Manufacturers demonstrate partial awareness of CBAM obligations, particularly in sub-sectors like metals.
- Textile exporters show weak awareness, with most companies focused on subcontracting for cost-sensitive markets.
- ICT companies are the least aware, with sustainability rarely considered beyond a few outsourcing companies serving ESG-conscious clients.

This is reflected in the awareness scores: agro-business and manufacturing rated 3/5, while textiles and ICT lag at 2/5.



Graph 4.0 Exporter Awareness & Preparedness Radar Profiles. Source. Based on KIIs.

30. Methodological note on scoring framework. This section uses qualitative scoring (1–5 scale) to assess sectoral readiness, awareness, preparedness, buyer pressure, and GO relevance. The scoring is not arbitrary; it combines statistical data, institutional reporting, and expert judgment to provide a consistent comparative framework across sectors. Awareness is the degree to which exporters recognize sustainability/green certification requirements. 1 = Minimal/no awareness; 3 = moderate (some certified exporters, sector associations discuss ESG); 5 = high, widespread recognition across companies.

3.3.2. Preparedness Levels

Preparedness[31] across all sectors is generally lower than awareness, highlighting a significant implementation gap. The BKT Kosova ESG Report (2023) confirms that while financial institutions are beginning to push ESG principles, most SMEs lack the resources or structures to comply.

- Agro-business is relatively better prepared (3/5) thanks to donor-supported farms with Global G.A.P. certification, though scaling remains constrained by finance.
- Manufacturing is weakly prepared (2/5), with outdated machinery, high energy intensity, and little access to green finance.
- Textiles (2/5) face similar constraints, outdated equipment and little knowledge of certification processes.
- ICT (2/5) has financial stability but lacks ESG frameworks or renewable sourcing practices.

The awareness gap highlights that exporters may not be ready for full sustainability transformations, but Guarantees of Origin offer a low-cost entry point to demonstrate renewable energy use. For agro and manufacturing exporters, especially, GOs can help bridge the gap between awareness and preparedness while avoiding exclusion from EU markets.

4. Legal and Policy Framework for Guarantees of Origin

4.1 Key EU Directives and Complementary Instruments

The foundation for Guarantees of Origin - GOs in the European Union is enshrined in a series of directives and regulations, each shaping a dimension of the energy and climate transition, while also supported by different complementary instruments that further strengthen the GO relevance in green transitioning. These together drive the EU's clean energy transition and reinforce its competitive objectives. At its core, the Renewable Energy Directive (RED II – Directive (EU) 2018/2001)[32],

[31] Methodological note on scoring framework. This section uses qualitative scoring (1–5 scale) to assess sectoral readiness, awareness, preparedness, buyer pressure, and GO & green transition relevance. The scoring is not arbitrary; it combines statistical data, institutional reporting, and expert judgment to provide a consistent comparative framework across sectors. Preparedness is the practical ability of exporters to comply (certifications, technology, finance). 1 = No certifications, outdated tech, no finance; 3 = some donor supported certifications or isolated compliance; 5 = systemic readiness and financing options.

[32] European Parliament and Council, *Directive (EU) 2018/2001 on the Promotion of the Use of Energy from Renewable Sources (Recast), Consolidated Version (as of 16 July 2024)* Brussels: European Union, 2024), EUR-Lex.

as amended by Directive (EU) 2023/2413 ("RED III")[33], requires EU Member States and Energy Community Contracting Parties[34] to ensure that all electricity from renewable sources is traceable through GOs, with detailed rules for issuance, transfer, and cancellation.

The 2023 amendment raised the binding 2030 renewable energy target to at least 42.5% (aspirational 45%), introduced accelerated permitting for renewables, and encouraged innovative technologies, further elevating the strategic importance of GOs as proof points for renewable energy use across electricity, heating, and transport sectors. These provisions interlock with the Energy Efficiency Directive (2012/27/EU)[35], which commits the EU to binding efficiency targets and promotes transparent disclosure instrument, such as GOs, to verify the renewable content of efficient generation (i.e., high-efficiency cogeneration, district heating). By integrating GOs into efficiency reporting and support schemes, Contracting Parties can demonstrate renewable energy uptake in a way that is verifiable, compatible with the Energy Community acquis, and valuable for both domestic and cross-border trade.

The European Climate Law (Regulation (EU) 2021/1119) establishes an EU-wide commitment to climate neutrality by 2050 and formalizes climate targets. This regulation sets an interim target of at least a 55% net reduction in GHG emissions by 2030. It provides the overarching legal framework for EU climate and energy legislation, including RED II/RED III (Directive (EU) 2018/2001 & Directive (EU) 2023/2413), the Energy Efficiency Directive, and CBAM. Within this framework, GOs serve as a traceable and transparent tool to substantiate renewable energy use, enabling both member states and contracting parties to monitor progress toward decarbonization targets and meet reporting obligations under EU and Energy Community governance systems. The law reinforces the relevance of tools like GOs to support transparency, traceability, and the green transition of energy systems.

Beyond these cornerstone instruments, other EU frameworks further strengthen the market value of GOs and their role in enhancing exporter competitiveness.

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[33] European Parliament and the Council. (2023). Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001 (and related acts) as regards the promotion of energy from renewable sources. Official Journal entry (31 October 2023).

[34] Energy Community. Energy Community Treaty. (2006). https://energy.ec.europa.eu/topics/international-cooperation/international-organisations-and-initiatives/energy-community_en

[35] European Parliament and the Council. (2012). Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC Text with EEA relevance. https://eur-lex.europa.eu/eli/dir/2012/27/oj/eng

The EU Emissions Trading System - EU ETS[36] and its upcoming extensions (ETS2 for buildings and road transport) create carbon pricing signals that reward renewable energy use, where GOs can help document compliance and bolster ESG claims. The EU Taxonomy Regulation defines what qualifies as "environmentally sustainable" economic activity, and verified renewable energy use backed by GOs can support taxonomy alignment for investors and financiers. Likewise, the Corporate Sustainability Reporting Directive - CSRD and its European Sustainability Reporting Standards - ESRS require large companies (and, indirectly, their suppliers) to disclose energy sourcing and carbon intensity. GOs provide auditable proof in these disclosures.

Finally, trade-related instruments such as the Carbon Border Adjustment Mechanism - CBAM while not yet recognizing Kosovo Guarantees of Origin for compliance purposes, nonetheless underscore the strategic importance of demonstrating renewable-powered production and credible energy sourcing for exporters seeking to remain competitive in EU markets. In parallel, the Green Agenda for the Western Balkans commits Kosovo and its neighbors to align with EU climate and energy policies, including the integration of disclosure tools like GOs into market and policy frameworks. Together, these instruments create a unified policy and market environment where GOs are not only a compliance tool under the energy acquis but also a strategic asset for market access, investor attractiveness, and export competitiveness in a low-carbon global economy.

Together, these directives and complementary instruments create the legal context within which Kosovo must align its systems to ensure interoperability, legal compliance, and market access.

4.2 Association of Issuing Bodies & the European Energy Certificate System

The Association of Issuing Bodies - AIB is the central European network responsible for administering the European Energy Certificate System - EECS[37]. the standardized framework that underpins the credibility, traceability, and cross-border trade of GOs. By harmonizing technical rules, data formats, and market procedures across its members, the AIB ensure

36. EU Emissions Trading System (EU ETS). Source. https://climate.ec.europa.eu/eu-action/carbon-markets/eu-emissions-trading-system-eu-ets_en

37. European Energy Certification System – EECS. Source. https://www.aib-net.org/eecs

that certificates issued in one country are trusted and tradable in another, thereby enabling an integrated renewable energy market in Europe. Membership in the AIB grants access to the EECS Registries[38], a secure platform for the electronic transfer of GOs between national registries and aligns participants with the disclosure and residual mix methodologies used across the continent.

For Contracting Parties in the Energy Community, including Kosovo, alignment with EECS rules is not only a matter of market interoperability but also a strategic step toward fulfilling renewable energy obligations and facilitating participation in power purchase agreements and other cross-border mechanisms that the Secretariat identifies as key to regional growth. In practical terms, joining the AIB requires the designation of a competent issuing body, the establishment of a compliant registry, and the adoption of national rules fully consistent with EECS standards. Kosovo is in the process of developing its GO framework, supported by the Energy Community Secretariat, and it has recently secured AIB membership. Achieving this status is essential for its renewable energy producers to access EU buyers directly, strengthen the credibility of its green exports, and position the country within the emerging regional renewable energy market hub.

4.3 Energy Community and Kosovo's Regional Obligations

Kosovo's alignment with the EU's Guarantees of Origin framework is both a legal obligation under the Energy Community Treaty[39] and a strategic step to secure access to green-sensitive markets. The system operates within a wider EU legislative architecture that links renewable energy promotion, climate targets, and trade competitiveness. Establishing a compliant and interoperable GO framework will enable Kosovo's renewable energy claims to be recognized, strengthen its position in export markets, and support its broader energy transition goals. More specifically, as a Contracting Party to the Energy Community Treaty, Kosovo is legally bound to transpose and implement core elements of the EU energy legislation, including the Renewable Energy Directive (RED II/III) and the Energy Efficiency Directive, within agreed timelines.

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38. European Energy Certificate System – EECS. EECS Registries – List of all active EECS registries connected to the AiB Hub. Source. https://www.aib-net.org/facts/eecs-registries

39. EUR-Lex, *The Energy Community Treaty* (Brussels: European Union, 2006), https://eur-lex.europa.eu/EN/legal-content/summary/the-energy-community-treaty.html.

The Energy Community Secretariat[40] monitors progress through its annual implementation reports, where Kosovo's compliance with renewable energy and energy market legislation is assessed against specific indicators. Establishing a functioning Guarantees of Origin system is one of the key outstanding requirements identified for Kosovo, both as part of its renewable energy disclosure obligations and as a step toward greater market integration with the EU.

These obligations are reinforced by Kosovo's commitments under the Green Agenda for th e Western Balkans, which mirrors the EU Green Deal objectives at the regional level. Through the Green Agenda's action plan, Kosovo has pledged to strengthen its climate and energy policies, introduce a transparent disclosure instrument for renewable electricity, and prepare for the gradual introduction of carbon pricing and other decarbonization tools.[41] Implementing a GO system that is interoperable with the European Energy Certificate System (EECS) will directly support these commitments by enabling accurate disclosure of renewable generation, improving investment signals for green projects, and facilitating participation in emerging regional power markets.

The Energy Community Secretariat has provided technical assistance to help Kosovo draft the necessary secondary legislation, designate a competent issuing body, and prepare the technical infrastructure for a national GO registry. Full alignment will position Kosovo to join the Association of Issuing Bodies (AIB) in the future, ensuring that its GOs are recognized across the European market. Achieving this milestone is not only critical for fulfilling regional legal obligations but also for unlocking the trade and investment benefits associated with credible, internationally recognized renewable energy certification.

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40. Energy Community. Energy Community Secretariat. Source. https://www.energy-community.org/

41. Regional Cooperation Council, *Action Plan for the Implementation of the Sofia Declaration on the Green Agenda for the Western Balkans 2021–2030* (Sarajevo: RCC, 2021), https://www.rcc.int/docs/596/action-plan-for-the-implementation-of-the-sofia-declaration-on-the-green-agenda-for-the-western-balkans-2021-2030.

4.4 Legal Levers in Kosovo

The implementation of a GO system in Kosovo builds on an existing legislative framework that already embeds several key provisions relevant to renewable disclosure instrument, registry management, and the designation of an issuing authority. The cornerstone laws include:

Law /Instrument	Relevant Articles	What the law says about GOs (or Certificates of Origin)
LAW No. 05/L-085 ON ELECTRICITY	Article 8 - Certificate of Origin	Grants' renewable and high-efficiency cogeneration producers the right to a certificate of origin (standard size 1 MWh). Defines minimum content (energy source; production start/end dates; plant identity/location/capacity; commissioning date; support received; country & issue date; unique certificate number). Requires issuance, transfer, and cancellation in electronic form; prohibits double-counting; provides for recognition of certificates from other Energy Community jurisdictions unless there are justified doubts. Designates ERO as the competent issuing authority.
LAW No. 06/L-079 ON ENERGY EFFICIENCY	Art. 19 (High-Efficiency Cogeneration); Art. 42 (Secondary Legislation)	Provides for a certificate/guarantee of origin mechanism for electricity from high-efficiency cogeneration, under objective, transparent, and non-discriminatory criteria to be detailed in secondary legislation. Requires the adoption of an Administrative Instruction to set issuing and verification procedures.
LAW No. 05/L-081 ON ENERGY	Framework provisions (definitions; institutional roles)	Establishes the legal and institutional framework for Kosovo's energy sector. While it does not contain detailed GO procedures, it defines the regulatory role of ERO and the coordination duties with system operators for metering and data integrity, essential for the functioning of the GO system.
LAW No. 08/L-258 ON THE PROMOTION OF THE USE OF RENEWABLE ENERGY SOURCES	Art. 1(2); 53; 54; 55; 56	Transposes core provisions of RED II/RED III into Kosovo law. Expected to: mandate GOs for all eligible renewable carriers (electricity, heating/cooling, renewable gases as phased); confirm ERO as Issuing Body and registry operator; set 1 MWh unit size, validity period, anti-double-counting rules, and required certificate content; provide for cross-border recognition/export; and establish supplier disclosure & residual mix requirements.

Table 4.0.: GO GoK Cornerstone Laws. Source. GoK Official Gazette.

In addition to the primary and secondary legislation forming the legal backbone for GOs, Kosovo's national strategies and policy plans also provide a clear mandate and political direction for their development. These strategic documents embed GOs within broader energy transition, climate, and market integration goals, ensuring that their implementation is not

only a regulatory requirement but also a planned instrument for achieving renewable energy targets, meeting international climate commitments, and enabling access to green-sensitive markets. The table below summarizes the key national strategies and plans that directly or indirectly support the establishment and operation of a GO system in Kosovo.

Strategy/Plan	Relevance to GOs	Key Provisions/ Measures	Alignment with EU/ Regional Framerworks
NATIONAL ENERGY AND CLIMATE PLAN (NECP)–DRAFT	Provides the overarching integrated policy framework for energy and climate, legally required under the Energy Community Treaty.	Commits to increasing renewable energy share; references development of certification systems for RES; under NDC scenario, aims for 42% GHG reduction by 2030; includes measure to establish electronic issuing, transfer, and cancellation of GOs via upcoming updated ERO Rule.	Fully aligned with RED II/RED III and Energy Community obligations; supports compliance with EU disclosure requirements.
VOLUNTARY NATIONALLY DETERMINED CONTRIBUTION (NDC)	Signals Kosovo's international climate ambitions, with measures that can be leveraged to justify and fund a GO system.	Sets mitigation target of up to 42% GHG reduction by 2030 (conditional on climate finance); explicitly lists "Certificates of Origin for RES" as a policy measure; links to need for electronic GO mechanism.	Aligns with EU Green Deal, Green Agenda for the Western Balkans, and UNFCCC principles despite Kosovo's non-membership in UNFCCC.
ENERGY STRATEGY 2022–2031	Long-term national energy policy that embeds GOs as part of renewable market development.	Recognizes need for national and regional RES certification; calls for ERO to establish an electronic GO registry; integrates GOs into market liberalization and cross-border trading goals.	Supports integration with the EU's internal energy market and the AIB's EECS framework.
CLIMATE CHANGE STRATEGY (2019–2028)	Provides policy context for decarbonization tools like GOs.	Promotes market mechanisms and transparency in renewable energy tracking; indirectly supports GOs through monitoring and reporting measures.	Supports Green Agenda for the Western Balkans and EU climate legislation.
GREEN AGENDA FOR THE WESTERN BALKANS – ACTION PLAN (KOSOVO COMMIT-MENTS)	Regional policy umbrella under which GOs can serve as a practical instrument for decarbonization and trade.	Calls for renewable energy tracking and disclosure mechanisms; links to enabling conditions for green finance and sustainable trade.	Directly linked to EU Green Deal; coordinated under Energy Community structures.

Table 5.0.: Key national strategies and plans that directly or indirectly support the establishment and operation of a GO system in Kosovo. Source. GoK relevant websites.

5. Institutional Mapping and Governance for GOs in Kosovo

5.1 Key and Support Institutions

A functional Guarantees of Origin - GO system in Kosovo requires a clearly defined institutional architecture that meets both national legal obligations and EU/EECS standards. Successful implementation opens the gate on the coordinated roles of regulatory, policy, operational, and financing bodies, each with distinct mandates rooted in primary and secondary legislation. The following mapping outlines the key institutions, their statutory bases, and their prospective functions in establishing a transparent, interoperable GO framework that can integrate into the Association of Issuing Bodies - AIB network and support Kosovo's renewable energy and export competitiveness objectives.

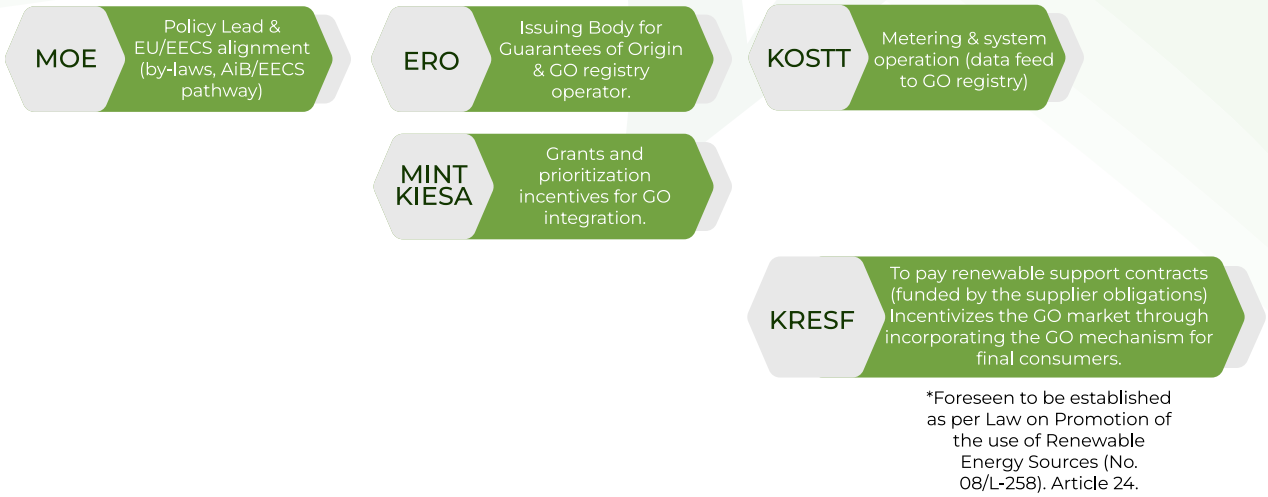

Figure 4.1.: Institutional Mapping, KII interviews and governance for GOs in Kosovo. Source: designed based KIIs and on the GoK legislation and institutional roles over GOs.

5.1.1 Energy Regulatory Office - ERO

Empowered by Article 2.3 of the Law on Energy (No. 05/L-081), ERO is mandated to carry out all activities for the regulation of the energy sector. In the electricity market, Article 4(2) of the Law on Electricity (No. 05/L-085) authorizes ERO to license and oversee electricity sector activities, while Article 5 empowers ERO to impose public service obligations where necessary. Under the Law on Energy Efficiency (No. 06/L-079), Article 26(7) explicitly requires ERO to ensure certification of origin for electricity produced from high-efficiency cogeneration according to objective, transparent, and non-discriminatory criteria in secondary legislation. This provision establishes a

direct legal precedent for extending certification functions to Guarantees of Origin for renewable energy. In line with Article 19(5) of RED II (Directive (EU) 2018/2001), the designated competent body for GOs must supervise issuance, transfer, and cancellation, be independent from production and supply, and operate an electronic, accurate, and fraud-resistant registry. ERO's independence and regulatory mandate meet these requirements, making it the logical Issuing Body for Kosovo's EECS-compliant GOs. Furthermore, Kosovo already has an ERO rule (2010) on certificates/guarantees of origin.[42] Per Kosovo's NDC, ERO is updating this rule to introduce an electronic mechanism for issuing, transferring, and cancelling GOs. The update is being aligned with RED II Article 19 requirements for an independent competent body and an electronic, accurate, fraud-resistant registry, building on Kosovo's existing legal precedent for origin certification in the Energy Efficiency Law (high-efficiency cogeneration).[43]

5.1.2 Kosovo Transmission System Operator - KOSTT

KOSTT operates, maintains, and develops Kosovo's high-voltage transmission grid and interconnectors, ensuring secure system operation and coordinating planning with market participants and neighboring Transmission System Operators (TSOs). For GOs, Article 8 of the Law on Electricity[44] requires the TSO and the Distribution System Operator - DSO to secure and control the total offtake of electricity from eligible producers in line with the Transmission and Distribution Grid Codes, and it grants priority purchase of electricity from renewable sources for which a GO has been issued under the Grid Code and Market Rules. Thus, in practice, the TSO/DSO metering and offtake duties will provide the verified production data that underpins issuance of the GOs.[45]

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42. Energy Regulatory Office (ERO), *Rules for the Establishment of the System of Certificates of Origin for Electricity Produced from Renewable Sources, Waste, and Combined Heat and Power (CHP)* in a Single Generating Unit (Prishtina: ERO, 2010), https://www.ero-ks.org/Secondary%20Legislation/Rule%202011/Rregulli_per_Certifikatat_e_Origjines_e_Miratuar_me29_12_2010.pdf.

43. GoK. Law on Energy Efficiency (No. 06/L-079. Article 26(7). Source. Official Gazette of the Republic of Kosovo.

44. GoK. (2016). Law on Electricity (No. 05/L-085). Article 8. Source. Official Gazette of the Republic of Kosovo.

45. GoK. (2016). Law on Electricity (No. 05/L-085). Article 8(5). Source. Official Gazette of the Republic of Kosovo.

5.1.3 Ministry of Economy - MoE

The MoE prepares the Energy Strategy Implementation program and may issue sub-legal acts to implement the Law on Energy. Under Law on Energy (No. /L-081), article 7 on Strategy Implementation, MoE prepared the implementation program and prepared sub-legal acts for renewable energy policy, while the Regulator - ERO is assigned the operational task of certification of origin, showing MoE as the policy lead and ERO as the executor. Furthermore, MoE is assigned to establish streamlined permitting/ coordination mechanisms under the Law on Energy, which is an important governance lever for GO-relevant Renewable Energy Source plants. Meanwhile, over the secondary legislation, the Law on Energy Efficiency (No. 06/L-079) explicitly lists the Ministry's secondary legislation package, including here, the administrative instruction on GOs (in the law currently referred to as "Certificates of origin") for electricity produced from high-efficiency cogeneration.[46] These provisions collectively ground MoE as the policy lead and by-law maker, so more specifically, MoE drafts/transposes REDII/III disclosure and GO rules, frames national RES/GO policy, and issues secondary legislation that ERO must operationalize.

5.1.4 Kosovo Renewable Energy Support Fund - KRESF

Kosovo's Renewable Energy Support Fund[47] is to be established by Law No. 08/L-258 on the Promotion of the Use of Renewable Energy Sources. Will finance the national renewables support scheme and it will be managed by the Renewable Energy Operator. The fund is fed by a renewable energy obligation[48] set by an ERO methodology and collected monthly from all suppliers per kWh supplied to final customers. Suppliers must also provide payment-insurance instruments. A market-based exemption encourages voluntary green sourcing, thus a final consumer will be exempted from paying the renewable energy obligation provided that it has purchased Guarantees of Origin covering its entire consumption.[49] Thus, operationally, suppliers exclude that consumer's metered volume from the obligation base once the corresponding GOs are cancelled against the consumer's full load, and they do not pass the levy through on the bill.

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46. GoK. (2024) Law on Promotion of the use of Renewable Energy Sources (No. 08/L-258). Article 24. Source. Official Gazette of the Republic of Kosovo.
47. GoK. (2024) Law on Promotion of the use of Renewable Energy Sources (No. 08/L-258). Article 24. Source. Official Gazette of the Republic of Kosovo.
48. GoK. (2024) Law on Promotion of the use of Renewable Energy Sources (No. 08/L-258). Article 24(1). Source.Official Gazette of the Republic of Kosovo.
49. GoK. (2024) Law on Promotion of the use of Renewable Energy Sources (No. 08/L-258). Article 24(5). Source.Official Gazette of the Republic of Kosovo.

5.1.5 Kosovo Energy Efficiency Fund - KEEF

The Kosovo Energy Efficiency Fund is a legally established, independent and autonomous public-interest, non-profit entity created by the Energy Efficiency Law to promote, support and implement energy-efficiency investments and to attract and manage financing for those projects. KEEF operates outside the civil service with full legal personality and operational autonomy, including the ability to contract, own assets, invest and provide grants or other instruments. Its financing model combines revolving and non-revolving components and may include Energy Service Agreements (primarily for public entities), grants/partial guarantees for households and other beneficiaries, as well as financing instruments that support the integration of renewable energy solutions in buildings, where these are linked to energy efficiency objectives.

Within the context of a GO system in Kosovo, KEEFs involvement is confined to its existing mandate (Law No. 06/L-079) as a financing mechanism for energy efficiency, and where applicable, small-scale renewable energy investments in buildings. Any interaction between KEEF-financed projects and GOs arises indirectly, as by-product of project financing, rather than through any role in the design, operation, or governance of the GO system itself. KEEF does not hold responsibilities related to the issuance of Guarantees of Origin, the establishment or operation of a GO registry, compliance monitoring, or market administration.

5.1.6 Ministry of Industry, Entrepreneurship and Trade - MIET & Kosovo Investment and Export Support Agency

The Ministry of Industry, Entrepreneurship and Trade and its implementing agency, KIESA, act as horizontal enablers for the GO market by driving investment, export promotion, and SME upgrading. KIESA's core mandate covers investment attraction, export promotion, and SME support, as well as policy levers, to which MIET can align with green industry goals to stimulate corporate renewable sourcing and certification demand. Furthermore, Kosovo's industrial policy foresees concrete support for export readiness and for technological upgrading focused on energy/material efficiency and "green technology" investment, which can lower soft costs for on-site renewables and related certifications. MIET/KIESA has already operationalized such instruments through competitive grant schemes, for example, product certification/digital empowerment grants in 2024 and a 2025 call for MSMEs are all mechanisms that can be targeted to green technologies and RES

procurement. Moreover, the industrial policy commits the government to an Investment Promotion Program to channel investment toward higher-value, export-oriented sectors, providing a platform to mainstream renewable energy and GO usage within firm-level competitiveness support.

5.2 Coordination Gaps

Kosovo has already taken a major step by building and activating a national Guarantees of Origin registry with Grexel on July 1, 2024, under the Energy Regulatory Office. Even so, several coordination gaps remain that could slow an EECS-grade rollout:

- ERO's "Rule on GOs" published in 2010 needs full alignment with RED II's requirements for an independent competent body and electronic EN 16325-compliant system, plus clear end-to-end procedures for issuance, transfer, cancellation, expiry, disclosure, and audits. Kosovo's Voluntary NDC also flags the ongoing rule update and electronic mechanism work for 2025-2026.
- Data and interface governance need tightening: formal binding data-sharing protocols between the registry, the Kosovo Transmission System, and market Operator -KOSTT, distribution operators, and suppliers must be finalized to ensure that metered production, cancellations, and residual mix

5.3 Registry Design and Data Governance

Grexel completed Kosovo's national GO registry in 2024 under the AIB framework. The operational registry now incorporates robust security protocols, transparent issuance and cancellation processes, and automated validation of production data, meeting EECS compliance requirements. The following highlights the main registry functions:

Legal Basis And Governance	Kosovo's Law No. 08/L-258 designates the Energy Regulatory Office (ERO) as the competent authority to issue GOs, maintain the electronic register, ensure its correctness and anti-fraud protections, and recover justified registry costs via participation fees. Transmission and distribution operators must submit measured production data to ERO for issuance. The law also fixes the standard GO size at 1 MWh, a 12-month validity from production end-date (with cancellation no later than six months after expiry), and allows transfers independent of the underlying electricity sale.
STANDARDS ALIGNMENT	The register must align with CEN EN 16325 and the AIB's EECS Rules, and be capable of connecting to a regional GO system established by the Energy Community Secretariat. This anchoring to European norms is explicit in Article 56 of the Kosovo Law No. 08/L-258.
RECOGNITION AND DISCLOSURES	Kosovo recognizes GOs issued in EU Member States and Energy Community Contracting Parties that contain the required elements; refusal is possible on accuracy/reliability grounds or where reciprocity is absent. ERO must also publish the shares of energy sources in electricity sold domestically, explicitly taking into account used/expired GOs, thereby linking issuance and disclosure.
LEGACY RULE & ONBOARDING CONTROLS	Kosovo's 2010 rule on Certificates of Origin (still cited by ERO as needing alignment with the new law) already set procedural controls: written registration requests to ERO; verification within 30 days that units are eligible and properly metered; and the requirement that any party seeking issuance/transfer must hold registry accounts. These controls remain relevant for secondary legislation updates under the 2024 law.
EECS RULEBOOK CONTEXT	The current EECS Rules (Release 8, updated through November 2024) codify core principles (uniqueness, issuance/transfer/cancellation, data retention, and compatibility with EN 16325), which Kosovo's law references for registry alignment.

5.4 Cross-Border Compatibility

Kosovo's cross-border GO compatibility rests on two pillars: 1. a domestic register aligned with EN 16325[50] and the AIB EECS Rules[51] and technically able to connect to an Energy Community regional system, and 2. legal recognition of GOs issued by EU/EnC parties, with refusal permitted for accuracy or reciprocity concerns.

FRAMEWORK FOR MUTUAL RECOGNITION	LINK TO EUROPEAN SYSTEMS	KOSOVO'S AIB STATUS	IMPLICATIONS FOR EXPORTERS
Kosovo's law provides for recognition of EU/EnC GOs and allows refusal where accuracy is doubtful or reciprocity is lacking (Article 58 – Law No. 08 L-258). This creates a legal pathway for mutual recognition but does not, by itself, ensure automated cross-border exchange.	Article 56 of the Kosovo Law No. 08/L-258. requires registry alignment with CEN EN 16325 and EECS rules and the ability to connect to a regional system established by the Energy Community Secretariat. Full, seamless pan-European transfers typically occur via the AIB EECS Hub; protocols (e.g., Slovenia) illustrate standard practices for issuance, 1-year validity, and hub-enabled imports/exports under AIB oversight.	During the interview ERO indicates that progression from AIB observer to member is anticipated. Until AIB membership is secured, cross-border transfers will rely on bilateral recognition and any regional mechanisms developed under the Energy Community.	In practical terms, Kosovo GOs can support source disclosure and buyer due diligence (where counterparties accept them contractually). For automated EU-wide tradability and frictionless supplier use in multi-country portfolios, AIB membership will remain the pivotal step. Kosovo's legal architecture (Articles 53–59 – Law No. 08 L-258) has been drafted with that convergence in mind.

50. CEN STANDARD. (2020). CEN EN16325 standard on Guarantees of Origin. Source.https://www.aib-net.org/certification/certificates-supported/cen-standard

51. AiB. (2025). EECS Rules - European Energy Certificate System. Source. https://www.aib-net.org/eecs/eecsr-rules

6. SME Readiness and Export Certification Pathways

6.1 Strategic Value of GOs for Kosovo exporters

GOs enable exporters to make credible environmental claims about their production processes. They are a market access enabler and a competitive differentiator in the rapidly greening global economy. By providing verifiable, internationally recognized proof of renewable electricity consumption, GOs allow exporters to make credible environmental claims about their production processes that can withstand assessments or evaluations from buyers, regulators, and investors. This credibility is increasingly non-negotiable in EU markets, where procurement decisions, financing conditions, and even tariff treatments are being tied to verifiable climate performance. From a commercial standpoint, GOs unlock multiple, tangible advantages, and their credibility translates into tangible business benefits such as:

6.1.1 Enhanced brand reputation with Sustainability-conscious clients

Companies able to demonstrate renewable electricity use supported by GOs send a strong market signal that their operations align with international sustainability standards. This is increasingly important for EU buyers, many of whom have adopted Scope 2 decarbonization targets and require suppliers to demonstrate renewable energy sourcing through recognized disclosure instruments such as GOs. Major EU buyers are increasingly integrating renewable energy disclosure into their procurement and compliance systems. For instance, German fashion retailers such as H&M and C&A now require their textile suppliers to disclose the origin of electricity used in production as part of their Science-based targets initiative - SBTi Scope 2 reporting.[52] In the agribusiness sector, leading food retailers in the Netherlands, including companies such as Albert Heijn (Ahold Delhaize group), mandate supplier reporting on renewable electricity sourcing under their responsible sourcing standards.[53]

For Kosovo exporters, the existence of a functioning GO system creates a direct pathway into this sustainability-driven value chain landscape. Textile producers supplying brands can demonstrate renewable use supported by GOs positioning themselves as climate-aligned partners. Agro-processors serving retailers would be able to back sustainability claims with GOs, thus strengthening trust and eligibility in long-term contracts. Beyond compliance, GOs enhance brand reputation with sustainability-conscious buyers by signaling

52. Clean Energy Close Up, *An In-Depth Analysis of the Tangible Progress of 11 of the Most Influential Global Fashion Companies* (n.p.: Clean Energy Close Up, 2024), https://stand.earth/fashion/resources/clean-energy-close-up/.

53. Albert Heijn, *Climate Targets: What Do We Expect from You as a Supplier?* (Zaandam: Albert Heijn, 2014), https://www.ah.nl/over-ah/onze-missie/duurzaam/voor-leveranciers/klimaat.

operational transparency and alignment with international targets. sustainability-conscious buyers by signaling operational transparency and alignment with international targets. This reputational capital translates into commercial advantages, such as exporters securing premium clients, reducing the risk of contract exclusion, and gaining entry into value chains where “green proof” is increasingly a gatekeeping criterion rather than a bonus.

6.1.2 Competitive differentiation in green procurement schemes

Green public procurement and large corporate sourcing frameworks in the EU increasingly reward suppliers with verifiable renewable energy use. Certain EU public procurement frameworks now incorporate environmental criteria directly into tender evaluations. The European Commission has developed voluntary GPP - Green public procurement criteria for over 20 product and service categories[54], including textiles and ICT, enabling public authorities to insert sustainability requirements based on product life-cycle considerations into procurement processes. In the private sector, IKEA requires suppliers globally to transition to 100% renewable electricity under its IWAY Standard, where GOs or other Energy Attribute Certificates are accepted as verifiable proof.[55]

For Kosovo companies that are exporters, this represents a significant opportunity. Even though Kosovo-issued GOs are not yet automatically recognized across the EU through the Association of Issuing Bodies - AIB Hub, they are issued under the new Law on Promotion of Renewable Energy Sources.[56] and aligned with the EU Directive 2018/2001 - RED II. Buyers like IKEA and international brands often accept credible Energy Attribute Certificates outside the AIB system, particularly in bilateral supply agreements.[57] This means Kosovo businesses can already strengthen their bid eligibility and brand standing with sustainability-conscious clients, while full cross-border trading recognition is in process.

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54. European Commission, *Green Public Procurement: Procuring Goods, Services and Works with a Reduced Environmental Impact throughout Their Life Cycle* (Brussels: European Commission, n.d.), https://green-forum.ec.europa.eu/green-business/green-public-procurement_en.

55. IKEA. (2019). IWAY Standard. “The IKEA Way of Responsible Procuring Products, Services, Materials and Components”. Edition 6.0. Source. https://www.ikea.com/global/en/images/IWAY_Standard_General_Section_Edition_60_6238ea7ef9.pdf

56. GoK. (2024) Law on Promotion of the use of Renewable Energy Sources (No. 08/L-258). Source. Official Gazette of the Republic of Kosovo.

57. IRENA. (2018) Corporate Sourcing of Renewables: Markets and Industry Trends – Remade Index 2018. International Renewable Energy Agency, Abu Dhabi. https://www.researchgate.net/publication/327447171_Corporate_Sourcing_of_Renewables_Market_and_Industry_Trends

6.1.3 Eligibility for sustainability-linked loans and grants

International financial institutions increasingly link preferential finance to measurable decarbonization indicators. The European Bank for Reconstruction and Development- EBRD requires renewable energy KPIs in its Green Economy Transition Strategy, offering loans and guarantees to companies meeting these benchmarks.[58] Similarly, the International Finance Corporation - IFC issues sustainability-linked loans where interest rates are tied to verifiable renewable sourcing.[59]

Kosovo's issuance of GOs under its 2024 RES Law offers exporters a concrete tool to demonstrate compliance with these financing requirements. While Kosovo GOs are not yet integrated into the AiB Hub, they provide an auditable national standard that can be accepted by banks and IFIs operating in the Western Balkans region. In practice, this means SMEs in sectors like metals, agro-processing, and textiles could leverage GOs to unlock access to sustainability-linked finance, lowering borrowing costs and accelerating investment in clean production.

6.1.4 GOs to be linked to a national carbon tax

CBAM - Carbon Border Adjustment Mechanism, covering selected goods (iron and steel, aluminium, cement, fertilizers, hydrogen and electricity).[60] Is scheduled to move from its transitional reporting phase to full financial adjustment on 1 January 2026. In the definitive period, EU importers must surrender CBAM certificates for the embedded emissions in those goods, but may reduce their obligation by the amount of carbon price paid in the country of origin for those same embedded emissions.[61] A simplification and strengthening proposal is currently under negotiation between the European Parliament and Council (COM(2025) 87).[62] Kosovo's Energy Strategy 2022-

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58. EBRD. (2024). Green Economy Transition (GET) Technical Guide. Source. https://www.ebrd.com/content/dam/ebrd_dxp/assets/pdfs/green-economy-transition/ebrds-green-economy-transition-approach/Implementing-the-Green-Economy-Transition-Technical-Guide-March-2024.pdf

59. IFC. (2022). IFC Sustainability-Linked Finance Note - Mobilizing Capital for Sustainability in Emerging Markets". Source. https://www.ifc.org/content/dam/ifc/doc/mgrt/emcompass-note-110-sustainability-linked-finance-web.pdf

60. EUR-Lex, *Carbon Border Adjustment Mechanism: Summary of Regulation (EU) 2023/956 Establishing a Carbon Border Adjustment Mechanism* (Brussels: European Union, n.d.), https://eur-lex.europa.eu/EN/legal-content/summary/carbon-border-adjustment-mechanism.html.

61. Taxation and Customs Union. (2023). FAQ - CBAM. Source. https://taxation-customs.ec.europa.eu/system/files/2023-11/CBAM%20Frequently%20Asked%20Questions_November%202023.pdf

62. EUR-Lex. (2025). Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2023/956 as regards simplifying and strengthening the carbon border adjustment mechanism. COM/2025/87 final. Source. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52025PC0087

2031 [63] states the objective of completing preparations for the introduction of a carbon pricing system by 2025, providing a legal pathway for a national for a national carbon tax or equivalent mechanism that could if appropriately designed, be creditable against CBAM for affected exports. For such recognition, the carbon price would need to effectively paid on the embedded emissions of goods, in line with CBAM requirements. In this context, Guarantees of Origin are not instruments that reduce CBAM liabilities. Rather, if Kosovo were to introduce a carbon tax aligned with EU ETS principles, applied at installation level and supported by MRB, renewable electricity verified through GOs could play a supportive role in evidencing lower physical emissions exposure, where such reductions are reflected in the underlying emissions accounting rather than through tax exemptions.

Comparable international approaches demonstrate that carbon pricing systems may incorporate differentiated treatment based on verified emissions intensity, provided that such differentiation reflects actual emissions performance and does not eliminate the effective carbon price.[64] Thus, while GOs provide standardized disclosure certificate of renewable electricity sourcing, they do not directly reduce CBAM liabilities. However, they may support broader decarbonization strategies and corporate reporting aligned with CBAM compliance. What matters for CBAM is that the explicit price paid domestically is documented and attributable to the embedded ecorporate reporting aligned with CBAM compliance. What matters for CBAM is that the explicit price paid domestically is documented and attributable to the embedded emissions.

Implication for competitiveness - Under such a design, Kosovo exporters that invest in renewable electricity and can credibly demonstrate lower emissions intensity would face reduced overall carbon exposure domestically while operating within a carbon pricing framework potentially recognizable under CBAM. This would allow EU importers to credit the carbon price effectively paid, improving relative competitiveness of Kosovo exports compared to suppliers from countries without carbon pricing or without credible emissions accounting systems.

For Kosovo, operationalizing a recognized GO system can strategically reposition its export economy as green-aligned and market-responsive. This move would also attract foreign investment into energy-intensive sectors seeking green electricity.
missions.

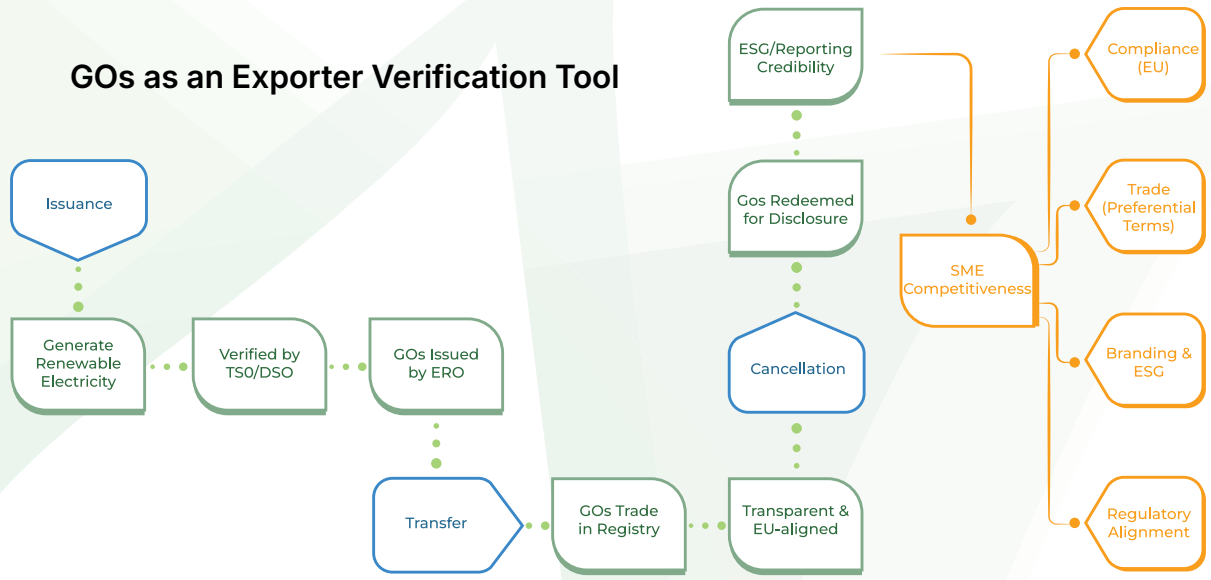
63. GoK. Ministry of Economy. “Energy Strategy of the Republic of Kosovo 2022-2031”. Source. https://kryeministri.rks-gov.net/wp-content/uploads/2023/03/Energy-Strategy-of-the-Republic-of-Kosovo-2022-2031.pdf

64. OECD. (2024). “Pricing Greenhouse Gas Emissions 2024: Gearing Up to Bring Emissions Down, OECD Series on Carbon Pricing and Energy Taxation. Source. OECD Publishing, Paris. https://doi.org/10.1787/b44c74e6-en

6.2 Exporter Verification Model - SME Read Through

Building on the strategic value of GOs outlined above, the flowchart on the side refines how the certification process operates in practice and what it means for exporters. It traces the technical steps of the GO lifecycle (issuance, transfer, and cancellation) and then connects these directly to the commercial read-through for SMEs. In other words, it shows how a system designed for energy market transparency becomes a verification tool that exporters can use to meet buyer demands, access financing, and strengthen their competitiveness in sustainability-driven value chains.

The technical flow begins with issuance, where renewable electricity production is validated by the TSO/DSO and certified by the Energy Regulatory Office - ERO (The Energy Regulatory Office - ERO would serve as the designation Issuing Body responsible for certification processes, while Ministry of Economy provides policy direction.) Once entered the national registry, GOs become tradable under the transfer phase, ensuring transparency, traceability, and interoperability with EU standards. The process concludes in cancellation, where GOs are redeemed to provide verifiable evidence of renewable energy use in supplier disclosure, ESG reporting, and sustainability audits. This operational cycle ensures credibility by preventing double-counting and aligning with EU legal framework requirements.

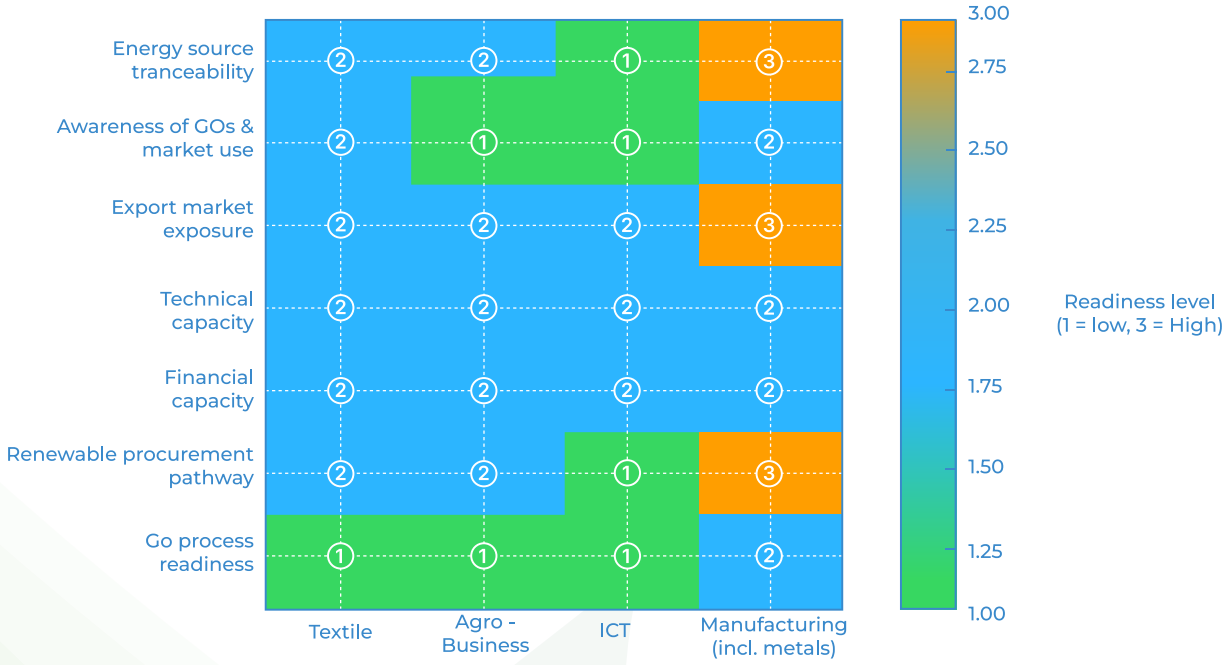


The read-through for SMEs lies in how these cancelled GOs translate directly into market advantages. Export-oriented companies can demonstrate compliance with EU buyer sustainability requirements. They gain access to preferential trade opportunities, as European buyers increasingly reward verified green sourcing with better contract terms or co-investment support. At the same time, the ability to claim renewable electricity use enhances branding and ESG reputation, strengthening the company's positioning in competitive value chains. Finally, the model shows how SMEs prepare for regulatory alignment, with Kosovo's 2024 Renewable Energy Law embedding GOs into the country's energy and trade frameworks.

Thus, being positioned as more than an administrative certification tool, GOs are an exporter verification mechanism that provides Kosovo's SMEs with a competitive edge in sustainability-driven markets.

6.3 SME GO Readiness Framework

This matrix compares SME readiness across four export-relevant sectors using a 1-3 scale (1 = low, 3 = high). Scores reflect evidence from stakeholder interviews and company examples. Dimensions cover energy data traceability, awareness, and process use of GOs, export exposure, technical and financial capacity, renewable procurement pathways, and GO process readiness.



Heatmap 1.0.: SME Readiness Matrix by Sector and Criteria. Scores: 1 = Low readiness, 2 = Medium, 3 = High. Manufacturing (incl. metals), Agro-business, Textile, and ICT are evidence-based from interviews and sector documentation; Dimensions reflect energy traceability, GO awareness and process, export exposure, technical and financial capacity, renewable procurement pathway, and GO process readiness. Source: Author analysis of interview notes with sector associations, companies, public institutions, and association-led questionnaire (2024–2025).

Scoring follows a three-point scale (1-3) across each assessed dimension, where 1 indicates limited or no readiness, 2 reflects partial progress or emerging capability, and 3 represents advanced readiness or established practice. Sectoral scoring integrates both quantitative and qualitative indicators. For manufacturing (incl. metals) and agro-business, values are derived directly from company interviews, covering on-site metering,

renewable energy sourcing, EU export share, and existing certification or energy management systems. Textile and ICT sectors are established based on association-led questionnaires and review of available documentation, particularly regarding Scope 2 sourcing and audit traceability.

Manufacturing (incl. metals) shows the strongest readiness profile, with high scores on energy traceability, export exposure, and renewable procurement, consistent with widespread PV self-generation and EU client demands. This group shows the highest readiness because exporters already track energy with on-site PV and face direct EU client scrutiny. One interviewed manufacturing exporter reports roughly 90% of sales to the EU and uses software to monitor PV vs. grid consumption, citing approximately 92% self-generation and roughly 8% grid; the firm has ISO 9001/14001/3834 and is expanding PV from 200 kW toward 400 kW. Conversations with EU buyers around energy/carbon started in 2023, coinciding with carbon-price signals. MIRECK confirms that many metal companies are prosumers with their own PV systems and that client requests for standardized disclosure certificate of renewable electricity have increased, while awareness of the GO registry is still only “basic.”

Agro-business sits at medium readiness across most dimensions, reflecting partial PV uptake and active quality-assurance systems, but lower GO awareness. Readiness is mid-range. Agriculture Associations report multiple members with PV, from 40 - 60 kW up to about 1 MW, yet operations still blend coal-based grid electricity with solar, and requests for GOs have not yet come through the associations. Awareness is uneven: some members mix Guarantees of Origin with product origin certificates. Quality-assurance culture is comparatively strong (ISO 22000/HACCP/Global GAP and Organic Standard schemes), and there is precedent for subsidized certification costs, indicating the capacity to adopt new compliance systems once demand materializers.

Textile and ICT both register medium scores on basic capacity, yet low on GO-specific awareness and process use. Based on cross-sector evidence from the Kosovo Chamber of Commerce, general awareness that a Kosovo GO registry exists is present, but procedures are not familiar, and there have been no member requests so far. On the other hand, interest in renewables is rising as companies look ahead to EU requirements.

Overall, SME readiness is uneven but movable. Manufacturing (incl. metals) sits closest to certification-ready on energy traceability and EU exposure.

Meanwhile, in Agro-business, readiness is mid-range due to established Quality Assurance systems, but lower GO familiarity. Textile and ICT remain with limited process awareness. The binding gaps are procedural, knowing the registry steps and assembling buyer-facing evidence, rather than technology or finance. As EU client requests for documented renewable use continue and disclosure routines standardize, a large share of companies can shift from "emerging" to "pre-certification" with comparatively modest process work.

6.4 Intermediary Support System: Chambers, Sector Associations & Clusters in GO Uptake

Kosovo's chambers and sector associations may support awareness and financial structuring for projects that generate or utilize GOs. While operational certification remains under the issuing body (ERO), they can support GO uptake at scale because they already represent the companies that export, and they convene them regularly. They can act as awareness raising intermediaries within a formalized GO Support Framework for SMEs led by ERO. This can be developed as follows:

Pillar	Description	Key Activities	Intended Impact
1. Capacity Building & Awareness	Strengthening SME understanding of GO benefits and compliance requirements	Regular training sessions, sector-focused workshops, practical application guides, and case studies from EU markets	Improved SME knowledge, readiness to apply for GOs
2. Technical Facilitation	Helping SMEs navigate the GO registry and data requirements	Assistance with registry account creation, data submission protocols, and troubleshooting with ERO	Faster onboarding, reduced errors in applications
3. Collective Certification & Cost Sharing	Pooling resources for certification and audits	Organizing sector-wide applications, negotiating bulk verification rates, and securing KEEF/donor subsidies	Lower certification costs, increased SME participation
4. Market Positioning & Promotion	Promoting certified SMEs in international markets	Coordination channels exist	Greater visibility, enhanced export competitiveness

Table 6.0.: Intermediary Support System: Chambers and Sector Associations & Clusters in GO Uptake.

6.4.1 Pillar 1: Capacity Building & Awareness

Chambers already commands the audience to make first-mile awareness work: the Economic Chamber reports a good number of businesses typically attending briefings[65], and it explicitly sees itself as a communication bridge for SMEs on decarbonization topics. At the same time, ERO[66] confirms the GO registry is live, staffing is limited, and promotion and awareness of the registry is not something that they had a budget to cover, which creates an information gap that associations are well placed to close. In practice, this pillar means packaging short, repeatable modules (what GOs are, how disclosure/cancellation works, how to read a cancellation statement) and circulating them through the chambers and sector associations' existing events calendar. Sensible outcome signals here are reach and conversion, such as, number of companies trained, the share of participants that go on to open registry accounts, and the reduction in basic "how to" queries reaching ERO (a proxy for effective first-mile guidance).

6.4.2 Pillar 2: Technical Facilitation

The 2010 ERO GO rule[67] and current ERO procedures provide a detailed framework. Account opening is a precondition to issuance/transfer, then ERO verifies device eligibility and metering, and (once issued) transfers and related records must be handled in the registry and retained for ten (10) years.

Associations can turn these legal/operational steps into checklists and office-hours support for members (account creation, device data, metering evidence, cancellation timing). This is particularly helpful while ERO's own team remains lean (and recently trained), so that applicant errors fall and throughput rises. Useful indicators here could be average days from account request to activation, issuance cycle time (from application to GO issuance within the rule's timeline), and error/rejection rates on submissions.

6.4.3 Pillar 3: Collective Certification & Cost Sharing

Pooling verification and audit needs at the association level lowers per-firm costs and fits with existing policy instruments. Kosovo's Energy Efficiency Law enables KEEF to support SME audits, training, and implementation of cost-effective measures. These mechanisms can be paired with GO evidence when companies start matching renewable consumption with cancellations. Furthermore, associations also stand in a good position and are, in most cases, a focal point for Government Institutions when it comes to including the private sector, thus they are positioned alongside outreach channels, such as KIESA's grant calls, which

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65. Primary research, data from Key Informant Interviews (KIIs).

66. *Ibid.*

67. Energy Regulatory Office (ERO), *Rules for the Establishment of the System of Certificates of Origin for Electricity Produced from Renewable Sources, Waste, and Combined Heat and Power (CHP) in a Single Generating Unit* (Prishtina: ERO, 2010), https://www.ero-ks.org/Secondary%20Legislation/Rule%202011/Rregulli_per_Certifikatat_e_Origjines_e_Miratuar_me29_12_2010.pdf.

attract a large number of business applicants annually, creating an easy way to reach out or form groups around green-electricity evidence. Some of the trackable effects would include, amongst others, the number of SMEs enrolled in pooled verification batches, average audit/verifier cost per firm before/after pooling, and uptake of co-funding for energy audits tied to GO use. In general, sector associations or clusters could help SMEs reduce costs, access government-backed efficiency support, and connect to renewable energy guarantees, while also serving as a key channel for outreach through existing grant programs.

6.4.4 Pillar 4: Market Positioning & Promotion

Economic Chambers and Sector Associations also operate project-based activities; they run trade fairs and sector events.[68] They can expand their activities by also helping businesses keep up with new requirements and international market expectations. To turn this into GO uptake, they can publish a "GO-ready suppliers" list, which would include companies that would be the pilots of the Kosovo GO registry and host a simple evidence pack for each company. They then share these materials on their websites, in newsletters, and on buyer missions. As Kosovo's industrial policy[69] brings EU Green Public Procurement into areas like food, textiles, and furniture, and companies with this documentation will stand out in sourcing. Progress can be measured by disclosign how many "Go-ready" company profiles are published online, how often buyers reference them in sourcing inquiries, and how frequently member companies use GO cancellation certificates as standardized disclosure certificates of renewable energy in tenders.

In general, this support system is realistic now, due to enabling pieces being in place, starting with the live GO registry, economic chambers and sector associations that are ready to convene a great number of companies at a time, legal hooks for SME audits and support via KEEF, KIESA and other international donors, and sector and procurement policies that are tending toward greener criteria.

By implementing this table-based framework, associations provide clear, actionable support across technical, financial, and market dimensions, while also serving as policy advocates to ensure SME priorities are integrated into GO system development and EECS alignment. Thus, by leveraging their scale, sector expertise, and existing export-promotion mechanism, Kosovo's chambers and associations can act as the operational backbone for GO uptake, translating registry rules into repeatable member workflows, pooling verification costs, and packaging "GO-ready" supplier

68. Primary research, data from Key Informant Interviews (KIIs).

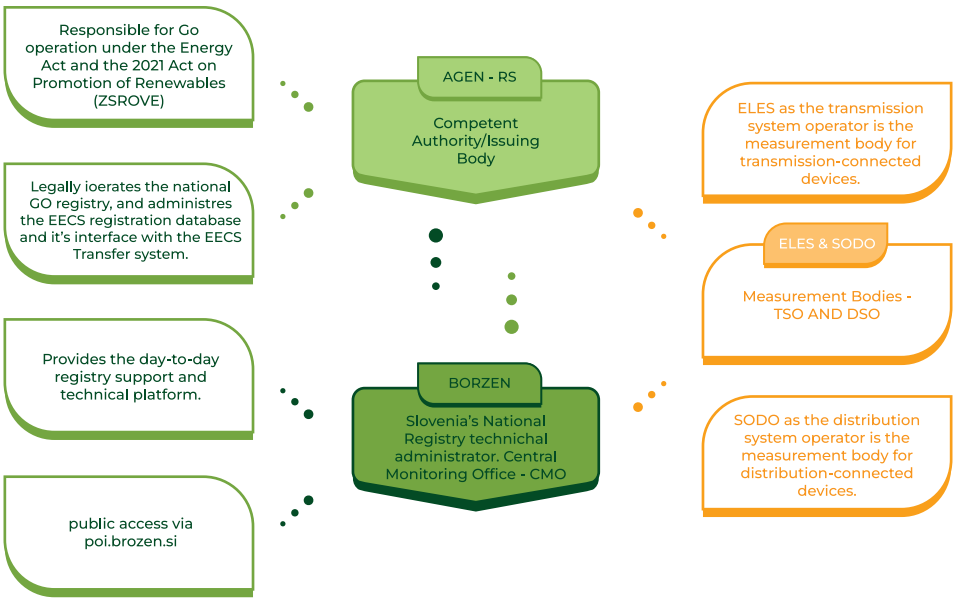
69. GoK. (2023). Ministry of Industry, Entrepreneurship and Trade - MIET. Strategy for Industrial Development and Business Support 2030. Source. https://mint.rks-gov.net/desk/inc/media/8721BDAD-6637-435F-897B-6938E6C75907.pdf

lists for EU buyers. This networked approach builds directly on their current reach and their demonstrated convening capacity, turning diffuse interest into verifiable, market-facing standardized disclosure certificates of renewable electricity use.

7. Case Study: Slovenia as a Benchmark for GO-Driven Trade

7.1 Institutional Setup

Slovenia's path to a mature GO system was the result of a gradual, structured process that began with legal transposition of EU energy directives into national law, followed by the establishment of Borzen as the central registry operator. Thus, Slovenia's GO system rests on a clear split of institutional roles set out in its EECS Domain Protocol and energy legislation. The National Competent Authority also the Issuing Body is AGEN-RS, while Borzen (the electricity market operator) administers the registry as central monitoring office - CMO and technical operator. The transmissions system operator - ELES and distribution system operator - SODO serve as Measurement Bodies for production data, such as device-level metering and validation.[70] Early in the process, Slovenia prioritized building stakeholder consensus, securing alignment with AIB EECS requirements from the outset, and launching pilot programs with electricity suppliers before scaling to a broader market. These steps ensured a controlled environment for refining registry operations, increasing public trust, and embedding GOs into energy disclosure, trade, and finance practices.



[70] Energy Agency. (2021). *EECS Electricity Domain Protocol for Slovenia. Based on EECS Rules Release 7 v6.* Source. https://www.aib-net.org/sites/default/files/assets/facts/domain-protocols/AIB-2021-DPSI-%20Domain%20Protocol%20Slovenia%202021115.pdf

Figure 5.1.: Slovenia's GO Institutional Set-up. Designed based on the Energy Agency. (2021). EECS Electricity Domain Protocol for Slovenia. Based on EECS Rules Release 7 v6.

Borzen acts as Slovenia's Central Monitoring Office and technical administrator of the national Guarantees of Origin registry, operating under mandate and oversight from AGEN-RS within the framework of the Energy Act[71] and Slovenia's transposition of RED II. In this role, Borzen runs a secure, user-oriented, EECS-compliant digital platform,[72] serves as the main interface to the AIB Hub[73] for cross-border GO transfers and supports real-time issuance and cancellation workflows with automated device accreditation. The registry provides end-to-end traceability from production to cancellation to support both domestic disclosure and export-facing verification, and Borzen maintains active coordination with market participants AGEN-RS, the TSO/DSO, renewable generators, suppliers, and consumer groups to ensure accurate device registration, transparent data reporting, and ongoing stakeholder engagement.

7.2 Legal Framework and Export Use

Slovenia's GO framework is deeply integrated into multiple areas of the energy and trade ecosystem. The GO regime is integrated in supplier disclosure law and day-to-day market practice, which makes the instrument directly usable by SMEs in sales, audits, and finance.[74] The Energy Act requires electricity suppliers to disclose their fuel mix, and where they claim renewable electricity, that share must be evidenced with cancelled GOs from the national registry. Since 2016, the Energy Agency has specified that renewable shares for disclosure can be proven only via GO cancellation.[75] Cancelled GOs are issued to users as electronic/PDF statements, which Slovenian SMEs routinely attach to tender files and buyer due diligence packages.

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71. Energy Agency of the Republic of Slovenia, *The New Energy Act No. 17/2014* (Ljubljana: Energy Agency, 2014), https://www.agen-rs.si/web/en/legislation.

72. BORZEN, *Slovenia's National Go Registry* (Ljubljana: BORZEN, n.d.), https://poi.borzen.si/register/Default.aspx.

73. AiB-Association of Issuing Bodies.(2025) Source. https://www.aib-net.org/facts/eecs-registries/aib-hub

74. Energy Agency. (2021). EECS Electricity Domain Protocol for Slovenia. Based on EECS Rules Release 7 v6. Source. https://www.aib-net.org/sites/default/files/assets/facts/domain-protocols/AIB-2021-DPSI-%20Domain%20Protocol%20Slovenia%202021115.pdf

75. Energy Agency. (2022). Renewable Sources and Efficient Use. Certificates of Origin of Electricity. Source. https://www.agen-rs.si/izvajalci/ove-ure/obnovljivi-viri-in-soproizvodnja/potrdila-o-izvoru-elektricne-energije

7.2.1 Energy Disclosure

Legally binding supplier disclosure requirements mandate the use of GOs to verify the fuel mix, enhancing transparency for consumers and large buyers. Thus, Suppliers must present last-year fuel-mix data to customers (on bills, promotional materials, and websites), and if any renewable share is claimed, it must be backed by cancelled GOs in the registry.[76] This gives SMEs a standard, regulator-defined document trail (supplier disclosure plus cancellation statements) to demonstrate renewable electricity use to buyers and auditors without customized verification.

Slovenian suppliers make this paperwork easy to access; for instance, Elektro Energija publishes an annual "Certificate of cancellation of certificates of origin of electricity for the year of (each year)"[77] alongside its disclosed fuel mix, which SMEs can cite directly in tender packs and ESG files. GEN-I states its disclosed energy mix is based on the number of cancelled GOs and provides the cancellation certificates for the year in a single place, again creating a ready-made evidentiary trail that SME customers can reference.[78] On the buyer side of SME value chains, Slovenian manufacturers highlight that purchased electricity is verified via GOs in public communications. Goodyear Corporate explicitly notes it procures Guarantees of Origin to prove renewable sourcing, normalizing the use of GO documentation in supplier audits.[79]

7.2.2 Green Labelling and Marketing

Slovenian manufacturers, including SMEs, leverage GOs to substantiate renewable energy claims in product labelling, which is crucial for compliance with EU eco-labelling standards. Thus, the Agency's guidance makes clear that renewable shares in disclosure are recognized only via GO cancellation,[80] aligning SME marketing claims with the legal mechanisms that both buyers and auditors already accept. This reduces the back-and-forth with procurement teams and streamlines evidence for ecolabel-corresponding claims. In addition, ESG practice in Slovenia increasingly references market-based Scope 2 with supplier-issued GOs.

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76. Official Gazette of the Republic of Slovenia, *Energy Act* (EZ-1), no. 17/2014 (March 7, 2014): 1787, available at uradni-list.si.

77. Elektro Energija, *Documents and Price Lists: Certificate of Cancellation of Certificates of Origin of Electricity* (Ljubljana: Elektro Energija, 2024), https://www.elektro-energija.si/za-dom/dokumenti-in-ceniki.

78. GEN-I, d.o.o., Electrical Energy – *Breakdown of Sources: Certificates of Cancellation of Guarantees of Origin for the Year 2024* (Ljubljana: GEN-I, 2024), https://gen-i.si/media/kfposqwr/certifikat_poi_2024_gen-i.pdf.

79. Goodyear Corporate, "Goodyear Opts for Renewable Energy in European and Turkish Plants" (Akron, OH: Goodyear, 2021), https://news.goodyear.com/goodyear-opts-for-renewable-energy-in-european-and-turkish-plants.

80. Energy Agency. Republic of Slovenia. *Electricity - Composition of production resources.* Source. https://www.agen-rs.si/-/sestavine-proizvodnih-virov

Corporate reports, as for instance that of Gorenjska banka,[81] explicitly note the use of a supplier's GO certificate to substantiate electricity origin in their carbon footprint, signaling to SME clients that GO-backed documentation is standard in local assurance processes.

7.2.3 Sustainable Finance Instruments

Banks and investors use GOs as verifiable evidence in sustainability-linked financing, ESG bonds, and EU Taxonomy-aligned investment portfolios. Therefore, Slovenian SMEs can translate GO cancellations directly into finance and audit-ready evidence because the regulator treats a cancelled GO as authentic standardized disclosure certificates of electricity origin and makes the cancellation certificate downloadable (electronic/PDF) from the registry, exactly the sort of documentation lenders and auditors ask for in due diligence packs.[82] This aligns with the GHG Protocol Scope 2 Guidance, where the market-based method accepts contractual instruments (including Guarantees of Origin in Europe) to determine a company's purchased-electricity emissions factor, so the same GO paperwork supports both ESG reporting and finance KPI verification.[83] The banking market around SMEs is already scaled for sustainability-linked products. NLB Group reports €287 million of new sustainable financing in 2023 and 100% carbon-free electricity in its own main premises, showing both supply (sustainable finance) and familiarity with market-based electricity claims in a Slovenian banking group.[84]

On the other hand, programmes backed by public institutions also ease SME access. For instance, in June 2023, the EIF and SID Bank agreed to an InvestEU-backed €42 million guarantee, which is expected to unlock €72 million of new SME loans for innovation, digitalization, and the green transition, typically at lower interest rates and collateral requirements. This is a channel where documented renewable-electricity use strengthens the "green transition" profile of projects.[85] Taken together, regulator-issued GO cancellation certificates and market-based Scope 2 accounting give Slovenian SMEs a finance-grade, portable standardized disclosure certificates of renewable electricity.

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81. Gorenjska Banka. 2023. *Carbon Footprint of Gorenjska Banka for 2023*. Source. https://www.gbkr.si/wp-content/uploads/2025/03/Porocilo_Ogljicni-odtis-GB-za-leto-2023.pdf?ver=1742468007 & Sustainable Development Report 2023. Source.

82. Energy Agency. Republic of Slovenia. (2017). *Renewables and Energy Efficiency - Guarantee of origin (GO)*. Source. https://www.agen-rs.si/web/en/esp_go

83. GHG Protocol. World Resource Institute. Scope 2 Guidance - An amendment to the GHG Protocol Corporate Standard. Source. https://ghgprotocol.org/sites/default/files/2023-03/Scope%202%20Guidance.pdf

84. NLB Group, *Sustainability Report 2023 – Building the Future of Our Home Court* (Ljubljana: NLB Group, 2023), https://www.nlb.si/nlb/nlb-portal/eng/sustainability-new/sustainability-report-2023.pdf.

85. European Investment Fund, "EIF and SID Bank Sign €42 Million Guarantee Agreement to Support Access to Financing for Sustainable Investment, Innovation, and Digitalisation" (Luxembourg: EIF, 2023), https://www.eif.org/what_we_do/guarantees/news/2023/eif-sid-bank-sign-eur-42-million-guarantee-agreement-support-access-financing-sustainable-investment-innovation-digitalisation.html.

This combination reduces due diligence friction for lenders and auditors, supports sustainability-linked KPI verification, and, in practice, improves access to green credit and strengthens the credibility of ESG disclosures used in export tenders and investor reporting.

7.2.4 Export Competitiveness

SMEs integrate GOs into tender documentation and supply chain audits, satisfying EU procurement criteria and reducing the administrative burden in ESG reporting. Slovenia is one of the EU's most export-oriented economies; in 2023 Slovenia exported relatively 83.3% of its GDP,[86] selling mainly to EU partners, such as Germany, Italy, Croatia, and Austria.

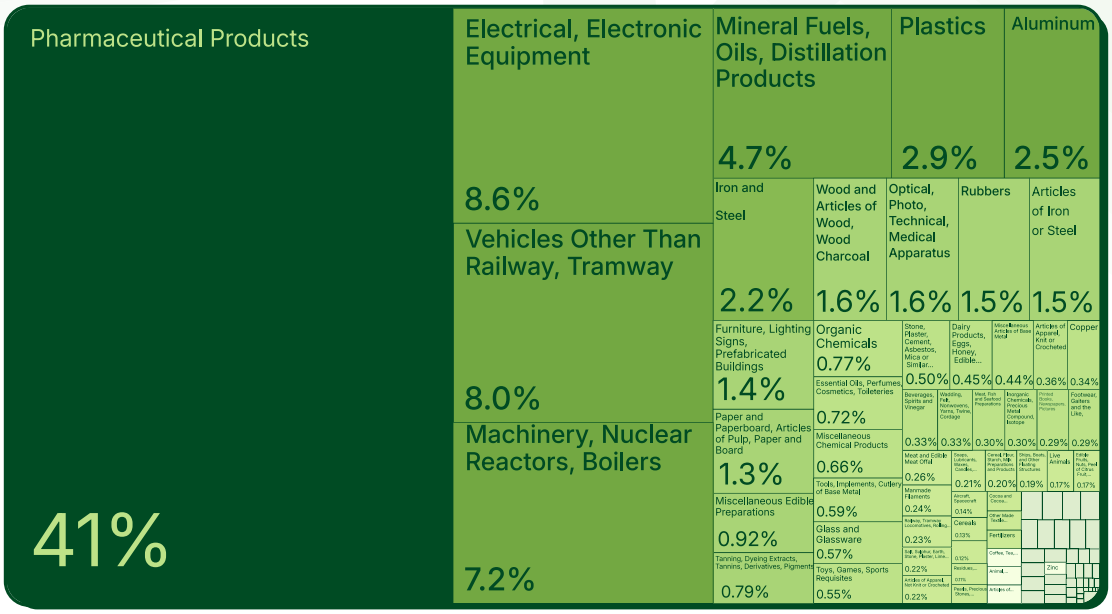

Figure 6.1. World Bank's World Development Indicators. Slovenia Exports by Category (2024). Source. https://tradingeconomics.com/slovenia/exports-by-category

[86] Statistical Office of the Republic of Slovenia, *Globalization Indicators, 2022 and 2023* (Ljubljana: SORS, 2024), https://www.stat.si/StatWeb/en/news/Index/13275.

Amongst other goods, high value manufacturing (pharmaceuticals, vehicles and electrical/electronic equipment) led the export, meanwhile textiles/apparel remain a smaller but active niche.[87] On the other side, the ICT sector counted 10,595 enterprises and relatively €6.17m in net turnover in 2023.[88] Whereas, agri-food is smaller by trade weight but economically relevant, characterized with an agricultural output at relative €1.58m and food exports around 3.8% of merchandise exports.[89]

As standardized disclosure certificates GOs are used to document renewable electricity attributes for electricity disclosure purposes, independent of physical electricity flows. This helps SMEs clear pre-qualification checks and sustainability questionnaires without commissioning extra audits. For instance, in wood/furniture and components, IKEA's supplier renewable-electricity programme tracks and lifts the share of renewables at factories and explicitly allows Energy Attribute Certificates - EACs, which in Europe include GOs as a transitional instrument.

Certificates - EACs, which in Europe include GOs as a transitional instrument. IKEA reports 491 direct suppliers at 100% renewable electricity in FY24, signaling widespread acceptance of certificate-backed claims in procurement.[90] Meanwhile, in agri-food retail, buyer groups widely use certified green electricity themselves. For instance, franchise groups such as REWE Group[91] and Lidl[92] disclose green power use and/or EAC mechanisms in Europe, thus, normalizing certificate-based evidence in retail compliance systems that food processors sell into.

Thus, because Slovenia's registry is operated under the EECS/AiB system, GO claims are portable across Europe and align with how large buyers check supplier energy data in tenders and onboarding portals helping Slovenian SMEs in textiles, ICT facilities (data rooms/colocation), agri-food processing and component manufacturing to meet pre-qualification thresholds and avoid residual-mix penalties in audits.

87. Trading Economics, World Bank's World Development Indicators: Slovenia Exports by Category (New York: Trading Economics, 2024), https://tradingeconomics.com/slovenia/exports-by-category.

88. Statistical Office of the Republic of Slovenia, ICT Sector 2023 (Ljubljana: SORS, 2024), https://www.stat.si/StatWeb/en/news/Index/13102.

89. Trading Economics, *World Bank's World Development Indicators: Slovenia Food Exports* (New York: Trading Economics, 2024), https://tradingeconomics.com/slovenia/food-exports-percent-of-merchandise-exports-wb-data.htm.

90. IKEA. (2024). Climate Report FY24. Source. https://www.ikea.com/global/en/images/IKEA_Climate_Report_FY_24_2025_01_27_9136cd2347.pdf

91. REWE Group. (2021). REWE Group Austria. Press release. EHA supplier green electricity "Made in Austria" also to commercial customers. Source. https://rewe-group.at/en/newsroom/2021/06/rewe-group-austria-eha-supplies-green-electricity-made-in-austria-also-to-commercial-customers

92. LIDL. Sustainability - Protecting Climate. Source. https://www.abettertomorrow-lidl.ie/sustainability/protecting-climate/

7.3 Gap Analysis on GO implementation: Slovenia vs. Kosovo – Lessons for Kosovo

Slovenia is a useful benchmark for Kosovo as it is a small, export-oriented economy that operationalized GOs early through clear legal mandates, a defined split of institutional roles, and full EECS/AIB connectivity, thus making certificates broadly usable in trade. The table contrasts those mature features with Kosovo's new operational registry to highlight practical gaps and near-term alignment opportunities without prescribing policy choices.

Dimension	Slovenia's Current Status	Kosovo's Current Status	Gap Identified	Action Needed
Pilot Sector Approach	Started with electricity suppliers and large RE producers before scaling	No formal pilot; registry operational but sector targeting not defined	Lack of phased sectoral rollout strategy	Define priority sectors in energy production and supply and then focus on piloting priority sectors - and launch
Registry Transparency	Public access to issuance, transfer, cancellation data; quarterly reports	Registry completed in 2024, no public accessible-data interface yet	Limited public visibility of GO activity	Implement accessible data portal and quarterly transparency reports
Legal Mandates	GO obligations embedded in primary legislation (Energy Act)	Relevant laws exist and define institutional roles.	Secondary by-laws and operational disclosures (issuance/cancellat i on & registry fees, metering/data-submission rules, residual-mix/share publication methodology, public transparency tools) are not yet fully adopted/executed,	Amend ERO Rule on GOs. Finalize and publish all required secondary rules; operationalize supplier disclosure and ERO publication of residual
Public-Private Coordination	Strong collaboration between Borzen, Ministry, regulators, industry	Coordination channels exist	Weak institutionalize d cooperation mechanisms	Establish formal GOsteering committee including MoE, ERO, KEEF, and business associations (economic chambers & sector associations)
EECS Integration	Fully EECS-compliant from inception	EECS-compliant registry as of 2024, AIB membership 2025.	Not yet a member of AIB Hub (EECS electricity scheme membership)	Gain AIB Hub (EECS electricity Scheme membership) - adopt all EECS protocols

Table 7.0.: Gap Analysis on GO implementation. Slovenia vs Kosovo - Lessons for Kosovo. Source. Relevant cited sources under footnotes, including both secondary data, information from KIIs and participatory workshop.

In Slovenia, the GO framework was phased in by starting with electricity suppliers and large renewable producers, which created a controlled setting to refine metering, issuance and cancellation before expanding to wider user groups, A similar approach could be piloted in Kosovo, with the second stage centering export-dependent SMEs in manufacturing, agro-business and textiles. On the other hand, transparency is another differentiator. Slovenia provides public access to issuance transfer and cancellation data and publishes regular summaries, a practice that builds buyer trust and lets companies point auditors to authoritative records. Thus, Kosovo's newly completed registry would benefit from a similar open-data interface and quarterly reports to make market activity visible. Legally, Slovenia incorporated GO issuance, disclosure and lifetimes directly in primary legislation, eliminating ambiguity and strengthening compliance signals. On a similar approach Kosovo has also integrated the GOs into its legislation, specifically GOs are also listed on the new transposed Law No. 08/L-258, however it needs to adopt secondary legislation regulating the method of providing data on the produced electricity measured at the place of transfer into the transmission and distribution system and monitoring.

Moving further, governance is also another important aspect. Slovenia's steady coordination among Borzen, the line ministry, the regulator and industry kept policy aims and market needs in sync. Therefore, Kosovo can institutionalize a similar approach through a formal steering group spanning ERO, MOE, KOSTT and business associations (economic chambers and sector associations). Finally, full EECS/AIB integration underpins cross-border recognition in Slovenia; Kosovo's registry reached EECS compliance in 2024 and has recently gained AIB membership, this brining Kosovo a step closer to make GO evidence portable across the European market. Finalizing the EECS electricity scheme membership is the remaining step for Kosovo to issue AIB-compatible Guarantees of Origin and subsequently connect to the AIB Hub.

8. Guarantees of Origin and Green Financing for Exporters

GOs are not only disclosure tools for renewable electricity but also increasingly function as credibility signals in accessing sustainable finance. For exporters, particularly SMEs, a verifiable claim of renewable energy use is now a prerequisite in both trade and investment contexts. Within the EU, the expansion of the Renewable Energy Directive (RED II, amended by Directive 2023/2413) mandates more transparent renewable energy accounting, creating direct linkages between GOs and eligibility for green financing instruments. The ability of Kosovo's exporters to adopt and sustain GOs will depend not only on legal and institutional frameworks, but also on the availability of financing instruments tailored to certification. While the country has made progress in establishing green finance mechanisms through donor-supported programs, government Institutions, agencies and commercial banks, these tools are not yet adapted to the specific transactional needs of exporters seeking to certify renewable energy usage.

8.1 Link to Financing Mechanisms

Green financing frameworks, including sustainability-linked loans, export credit facilities, and EU-aligned investment funds, are increasingly conditioned on verifiable evidence of renewable energy sourcing. In practice, Guarantees of Origin serve as compliance proof in loan covenants and ESG reporting. For instance, the European Bank for Reconstruction and Development - EBRD supports renewable energy infrastructure such as solar plants through structured financing and guarantees. Meanwhile, the International Finance Corporation - IFC finances clean energy and infrastructure projects globally; its support spans solar, energy efficiency, and renewable energy investments,[93] aligning with this use-case of GOs as green credibility instruments.

Kosovo's Law No. 08/L-258 on the Promotion of the Use of Renewable Energy Sources (2024) explicitly regulates GO issuance, partially transposing Directive 2018/2001 (RED II) under the Energy Community framework, an alignment that is critical for local exporters to qualify for concessional and blended renewable financing, consistent with evolving EU and OECD green finance standards.

93. FC. (2025). Green and Social Impact Report - Fiscal Year 2024. Source. https://www.ifc.org/content/dam/ifc/doc/2025/fy24-green-and-social-bonds-impact-report.pdf

8.2 Current Green Finance Tools in Kosovo

Kosovo's financial ecosystem provides partial support for renewable energy and efficiency investments but has no instruments directly covering the costs of certification.

Scheme / Programme	Provider(s)	Target Beneficiaries	Financial Mechanism	Scale & Incentives	Relevance for SMEs / Exporters
SME Go Green Programme	EBRD and EU, via Raiffeisen Bank Kosovo	SMEs (with focus on women-led and agribusinesses)	Credit line with performance -based grants	Up to €5M; 10% cashback (15% for renewables/agrib usiness)	Lowers cost of capital for SMEs investing in green tech and energy efficiency; boosts export competitiveness through ESG compliance.
SME Reboot & GEFF	EBRD and donors (SBIF, Norway, Luxembourg, Switzerland, Denmark, US) via ProCredit Bank	SMEs and households	Blended credit lines	€13M (8M Reboot + 5M GEFF); cashback 15–20%	Provides SMEs with access to affordable finance and technical support for renewable/EE upgrades.
WB GOLD Loan	EBRD via ProCredit Bank Kosovo	Local financial institutions and SME sub-borrowers	Outcome-based finance (results-linked incentives)	€10M	Encourages systemic adoption of green lending practices across Kosovo's financial sector.
IFC Climate & Gender Loan	IFC and Raiffeisen Leasing Kosovo	Women-led MSMEs; SMEs with climate investments	Credit line	€5M (2023)	Expands SME access to climate finance, with emphasis on inclusivity and clean tech adoption.
SME Competitiven ess Support Programme	EU and EBRD	SMEs aiming to meet EU standards	Loans, grants, and advisory support	Size varies; blended finance + TA	Helps SMEs align with EU environmental, safety, and quality standards, a prerequisite for exports.
EBRD Digitalisation & Green Loan	EBRD and Banka për Biznes	SMEs modernizing operations	Credit facility	Up to €5M	Combining digital and green transformation is important for competitiveness in EU markets.
Inclusive and Just Pathway 2030	UNDP Kosovo	SMEs, local institutions	Technical assistance + co-financing	Multi-year (2024–2027)	Builds SME capacity for adopting EE/RE measures and linking to green finance.

Table 8.0.: Active Green Finance Schemes and Support Mechanisms. Source. Relevant cited sources under footnotes.

Kosovo's green finance landscape is now operational and diversified, combining IFI credit lines, blended finance, donor-backed grants, and government subsidies that SMEs can access directly or indirectly. The SME Go Green credit line, launched by EBRD with EU support and implemented via local banks, offers SMEs concessional finance with cashback incentives (10%, rising to 15% for renewables/agribusiness).[94]

In parallel, ProCredit Bank Kosovo is deploying two EBRD-backed lines: €8m SME Reboot and €5m GEFF, structured as blended finance and paired with 15–20% investment incentives/cashback, supported by multiple donors (Denmark, Luxembourg, Norway, Switzerland, USA, among others).[95] To institutionalize green lending, EBRD has introduced the WB GOLD instrument in Kosovo, an outcome-based, results-linked facility providing €10m to ProCredit Bank to expand green on-lending and improve internal green-lending practices.[96] Beyond bank credit lines, IFC is channeling green and inclusive finance through Raiffeisen Leasing Kosovo, with a €5m facility targeted at climate projects and women-led MSMEs, broadening access to clean-tech equipment and efficient fleets.[97]

For exporters needing to meet EU standards, the SME Competitiveness Support Programme (SME-CSP) blends loans, grants, and technical assistance to fund upgrades in environment, product quality/safety, and occupational health & safety, all pivotal to ESG compliance and market access.[98]

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94. European Bank for Reconstruction and Development (EBRD), "EBRD and EU Help MSMEs Go Green in Kosovo" (London: EBRD, 2024), https://www.ebrd.com/home/work-with-us/projects/psd/54927.html.

95. European Bank for Reconstruction and Development (EBRD), "EBRD Lends €13 Million to ProCredit Bank in Kosovo" (London: EBRD, 2024), https://ebrdgeff.com/kosovo/ebrd-and-donors-help-over-18000-households-in-western-balkans-to-invest-in-energy-efficiency-2/.

96. European Bank for Reconstruction and Development (EBRD), Project ID 56413 (London: EBRD, 2025), https://www.ebrd.com/home/work-with-us/projects/psd/56413.html.

97. IFC. (2023). IFC Investment to Boost Access to Climate Finance in Kosovo, Support Women Entrepreneurs. https://www.ifc.org/sq/pressroom/2023/27802

98. SME Competitiveness Support Programme (SME CSP). https://web-sme-csp.com/kosovo/

The Go Digital in the Western Balkans line is now live in Kosovo: EBRD is lending up to €5m to Banka për Biznes (BpB) to finance automation, digitalization, and green technologies, with EU grant support via WBIF—complementing green transition with productivity gains.[99]

The Ministry of Economy and KEEF have also opened recurring subsidy calls for efficient household appliances, solar water heating, and building envelope measures, important cost-relief levers that SMEs can benefit from either as beneficiaries (i.e., small lodgings, agro-processors) or as suppliers/installers in the value chain.[100] Lastly, UNDP's "Inclusive & Just Pathway to 2030: Green Energy Future" is a multi-year platform blending institutional support, SME capacity-building, and co-financing for EE/RE adoption, aligning with the Energy Strategy and NECP, meaning SMEs can expect ongoing technical and potential financial windows as the program scales.[101]

Taken together, these active schemes already lower SMEs' cost of capital (cashback, grants), reduce compliance costs, and create bankable pathways for renewable and efficiency investments. To magnify impact, Kosovo can further link finance to verifiable renewable sourcing (GOs) in loan covenants and grant criteria, ensuring that every euro of public/IFI support also strengthens exporters' ESG credentials and EU market access.

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99. European Bank for Reconstruction and Development (EBRD), *Project ID 56099* (London: EBRD, 2025), https://www.ebrd.com/home/work-with-us/projects/psd/56099.html#customtab-b6424a39cf-item-ec24370b1c-tab.

100. Ministry of Economy. (2023). Call for Subsidy of Efficient Household Appliances and Solar System for Sanitary Water Heating. Source. https://me.rks-gov.net/en/blog/call-for-subsidy-of-efficient-household-appliances-and-solar-system-for-sanitary-water-heating-opened/

101. United Nations Development Programme. (2025). Source. https://www.undp.org/kosovo/projects/inclusive-and-just-pathway-2030-green-energy-future

Opportunity / Programme	Provider(s)	Target Beneficiaries	Financial Mechanism	Scale & Incentives	Relevance for SMEs / Exporters
Western Balkans Investment Framework (WBIF)	EU, EIB, EBRD, bilateral donors	Regional infrastructure & private sector supply chains	Blended finance (grants, loans,TA)	€10+ billion since 2009 across the Western Balkans	Kosovo SMEs can access as subcontractors or beneficiaries of RE/EE projects, which strengthens export readiness.
EIB Green Infrastructure Financing (future pipeline)	European Investment Bank (EIB) + EU	National energy infrastructure & private sector	Sovereign loans blended with EU grants	Typical projects €30–50M+	Potential for SMEs to benefit from future solar, wind, or grid projects via supply/maintenance contracts and downstream energy cost reductions.
UNDP PISTA (Platform for Investment Support & Technical Assistance)	UNDP Rome Centre	SMEs, municipalities, public-private projects	Technical assistance to make projects bankable	Global programme (launched 2024)	Kosovo SMEs could structure RE/EE projects to attract climate investors.
EBRD - EU WB-Go Digital Programme (2025)	EBRD + EU (via WBIF)	SMEs across the Western Balkans	Loans, grants, TA for digitalization & green tech	€377M facility; €27.6M in grants; ~750 businesses to benefit	Includes Kosovo SMEs,focusing on women-led companies, green tech adoption, and export readiness.
EU IPA / REEP Plus (Regional)	EU, EBRD, KfW	SMEs, municipalities, households	Technical assistance, grants, and loans	Regional programme under the Energy Community	SMEs in Kosovo can benefit from EE/RE investments once national implementation windows are activated.
Private Climate Finance (Green Bonds, ESG Funds)	IFC, EIB, commercial banks	SMEs with verifiable renewable sourcing (via GOs)	Sustainability-linked loans & green bonds	IFC Green & Social Bonds FY24 = $13.9B issued globally	Kosovo exporters with GOs could attract international lenders/investors.

Table 9.0. Emerging and Potential Green Finance Opportunities for SMEs in Kosovo. Source. Relevant cited sources under footnotes.

While Kosovo has a number of active schemes in place, a larger pool of emerging opportunities exists at the regional and international level. These mechanisms are not yet fully tapped but represent strategic entry points for SMEs and policymakers to attract additional green finance. The Western Balkans Investment Framework (WBIF) illustrates the scale of blended finance available in the region, having mobilized over €10 billion in grants, loans, and technical assistance since 2009.[102]

[102] Western Balkans Investment Framework. (2023). WBIF Annual Progress Report 2022. https://wbif.eu/storage/app/media/Library/11.%20Annual%20WBIF%20Progress%20Report/WBIF%20Annual%20Progress%20Report%202022.pdf

The European Investment Bank (EIB) remains a critical future financing channel, with past large-scale renewable investments in Kosovo serving as a precedent for SMEs to engage in supply chains and benefit from future renewable or grid-enhancing projects.[103] Similarly, the EBRD–EU WB-Go Digital Programme (2025) will deliver €377 million in loans and €27.6 million in grants across the Western Balkans, supporting digital and green SME upgrades, with 750 businesses expected to benefit regionally.[104]

On the donor side, UNDP's Platform for Investment Support and Technical Assistance (PISTA), launched in 2024, helps countries translate climate priorities into bankable projects, positioning SMEs to attract climate investors.[105] A major untapped opportunity lies in the global climate finance market. The IFC's Green and Social Bonds programme alone had issued US$13.9 billion cumulatively by 2024, demonstrating the scale of capital available for green projects.[106] If Kosovo SMEs adopt Guarantees of Origin and align with the EU Taxonomy, they could credibly attract sustainability-linked loans and ESG fund investments. Lastly, Kosovo is well-positioned to attract new green finance flows, provided it leverages its Energy Community commitments and aligns its Guarantee of Origin system with EU standards. By connecting SMEs to these regional and global mechanisms, Kosovo can scale beyond donor-led pilots toward a self-sustaining green finance ecosystem, directly supporting export competitiveness in EU markets.

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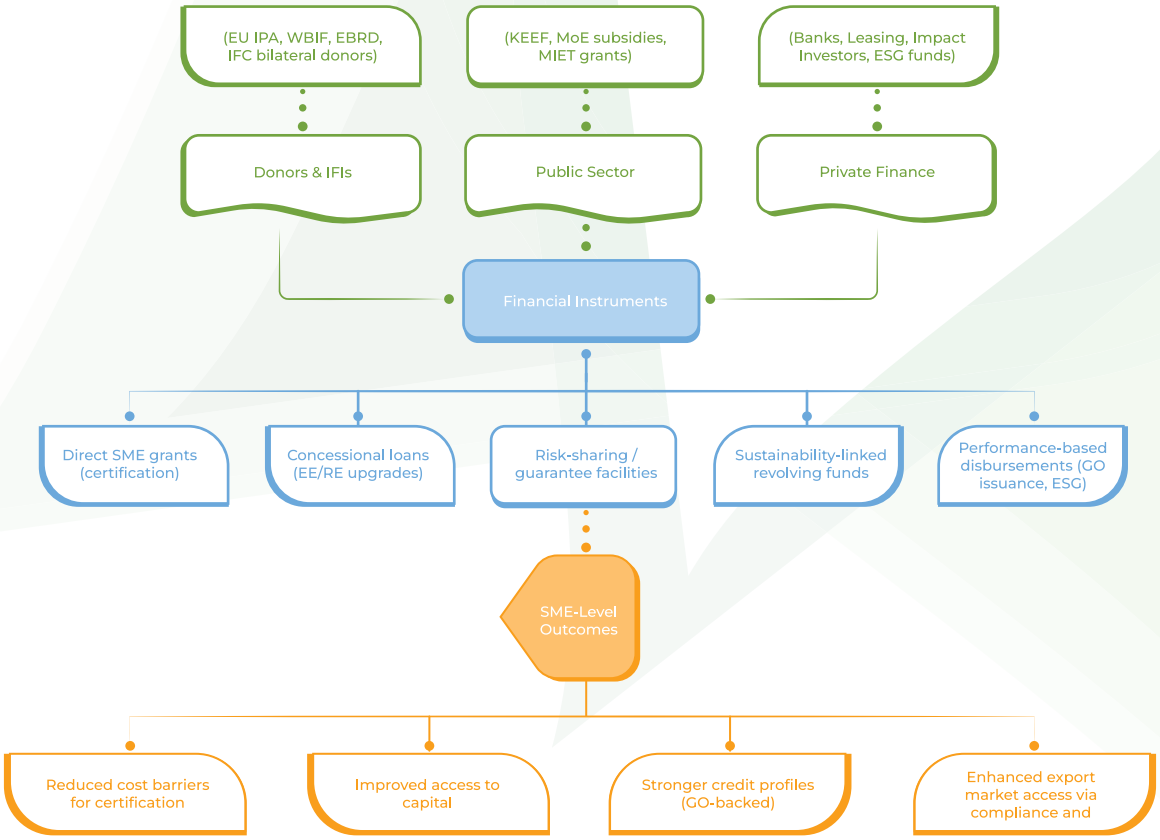
103. European Investment Bank. (2022). The EIB Group Operational Plan 2023-2025. https://www.eib.org/attachments/lucalli/20220289_eib_group_operational_plan_2023_en.pdf

104. Reuters. (2025). Source. https://www.reuters.com/markets/europe/ebrd-launches-417-million-programme-help-western-balkans-go-digital-2025-04-10/

105. United Nations Development Programme. (2025). https://www.undp.org/romecentre/blog/financing-green-transition-how-undps-pista-helping-countries-turn-climate-ambition-action

106. International Finance Corporation. (2025). Source. https://www.ifc.org/en/insights-reports/2025/green-and-social-bond-impact-report-fy24

A conceptual financial flows diagram.



Financing support for exporters must therefore be structured in a way that not only lowers the cost of renewable energy investments but also directly links capital to verifiable certification outcomes. Donors and IFIs already provide concessional credit lines and blended instruments, while the public sector anchors subsidies and grants through institutions such as MoE and MIET, and KEEF related to measures on energy efficiency of buildings. At the same time. Commercial banks, leasing companies, and ESG-focused investors are beginning to introduce market-based solutions that can extend the reach of green capital. When aligned under a coherent framework, these financing streams can converge into instruments that meet exporters' practical needs, thus covering the upfront administrative and verification costs of obtaining GOs, enabling renewable and efficiency upgrades, and providing risk-sharing and sustainability-linked facilities tied to GO issuance. At the SME level, the impact of this architecture is clear. Reduced upfront cost barriers for certification, improved access to capital, stronger credit profiles, and enhanced eligibility in export markets

The model highlights that finance is not an abstract enabler but a concrete pathway through which SMEs can align with EU buyer expectations and global sustainability standards. By linking each financial instrument to measurable outcomes, such as GO issuance, renewable upgrades, or ESG performance, Kosovo can ensure that every euro of public, donor, or private investment both accelerates the clean energy transition and strengthens the competitiveness of its export-oriented companies.

9. Roadmap for Implementation: SME Pathway to Competitive Exports through GOs

Building on the legal, institutional, and market analysis outlined in previous sections, it is necessary to provide a practical pathway that exporting SMEs can follow to operationalize Guarantees of Origin (Gos). While Kosovo has taken important steps to align its renewable energy framework with EU legal frameworks, the translation of these reforms into business-level practice remains incomplete. For SMEs, especially those in export-oriented sectors, the ability to credibly demonstrate renewable energy use will increasingly determine access and competitiveness in international, specifically EU markets that are shaped by sustainability requirements, such as green procurement and ESG disclosure rules. The certification readiness roadmap presented below captures the consecutive steps and institutional touchpoints that SMEs must navigate to adopt GOs.

However, the pathway to certification is not uniform. Some SMEs will participate in the GO system as generators, producing renewable electricity and thus eligible for certificate issuance; others will participate as non-generators, relying on procurement of GOs from the market to substantiate renewable sourcing. The roadmap that follows captures these dual tracks in a step-by-step structure, offering a realistic guide for businesses to achieve competitive export readiness through GOs.

Go Readiness Roadmap

Generating SMEs* Non-Generating SMEs* All SMEs*

1 Awareness & Orientation

Understand the EU requirements and preferences. Understand buyer requirements (Scope 2 disclosures, green procurement, etc.). Sector associations host trainings, Q&A front desks, and publish checklists.

2 Eligibility & Baseline Assessment

Check renewable share & capacity;
Conduct Energy Audit; Verify grid connection options.
Assess electricity procurement mix; Define renewable sourcing targets;
Prepare procurement checklist for GOs.

3 Registration & Account Setup

Apply to ERO/GO Registry (Grexel); Submit device & metering documents;
Get account activation.
Register as Account Holder (if direct); Or contract supplier/association to procure GOs on their behalf.

4 Verification & Compliance

ERO/KOSTT validate production data; Device audits & error corrections.
Supplier/registry verifies GO validity;
Association support to avoid double counting or expired GOs.

5 Issuance of GOs

1 MWh = 1 GO issued to account; Stored in registry, transferable.
Receive GOs via purchase from supplier; Ensure transfer into own account (if registry-registered).

6 Utilization & Export Alignment

Cancel GOs for export-linked contracts; Integrate into ESG/export documents.
Cancel purchased GOs against export volumes;
Disclose renewable sourcing in export compliance reports.

7 Financing & Scaling

Access KEEF, IPA III, donor finance; Invest in metering, audits, upgrades.
Explore facilitated access to pooled procurement of GOs via chambers/associations, ensuring transparency and traceability.

8 Utilization & Export Alignment

9.1 Awareness and Orientation

The first stage, which concerns awareness and orientation, underlines that both generating and non-generating SMEs must understand the regulatory drivers of demand for GOs, including the Renewable Energy Directives and buyer-specific Scope 2 disclosure requirements. At this stage, the role of the chambers of commerce and sector associations is critical in acting as translators between high-level EU legislation and the practical realities of SME operations in Kosovo. For many companies, the language of directives, regulations, and sustainability disclosure frameworks is inaccessible and often intimidating; thus, without structured mediation, the relevance of GOs risks being overlooked. Associations can therefore serve as trusted intermediaries by breaking down complex regulatory requirements into sector-specific guidance, illustrated with examples directly relevant to textiles, agro-processing, ICT, or manufacturing.

This includes designing tailored workshops that move beyond generic awareness sessions to focus on the implications for particular export markets and buyer groups, as well as developing step-by-step checklists that SMEs can integrate into their compliance routines. Equally important, associations can provide what might be called a “compliance helpline” function, which includes regular office hours or advisory desks where SMEs can receive one-to-one assistance with questions about registry applications, procurement of GOs, or preparation of documentation for buyers. Such practical support reduces the likelihood of errors at later stages, which can cause delays in issuance or even rejection of applications. By convening exporters regularly, chambers also create a platform for peer learning, where early adopters of GOs can share experiences and lessons with those just beginning the process.

This role is particularly critical in Kosovo’s context, where many SMEs operate with limited internal administrative capacity and a lack of in-house sustainability expertise. Unlike large corporations, SMEs cannot afford to dedicate entire teams to compliance with EU sustainability rules. Associations and chambers effectively fill this gap by pooling knowledge and resources at the meso level, ensuring that even smaller firms have access to accurate, actionable information. Thus, this positioning of chambers, associations, and clusters helps to transform GOs from what could be perceived as a distant or abstract policy tool into a concrete requirement directly linked to market access, competitiveness, and the ability to maintain or expand export contracts.

9.2 Eligibility and Baseline Assessment

Once SMEs are aware of the importance of GOs, they must assess their eligibility and establish a baseline. Generating SMEs begin by confirming whether their facilities qualify for GO issuance, which requires renewable generation sources such as solar PV, biomass, or small hydropower connected to the grid. They must also ensure their metering infrastructure is compliant with the Energy Regulatory Office (ERO) and Transmission System Operator (KOSTT) requirements. This stage often requires an energy audit to establish accurate baseline production data. For non-generating SMEs, the emphasis shifts to evaluating their electricity procurement mix and defining realistic renewable sourcing targets. This could involve calculating how much of their annual consumption should be covered by GOs to meet buyer requirements. Baseline assessment creates a data-driven starting point, enabling firms to move from abstract awareness to measurable commitments.

9.3 Registration and Account Setup

Certification readiness becomes tangible during registration. Generating SMEs must open an account in the national GO registry, which Kosovo operates on the Grexel platform, submitting production device licenses, grid connection documents, and metering certificates. This process links the SME formally to the certification system and establishes the framework for future issuance of certificates. For non-generating SMEs, registration may be optional: some may choose to open accounts directly in order to hold and cancel GOs themselves, while others will rely on suppliers or associations to manage procurement and cancellation on their behalf. The registration stage is therefore a key institutional interface, ensuring that SMEs enter the GO system in a structured and traceable manner.

9.4 Verification and Compliance

Verification is the cornerstone of credibility. For generating SMEs, this involves ERO and KOSTT validating production data and ensuring that energy generated aligns with registered device capacity and metering results. Periodic audits further strengthen reliability, reducing the risk of double-counting or misreporting. Any discrepancies must be corrected quickly, often with technical assistance from chambers or associations to minimize rejections. Non-generating SMEs do not undergo technical verification but must nonetheless ensure compliance by confirming that purchased GOs are valid, current, and not previously cancelled.

9.5 Issuance of GOs

Issuance transforms renewable production or procurement into a standardized asset. For generating SMEs, every verified megawatt-hour of renewable electricity is translated into one GO, recorded in the national registry, and transferable once Kosovo is linked to the Association of Issuing Bodies (AIB) Hub. This connection is essential, as in the future it can ensure that Kosovo-issued certificates can be recognized across EU markets. Non-generating SMEs, meanwhile, gain access to GOs by purchasing them from suppliers or via pooled procurement mechanisms organized by associations. In both cases, issuance or acquisition is the moment when renewable sourcing becomes tangible and quantifiable, creating a bridge between domestic operations and export market requirements.

9.6 Utilization and Export Alignment

The value of GOs is realized at the point of cancellation. Both generating and non-generating SMEs must cancel GOs against their export-linked production volumes to demonstrate renewable electricity use in those goods. For generating SMEs, this also allows them to integrate renewable sourcing into sustainability reporting and ESG disclosures, strengthening their brand reputation. For non-generating SMEs, cancellation is the mechanism that transforms a purchased certificate into a verified claim, which in the future would be recognized by EU buyers. Export alignment is therefore the stage where GOs cease to be a compliance tool and become a market enabler, directly linked to competitiveness and buyer trust.

9.7 Financing and Scaling

Although GO prices themselves are low, financing remains relevant, especially for generating SMEs, who must invest in audits, metering upgrades, and registry participation. Non-generating SMEs face less of a financial burden, but they benefit from facilitation of pooled procurement mechanisms that lower transaction costs and ensure transparency. Scaling also becomes important at this stage: as more SMEs adopt GOs, associations can negotiate better terms for pooled purchasing, while generating SMEs that can use GOs to structure long-term Power Purchase Agreements (PPAs) with buyers. Financing and scaling thus ensure that participation in the GO system is not limited to early adopters but becomes embedded across the SME landscape.

9.8 Monitoring and Reporting

The roadmap concludes with monitoring and reporting, which reinforces credibility and transparency. Generating SMEs are expected to track issuance, transfer, and cancellation of GOs through the registry, publishing reports that link renewable production directly to certificate activity. Non-generating SMEs monitor purchased and cancelled GOs, reporting renewable sourcing shares in export documentation and ESG reports. Associations play a critical role in aggregating these data, publishing sector-level indicators such as average issuance times, rejection rates, or cancellation volumes. Such reporting provides EU buyers with the confidence that renewable claims are traceable, reliable, and backed by an accountable system. Ultimately, this stage ensures that the GO system is not a one-off exercise but an ongoing practice that strengthens Kosovo's credibility in European markets.

10. Recommendations for Advancing Green Transition and Export Competitiveness through Guarantees of Origin – GOs.

10.1 Policy and Strategic Recommendations

Recommendations	Actions	Priority	Timeline
1. Ensure Full Alignment with EU Renewable Energy and Energy Efficiency Directives	Finalize secondary legislation under Law No. 08/L-258 on RES to regulate detailed GO issuance, transfer, and cancellation procedures.	High	Short-term (2025 – 2026)
	Establish a legal-technical review group under the Ministry of Economy to align Kosovo's framework with Directive (EU) 2023/2413 and the Energy Community legislation.		
2. Operationalize the Energy Regulatory Office (ERO) as the Central Issuing Body	Adopt secondary legislation and technical rulebooks updating the 2010 Rule on Certificates of Origin to align with RED II/RED III standards.	High	Short-term (2025 – 2026)
	Secure budgetary allocation for staffing and compliance monitoring.		
	Strengthen ERO's audit and oversight functions to maintain credibility and avoid double-counting.		
3. Integrate GOs into Trade and Industrial Development Strategies	Update the Industrial Development Strategy 2030 with a dedicated GO uptake chapter.	Medium	Medium-term (2026 – 2028)
	KIESA to integrate GO eligibility into export-readiness and investment promotion programs.		
4. Strengthen Regional and EU Market Linkages	Engage in technical cooperation with neighboring Energy Community members (i.e., Albania, North Macedonia) to pilot cross-border GO transfers ahead of full AIB Hub accession.	High	Medium-term (2026 – 2028)
5. Registry Optimization and Data Transparency	Ensure the Grexel registry is fully interoperable with the AIB Hub for cross-border GO transfers.	Medium	Medium-term (2026 – 2028)
	Develop simplified SME access features (templates, delegated account management, or support desk).		
	Publish quarterly reports on issuance, cancellation, and transfers to enhance transparency.		
	Operate the registry not only as a technical platform but also as a transparent and informative disclosure tool, following the Borzen model in Slovenia, where issuance statistics, market reports, and user guidance are made publicly accessible to build confidence among SMEs, buyers, and investors.		
6. Link GOs with Climate Commitments and Carbon Pricing Readiness	Ministry of Economy and Ministry of Finance to prepare a scoping study on carbon pricing instruments, including how GOs can serve as verifiable Scope 2 evidence of renewable electricity use for exporters subject to CBAM obligations.	High	Medium- to Long-term (2026–2030)
	Ensure that GOs are formally recognized as a tracking and disclosure tool within Kosovo's Monitoring, Reporting, and Verification (MRV) system, aligning with the NECP and NDC frameworks.		
	Develop guidance for Kosovo exporters in sectors at risk of CBAM (i.e., steel, aluminum, cement, fertilizers) on how cancelling GOs can lower their reported embedded emissions, thus reducing exposure to EU border tariffs.		

10.2 Programmatic Recommendations

Recommendations	Actions	Priority	Timeline
1. SME Awareness and Capacity-Building Program	Design awareness modules with chambers and associations, to explain the business case for GOs, linking renewable electricity sourcing to export competitiveness.	High	Short to Medium–term (2025-2028)
	Develop multilingual SME handbooks and webinars explaining the GO process step-by-step (account creation, metering requirements, certificate cancellation, etc.).		
	Establish sector-specific "GO Helpdesks" within chambers/associations to provide practical office-hours support for applications and registry use.		
	Organize peer-learning workshops where early adopter SMEs showcase how they have leveraged GOs in buyer negotiations, ESG reporting, or financing applications.		
	Create a digital knowledge hub (linked to ERO and chamber websites) with FAQs, templates, application guides, and real-time updates on registry functioning.		
	Introduce a "GO Readiness Scorecard" tool for SMEs to self-assess their preparedness (energy data, documentation, export market exposure) and get tailored support.		
	Partner with universities and vocational training centers to integrate GOs and renewable energy certification into curricula for young professionals, ensuring a pipeline of skilled energy managers for SMEs.		
2. Financial Support Mechanisms for GO Uptake	Establish a pilot Green Certification Subsidy Scheme under KEEF to cover initial registration and issuance costs for SMEs.	High	Short to Medium-term (2025-2028)
	Introduce voucher schemes for SMEs to offset audit and metering costs required for GO applications.		
	Develop a risk-sharing facility with local banks and IFIs (i.e., EBRD, KfW) to enable affordable SME lending for renewable energy procurement and certification-related investments.		
	Promote sustainability -linked loans with reduced interest rates for companies that can show verified renewable energy usage through GOs.		
	Explore the creation of a revolving certification fund, where repayments from early adopters finance new applicants, ensuring sustainability beyond donor funding.		
3. Integration with Export Promotion and ESG Standards	Revise KIESA's export promotion toolkit to include GO compliance support, ensuring exporters are trained to present GOs as part of their "green credentials."	Medium	Medium-term (2026 - 2028)
	Partner with donor-backed ESG advisory initiatives to help SMEs bundle GOs into ESG reporting, including Scope 2 emissions accounting.		
	Develop a buyer-facing certification mark or "Green Export Label" that signals Kosovo products are backed by renewable energy GOs.		
	Train export promotion officers at embassies and trade missions to promote Kosovo exporters with GOs in international markets.		
	Work with international sustainability platforms to ensure Kosovo SMEs with GOs can easily integrate them into recognized disclosure systems.		
4. Piloting and Demonstration Projects	Select 2-3 leading SMEs per sector (textiles, agro, ICT, manufacturing) as early adopters and provide tailored technical/financial support.	Medium	Short to Medium - term (2025 - 2027)
	Publish case studies on these pilots to demonstrate tangible benefits of GOs (i.e., winning contracts, accessing green finance).		
	Use pilot results to design sector-specific roadmaps for wider SME adoption.		

Conclusion

Kosovo stands at a pivotal point in its green transition, where advancing renewable energy deployment is no longer a purely environmental goal but a strategic economic imperative. This study demonstrates that a well-designed and international interoperable Guarantees of Origin system can become one of the most practical instruments to align the country's decarbonization agenda with its export competitiveness objectives.

The analysis confirms that Kosovo's policy and legal foundations are now largely in place. Law No. 08/L-258 on Renewable Energy Sources (2024) establishes a clear national commitment to integrate renewable energy certification, while the Energy Regulatory Office (ERO) has the institutional authority to operationalize it. However, the transition from legal adoption to functional implementation remains critical. Secondary legislation, registry governance, and technical protocols must be completed to ensure transparency, reliability, and compatibility with the European Energy Certificate System (EECS). Without these elements, Kosovo's producers will remain outside the emerging European market for verified renewable energy and its associated financial benefits.

The study also highlights that the effectiveness of the GO system will depend on the demand side as much as on the regulatory framework. Export-oriented enterprises, particularly in manufacturing, agri-food, and textiles, must perceive GOs not as an administrative obligation but as a commercial asset. Linking certification to green procurement, sustainability-linked finance, and trade promotion programs can create the necessary economic incentives. Sector associations and chambers of commerce should act as intermediaries, aggregating small producers and facilitating access to certification to avoid the exclusion of SMEs from the green transition.

From a strategic perspective, the operationalization of GOs provides Kosovo with a tangible pathway to advance Energy Community Integration, prepare for future EU accession requirements, and demonstrate compliance with EU sustainability instruments. By establishing a trusted registry and joining the AIB, Kosovo is in the right direction to strengthen its credibility in the European energy market while unlocking new opportunities for green investment and innovation. In essence, the implementation of a national GO system marks the intersection of energy reform, industrial policy, and trade modernization. It can stimulate domestic renewable generation, elevate corporate transparency, and serve as an anchor for climate finance. Realizing this potential will require coordination across ministries, consistent donor and technical support, and sustained engagement with the private sector.

The analysis further indicates that successful implementation of a Guarantees of Origin system in Kosovo will depend not only on legal transposition and technical registry solutions, but also on the gradual strengthening of institutional capacities within the designated issuing body. As ERO's mandate expands to include registry operation, compliance oversight, and coordination with the EECS framework, targeted capacity-building and technical accompaniment during the initial implementation phase may play an important role in ensuring system credibility, operational continuity, and alignment with European practices.

Such support would be particularly relevant during the early years of system operation, when procedures, staffing models, and stakeholder interfaces are being tested and refined.

In this context, development partners already engaged in Kosovo's energy sector may consider accompanying implementation efforts through focused institutional strengthening initiatives, complementing regulatory reforms and infrastructure investments.

If implemented effectively, Kosovo's Guarantees of Origin framework would align with the broader regional efforts toward operational green market mechanisms, strengthening its role as an active contributor to the Western Balkans' collective transition toward carbon neutrality and green competitiveness.

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