Developing technological solutions and production possibilities for sustainable aviation fuel in Estonia and Latvia

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Supporting reforms in 27 Member States

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Republic of Estonia
Ministry of Climate

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European Commission disclaimer

PwC disclaimer

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Abbreviations

Abbreviation	Meaning
Beneficiaries	The Ministry of Transport of the Republic of Latvia, the Ministry of Climate of Estonia
Key stakeholders	Latvia: The Ministry of Economics of the Republic of Latvia, the Ministry of Climate and Energy of the Republic of Latvia, the Investment and Development Agency of Latvia, Riga Airport Estonia: The Ministry of Economic Affairs and Communications of Estonia, Estonian Transport Administration, Estonian Aviation Cluster, Tallinn Airport, and the Estonian Transport Fuels Association
SG REFORM	European Commission Reform and Investment Task Force

Abbreviation	Meaning	Abbreviation	Meaning
EU	European Union	**RED II**	Renewable Energy Directive II
EU	European Union	**RED III**	Renewable Energy Directive III
LV	Latvia	**ReFuelEU**	ReFuelEU Aviation Regulation
PwC	PricewaterhouseCoopers	**SAF**	Sustainable Aviation Fuel

1. General overview of the project and deliverables

1.1. Project objective and output

The primary aim of this service contract was to support Estonia and Latvia in developing targeted policy measures to support various technological solutions and production possibilities for sustainable aviation fuel in Estonia and Latvia. Additionally, the contract aimed to promote awareness of the SAF among the policy makers and wider audience.

The general objective of this service contract is:

To contribute to institutional, administrative and growth-sustaining structural reforms in Estonia and Latvia, in line with Article 3 of the TSI Regulation.

In addition, the specific objective of this service contract is:

To assist national authorities in improving their capacity to design, develop and implement reforms, in line with Article 4 of the TSI Regulation.

Achievement of the outcomes and contributing to a longer-term impact of this contract depends to a large extent on the concrete follow-up and implementation of the deliverables by Estonia and Latvia and subsequent enforcement, as well as on wider policy conditions, which remain outside the responsibility of the European Commission and the contractor. Such follow-up and implementation remain the exclusive responsibility of Estonia and Latvia.

Considering the general and specific objectives of the service contract, the project outcome will be:

Enhanced policy framework in Estonia and Latvia to improve the access to and use of Sustainable Aviation Fuel.

Improved awareness and capacities of relevant authorities and stakeholders in the aviation and fuel production ecosystems in Estonia and Latvia to boost the access to and use of Sustainable Aviation Fuel.

1.2. Key Project Stakeholders

Throughout the Project, comprehensive recommendations on how to strengthen Estonia's and Latvia's policy framework to increase access to and use of SAF were formulated in collaboration with following beneficiaries and key stakeholders.

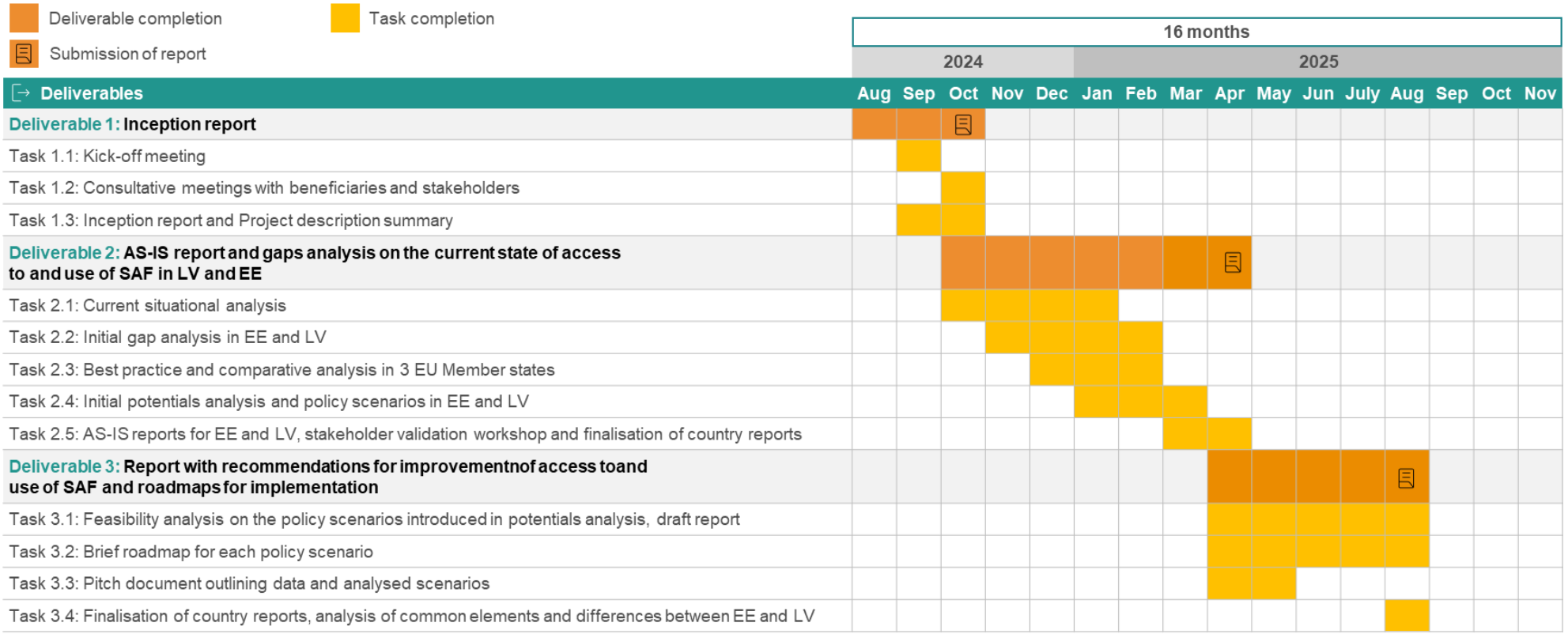
Table 1. Main beneficiaries and key stakeholders.

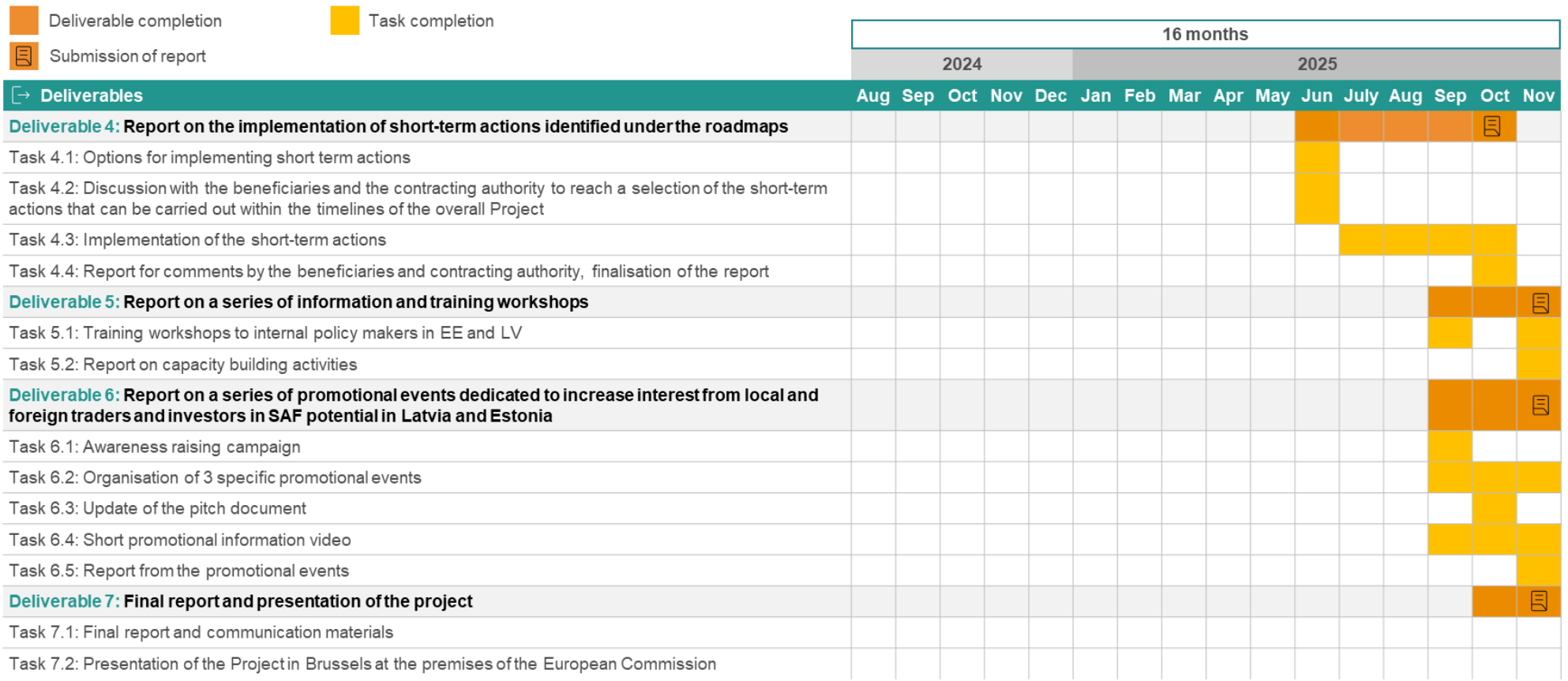
Estonia	Latvia
Key stakeholders	
Beneficiaries	
1. Ministry of Climate of the Republic of Estonia	1. Ministry of Transport of the Republic of Latvia
Other key stakeholders – Public Institutions	
2. Ministry of Economic Affairs and Communications of the Republic of Estonia 3. Ministry of Rural Affairs of the Republic of Estonia 4. Transport Administration of the Republic of Estonia 5. Tax and Customs Board of the Republic of Estonia 6. Estonian Business and Innovation Agency 7. Environmental Board 8. Tallin Airport	2. Ministry of Climate and Energy of the Republic of Latvia 3. Ministry of Economics of the Republic of Latvia 4. Ministry of Environmental Protection and Regional Development of Latvia 5. Ministry of Agriculture 6. Ministry of Finance of the Republic of Latvia 7. Riga Airport 8. The State Environmental Service 9. Investment and Development Agency of Latvia (LIAA) 10. Latvian Civil Aviation Agency 11. Riga City Council Housing and Environment Department 12. Liepāja Central Administration Environmental Department 13. Ventspils City Council Administration Environmental Supervision Department 14. Liepaja Special Economic Zone 15. Freeport of Ventspils 16. Freeport of Riga
Other key stakeholders – Market participants	
9. Estonian Biomass Association (Trade association) 10. Estonian Aviation Cluster (Trade association) 11. Estonian Transport Fuels Association (Trade association) 12. Estonian Institute for Sustainable Development (Stockholm Environmental Institute) (NGO) 13. Estonian Hydrogen Association (NGO) 14. Estonian University of Life Sciences (Academic) 15. Tallinn University of Technology (Academic) 16. Tartu University (Academic) 17. Biomotorai Eesti OÜ (Feedstock provider) 18. Airest (Airline) 19. Nyxair (Airline) 20. Marabu Airlines (Airline) 21. Diamond Sky (Airline) 22. Fort Aero (Airline) 23. Eesti Aviokütuste Teenused AS (Fuel supplier) 24. Baltic Ground Services EE OÜ (Fuel supplier) 25. Neste (Fuel supplier) 26. Alexela (Energy company) 27. Enefit Green (Renewable energy company) 28. Sunly (Renewable energy company)	17. Latvian Aviation Association (NGO) 18. Latvian Biomass Association (NGO) 19. Latvian Hydrogen Association (NGO) 20. Norsaf (producer)

1.3. Overview of the project deliverables and project timeline

To achieve the project outcome, a set of deliverables were generated within the scope of the project.

Figure 1. Project timeline and key milestones.




Deliverable completion
Task completion
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16 months
2024
2025
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Deliverable 4: Report on the implementation of short-term actions identified under the roadmaps
Task 4.1: Options for implementing short term actions
Task 4.2: Discussion with the beneficiaries and the contracting authority to reach a selection of the short-term actions that can be carried out within the timelines of the overall Project
Task 4.3: Implementation of the short-term actions
Task 4.4: Report for comments by the beneficiaries and contracting authority, finalisation of the report
Deliverable 5: Report on a series of information and training workshops
Task 5.1: Training workshops to internal policy makers in EE and LV
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Deliverable 7: Final report and presentation of the project
Task 7.1: Final report and communication materials
Task 7.2: Presentation of the Project in Brussels at the premises of the European Commission

2. Key Project findings

The key findings of the Project offer a strategic assessment of each country's potential to enhance access to and use of SAF. The analysis identifies opportunities for expanding SAF adoption by evaluating each country's unique strengths, weaknesses, and market potential. The key finding outlines potential scenarios for promoting SAF adoption, accompanied by an impact assessment and feasibility study for each. Based on this analysis, a preferred scenario is selected for every country, along with tailored recommendations and a roadmap for implementation.

Table 2. Key Project findings.

Dimension	Latvia	Estonia
Feedstock availability	Existing feedstock availability is currently being applied for lower value-add projects, creating the possibility for redirection of these resources for SAF projects. There is also high potential for the development of PtL projects due to non-biological feedstock availability and market conditions.	Estonia generates significant volumes of wood-based waste and carbon output from its industrial sector, which could serve as inputs for SAF. However, feedstock use is constrained by high electricity prices and regulatory criteria for e-fuels, and has not yet translated into practical value due to limited investor interest
Existing SAF projects	Two SAF production projects have been announced: Pars Terminals in Riga (HEFA pathway using rapeseed oil) and NorSAF in Liepāja (AtJ and e-fuel production). NorSAF has secured strategic partners and is progressing with pre-development research.	Estonia has one early-stage SAF project announced by Biojet in Narva, based on wood chips. However, the project is in a preliminary phase with limited disclosed progress, and most renewable fuel initiatives in Estonia focus on non-aviation sectors.
Infrastructure readiness	Fuel supply infrastructure at airports is well developed and operated by direct suppliers. Ports and SEZs are under continuous development, and infrastructure is being adapted to support SAF production through announced projects. However, Latvia currently lacks dedicated SAF infrastructure and state aid programs, which may delay deployment.	Estonia has a well-developed rail and road network, and large oil terminals in key ports. Infrastructure for SAF transport and storage exists, and the oil shale industry offers synergies. However, there is no infrastructure currently adaptable for SAF production, and SAF-specific investment support mechanisms are not yet in place.
Policy and regulatory support	SAF project development is supported by green corridor, SEZs, and free ports. However, the national regulatory framework is still under development, with gaps in SAF production, transport, refuelling, and reporting rules. Responsibilities are fragmented across ministries, and enforcement mechanisms are not yet in place.	Estonia benefits from streamlined digital governance and low regulatory burden for business setup. SAF-related legislation is being aligned with EU rules, but political instability, local opposition to energy projects, and lack of strategic prioritization delay long-term regulatory certainty.
Economic feasibility	High borrowing costs and limited access to affordable capital constrain investment. The small market size and high energy prices reduce feasibility. Investor interest is low due to unclear policy direction and limited scale.	Estonia faces high electricity prices and limited workforce availability, which increase operational costs. Small market size and higher interest rates on capital further reduce cost competitiveness for SAF production.

Strategic role	Latvia plays a central role in regional SAF uptake due to AirBaltic, the largest airline in the region, headquartered in Riga and expected to be the biggest SAF consumer. The country's policy instruments and active industry interest position it as a production and export hub.	Estonia is strategically positioned as an SAF importer. Its regulatory direction, infrastructure, and stakeholder preferences are oriented toward facilitating SAF import rather than local production, due to limited demand and cost competitiveness.

2.1. Overview of Estonia's potential to increase access to and use of SAF

SAF demand is driven by the ReFuelEU regulation, which requires aviation fuel suppliers to provide a SAF blend within the total aviation fuel supplied to the market. In Estonia, SAF is expected to have the greatest economic impact toward the end of the effective period. The government must align national regulation with ReFuelEU and explore SAF industry development possibilities. Production or import potential depends on local demand, legislation, feedstock, and infrastructure. Based on analysis of regulation, demand forecasts, feedstock, infrastructure, and stakeholder workshops, Estonia's scenarios will focus only on import support. Limited local demand, cheaper production abroad, and expected Baltic capacities led to the conclusion that local production is not economically feasible.

SAF regulatory and policy planning framework

The EU regulatory framework outlines the necessary key aspects for SAF deployment. However, the national regulatory framework is still in its early stages and has not yet been aligned with the EU framework. Some key pieces of EU legislation which have not yet been transposed to national law.

SAF demand

The ReFuelEU regulation mandates volumes of sustainable fuel that must be off taken, creating predictable demand for SAF with an annual regulated demand increase of 16.6% over the period from 2025 to 2050.[1] Rapid SAF increase at airports will require large investments and significant financial and human resources, even without domestic production. Fuel suppliers are obligated to meet SAF blending targets, with flexibility period to average shares across Union Airports until 2035. In Estonia, only ~1,000 tons of SAF is expected to be demanded in Tallinn until 2030, and within the flexibility mechanism fuel suppliers won't face large obligations there.[2] Significant demand is projected only by 2050, exceeding 100,000 tons. Overall, Estonia's SAF demand is minor within the ReFuelEU scope and does not support feasible local production offtake.

Renewable fuel production

Supplying SAF requires not only fuel production but also the development of related technologies and supply chains. Adjacent sectors like maritime and road transport share both feedstocks (such as renewable hydrogen, or bio-feedstocks) and even production facility infrastructures, creating synergies across renewable and low-carbon fuels. However, significant financial investment and expertise are needed. As of 2025, a few renewable fuel projects exist in Estonia, but most focus on non-aviation industries. Power2X plans a EUR 1 billion renewable methane facility for maritime industry, while Bioforce is expanding CNG production for public and private transport. In aviation, Biojet

[1] Based on PwC and Strategy& estimates; Strategy& Sustainable Aviation Fuel study

[2] Based on the information provided by the market participants in the AS-IS analysis: Tallinn Airport, airlines, fuel suppliers, energy companies, renewable energy companies and stakeholder institutions.

has announced early-stage plans for a SAF facility in Narva using wood chips. While Estonia has several renewable fuel initiatives, the focus on SAF has yet to be clarified.

Feedstock availability

Producing SAF requires feedstocks and the development of refining technologies and supply chains. While feedstocks can be imported, global competition and long transport distances may raise lifecycle emissions. SAF development faces capital and operational cost challenges for reactors and technologies, and operational costs mainly from feedstocks. In Estonia, forestry waste is the most economically and environmentally feasible biofuel feedstock, offering competitive pricing and export potential. For e-fuels, feedstocks are limited to renewable electricity and captured CO_2, with strict sustainability criteria. However, electricity prices in Estonia are significantly higher than in other EU countries, making competitive SAF production difficult despite the wide availability of renewable electricity.

Existing distribution, storage, and refuelling infrastructure

SAF import, production, or export requires transporting fuels to airports and, in the case of production, transporting feedstocks to facilities. Estonia has a well-developed rail and road network, and currently, most JetA1 fuel is delivered by truck from the Mazeikiai refinery in Lithuania. Although the oil shale industry infrastructure offers synergies and can be used for SAF transportation, storage and refuelling, there is no existing infrastructure adaptable for SAF production. The road transport will remain the primary method for aviation fuel delivery, as Tallinn's demand does not justify the economic use of railways.

Available financing for infrastructure projects

SAF production requires a developer to make a final investment decision, often involving hundreds of millions of euros in capital expenses. Developers must seek the most economically feasible options, and capital investments need financing optimization to ensure fuel competitiveness. While funding sources include capital markets, equity investors, banks, and grants, many face high borrowing costs and lack precedent. Therefore, grants and international financial institutions are seen as the most feasible, offering strategic alignment with renewables, lower debt costs, and greater availability. However, both require strong confidence in project realization, making government support essential.

Key factors influencing the preferred SAF scenario for Estonia

Considering the comprehensive analysis of the current situation and the insights gathered from key stakeholders within the SAF industry in Estonia, the preferred scenario was selected based on several critical factors:

- **Limited SAF industry's interest in setting up local SAF production** during stakeholder interviews and workshops. Industry participants in the SAF sector do not perceive Estonia as a potential location for SAF production and are not inclined to pursue SAF production within the country.
- **Estonia's limited market size and low local demand** suggest that establishing production facilities within the country may not achieve the necessary scale for cost competitiveness. Larger facilities in other regions benefit from proximity to larger consumer bases, which Estonia cannot offer.
- **The higher feedstock and operational costs, including elevated energy prices**, would further erode the price competitiveness of domestically produced

SAF. This economic disadvantage makes local production less attractive compared to importing SAF from more established markets.

- **The local opposition to the development of wind farms and nuclear facilities poses significant political hurdles**, which could impede the advancement of green energy initiatives necessary for SAF production. Such resistance adds another layer of complexity and uncertainty to the feasibility of local SAF production.
- **Estonia's geopolitical situation** introduces significant risks to investment stability in the region. These factors create an environment that is less conducive to the large-scale, long-term investments required for SAF production facilities.

SWOT analysis of Estonia's access to and use of SAF

Figure 2. SWOT analysis of Estonia's access to and use of SAF.

Strengths	Weaknesses
1. Estonia has one of the best **transportations infrastructures** in the area – specifically the large oil containers in key ports that have the capacity to accommodate large vessels. It is also well connected via railways. 2. There is a well-developed **innovation** framework – it has research facilities, and the scientific community has been involved in the fuel technology development. 3. Estonia offers one of the most **favourable business environments** overall, characterized by its low corporate taxes, minimal real estate taxation, and streamlined documentation processes. The country's commitment to digital governance provides entrepreneurs with advanced digital solutions for registering workers, submitting applications, conducting transactions, and more. 4. As one of the most **forested nations** globally by percentage, Estonia possesses a significant amount of wood-based waste relative to its size. Additionally, the country benefits from a substantial amount of carbon output from its industrial sector and has ample available land for establishing new production facilities near key logistic hubs. While this is presented as a strength, it should be noted that it has not yet translated into practical value, given the limited investor interest in establishing SAF production facilities in Estonia. 5. A **robust chemical industry** and ecosystem have been developed in East-Virumaa, supported by a skilled labour force. The region's longstanding coal mining tradition—dating back over a century—contributes valuable expertise that has already been partially leveraged in large-scale fuel production plants.	1. Due to Estonia's relatively **small market size**, major industry players tend to introduce their production and products to the region at a later stage, driven by limited local economic incentives and a modest consumer/client base. Consequently, Estonia often assumes the role of trend follower rather than trendsetter. 2. Establishing a commercial-scale production facility necessitates engineers and workers possessing specific knowledge of the technology being implemented, as well as expertise in effectively operating and maintaining the systems. Although Estonia does have some experts, the **limited workforce** size poses challenges. Additionally, it is important to consider the wage disparities between Estonia and neighbouring markets such as Finland, Sweden, and the Netherlands, which compete for the same talent but can offer significantly higher salaries. 3. Estonia faces **high electricity costs**, which pose a significant barrier to energy-intensive production initiatives, as stable and affordable energy is crucial for any manufacturing operation. The current electricity prices in Estonia are not competitive with countries like Finland, where costs can be up to twice as low. 4. The risks, such as market size and geopolitical considerations, contribute to Estonia typically facing **higher interest rates** on commercial capital.

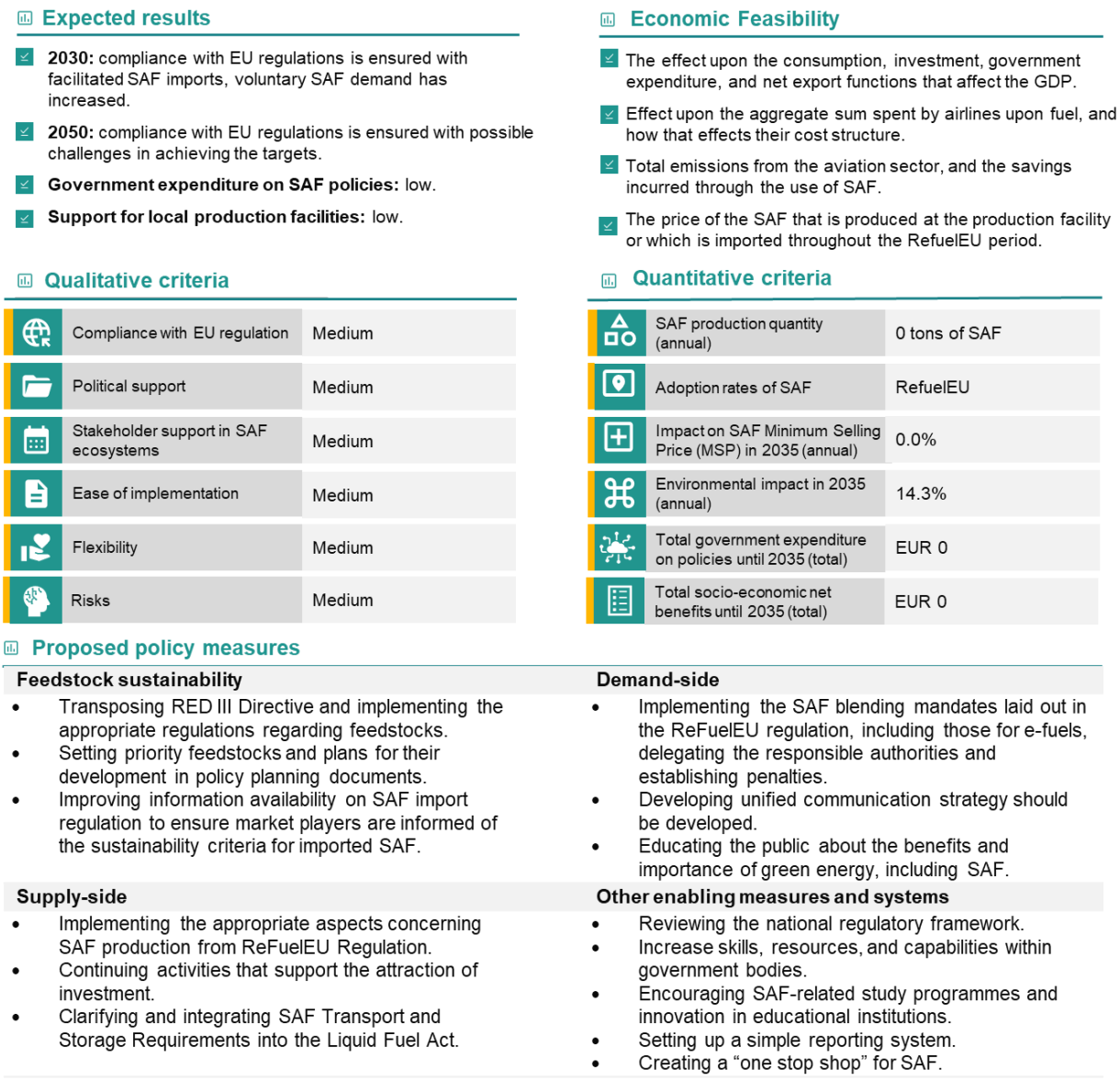
Opportunities	Threats
1. Estonia's strategic location with excellent **access to the Baltic Sea**, including proximity to major European transport hubs like Denmark, positions it as a strong potential exporter. The development of railway connections, such as Rail Baltica, further enhances Estonia's future export prospects by facilitating improved links with Central Europe. 2. Estonia is committed to advancing **a green energy future**, with several wind farm projects underway and plans for a potential nuclear facility. The country also benefits from a substantial amount of biomass resources from its agricultural and forestry sectors. 3. **Proximity to the Nordic countries** offers Estonia numerous opportunities for collaboration. Historically, various projects across diverse fields have been successfully executed, reinforcing strong cooperative ties. 4. With Estonia's market still evolving, there is **less dominance by large players,** creating opportunities for smaller enterprises to enter and compete in the market. 5. Estonia currently **exports over 1 million tons of wood pellets annually.** There is potential to enhance the value of this product domestically, thereby increasing ownership of the supply chain and achieving higher market prices. 6. The small size of Estonia presents unique advantages. The decision-making processes encounter fewer bureaucratic hurdles, resulting in a **more efficient command** chain compared to larger countries. 7. **Renowned for its digital innovations**, Estonia is often dubbed the "Silicon Valley" of Europe, particularly noted for its high density of IT startups. This expertise presents opportunities to develop advanced digital solutions beneficial for sustainable aviation fuel (SAF) production or supply chain management.	1. **NIMBY** – There has been notable local opposition in Estonia to the development of wind farms and nuclear facilities. This could result in **significant political hurdles**, potentially hindering the advancement of green energy initiatives and limiting the potential for hydrogen production. 2. The limited size of Estonia's market and low local demand suggest that production facilities are unlikely to achieve the scale needed for **cost competitiveness**, especially as larger facilities elsewhere benefit from closer proximity to larger consumer bases. Additionally, higher feedstock and operational costs, such as elevated energy prices, further erode the price competitiveness of final products. 4. Ongoing geopolitical tensions, particularly with Russia and the Ukraine conflict, pose significant risks to **investment stability** in the region. 5. The **frequent changes in political leadership** create uncertainty. While the current government may support SAF production, the lengthy timeline for facility development (5-7 years) raises concerns about future political support. 6. There is a prevailing sentiment within the market that Estonia's small size **limits its influence and ability to pursue ambitious projects**, which may deter bold investment and development initiatives.

Considering the above-mentioned, it was agreed to focus on import support rather than supporting local production. Overall, the **import support scenario aligns with the pragmatic approach of leveraging established global supply chains while avoiding the inherent risks and limitations associated with local production**. This strategy ensures that Estonia can still contribute to and benefit from the global push towards greener fuels without compromising economic viability.

Selected scenario for Estonia

Low policy support scenario for import aims to develop the SAF import sector without requiring government investments. **Based on the intended purpose and provided analysis, this scenario is identified as the most feasible option for enhancing access to and use of SAF in Estonia.**

Figure 3. Overview of the most feasible scenario in Estonia



2.2. Overview of Latvia's potential to increase access to and use of SAF

SAF demand is driven by the ReFuelEU regulation, which mandates that fuel suppliers include a blend of SAF in their fuels, gradually increasing the required share to 70% by 2050. In Latvia, the most significant economic impact is expected toward the end of the regulation's effective period. Latvia must align its national legislation with ReFuelEU and explore SAF industry development possibilities. The potential for production or import depends on local demand, regulatory conditions, feedstock availability, and infrastructure. Latvia's scenario analysis will focus on production support. The presence of two SAF production projects, one with significant progress, supports the need to explore support mechanisms to realize local production.

SAF regulatory and policy planning framework

The EU regulatory framework defines outline key aspects for SAF deployment. However, Latvia's national framework is still under development. While the "Act on Aviation" requires amendment to align with ReFuelEU and RED III, and other regulations are in

preparation, critical gaps remain: rules for SAF production, transport, refuelling, and reporting are not yet implemented; responsible authorities are not nominated; and “green corridor” regulations are not yet enforceable.

SAF demand

The ReFuelEU regulation enforces SAF use through mandated volumes, creating predictable demand with a 16.6% annual increase over the period from 2025 to 2050. [3] This will require major investments in production, blending, distribution, and testing infrastructure, even without domestic production. Fuel suppliers are primarily responsible for meeting necessary SAF shares and related reporting. A flexibility period allows averaging SAF shares across Union Airports until 2035. In Latvia, only ~3,000 tons of SAF is expected to be demanded in Riga by 2030. Significant demand is projected from 2045, exceeding 100,000 tons. This, along with regional import focus, supports the potential for local production.

Renewable and low-carbon fuel production

Supplying SAF requires fuel production and the development of related technologies and supply chains. Maritime and road transport sectors share similar feedstocks, creating synergies across renewable and low-carbon fuels. However, renewable fuel production demands significant financial investment and expertise. As of 2025, two SAF projects are announced: one in Riga by Pars Terminals using the HEFA pathway with rapeseed oil[4], and one in Liepaja by NorSAF, combining bio- and e-fuel production via AtJ technology.[5] They aim to produce 100,000 tons of SAF. NorSAF has secured strategic partners and continues pre-development research. The presence of these projects indicates production potential in Latvia and reduces the need to attract new investors.

Feedstock availability

Producing SAF requires feedstocks and significant investment in production technologies. While feedstocks can be imported, global competition and transport emissions must be considered. Latvia’s two SAF projects must identify the most cost-effective and sustainable regional feedstocks to remain competitive. Forestry waste is the most feasible biofuel feedstock in Latvia, offering price advantages and export potential. For e-fuels, feedstocks are limited to renewable electricity and captured CO_2, with strict sustainability criteria. Latvia is expected to meet “green grid” status after 2035, so current projects must comply with all regulatory clauses. Electricity pricing remains a major cost factor, and Latvia’s higher rates compared to other EU countries reduce competitiveness in e-fuel production.

Existing distribution, storage, and refuelling infrastructure

SAF import, production, or export requires transporting fuels to airports and, in the case of production, transporting feedstocks to facilities. Latvia has a well-developed rail and road network, and currently, most JetA fuel is delivered by truck from the Mazeikiai refinery in Lithuania. While existing infrastructure offers synergies and can be used for SAF transportation, storage and refuelling, Latvia is currently in the process of developing dedicated infrastructure for SAF production through announced projects. The

[3] Based on PwC and Strategy& estimates; Strategy& Sustainable Aviation Fuel study

[4] Riga City Development Department. (2024). *Informative Notice on the Initial Environmental Impact Assessment for the Planned Activity at Uriekstes Street 30*. Source: https://www.rdpad.lv/wp-content/uploads/2024/06/Informativais_pazinojums_Uriekstes_30.pdf

[5] NorSAF. (2025). *SAF Project*. https://norsaf.com/saf-project-norsaf/

road transport will remain the primary method for aviation fuel delivery, as Riga's demand does not justify the economic use of railways.

Available financing for infrastructure projects

SAF production requires a developer to make a final investment decision, often involving hundreds of millions of euros. Due to various constraints, capital investments must be optimized to ensure fuel competitiveness. While funding sources include capital markets, equity investors, banks, and grants, many face high borrowing costs and lack precedent. Grants and international financial institutions are the most feasible, offering strategic alignment with renewables and lower debt costs, but they require strong project viability and government support.

Key factors influencing the preferred SAF scenario for Estonia

Considering the comprehensive analysis of the current situation and the insights gathered from key stakeholders within the SAF industry in Estonia, the preferred scenario was selected based on several critical factors:

- **Latvia's strategic location with access to the Baltic Sea and well-developed port infrastructure**, including Riga and Liepaja ports, makes it an ideal hub for both importing feedstocks and exporting SAF. The ports are well-connected to maritime, road and railway shipping routes, which is advantageous for the logistics of SAF production and distribution
- **Latvia boasts a significant share of renewable energy in its electricity production**, with projections indicating continued growth. By 2050, it is anticipated that 96.8% of Latvia's electricity will be derived from renewable sources. To facilitate high-value production, including e-fuels that necessitate substantial electricity, it is crucial to further advance and support renewable energy projects to ensure Latvia' electricity price competitiveness in the European market.
- **Latvia can reduce its dependence on imported fossil fuels, thereby increasing its energy independence** by advancing renewable energy and SAF production. Utilizing local feedstocks and renewable energy sources ensures a stable and resilient energy supply, which is crucial for national security and economic stability.
- **Latvia has a diverse range of biomass feedstocks suitable for SAF production**. The availability of these feedstocks supports SAF production through various pathways, such as HEFA, AtJ, and FT processes. Given that SAF production requires green hydrogen, it is essential to further develop and support green hydrogen production projects. Additionally, it is crucial to strengthen the legal framework by establishing clear provisions for the production, transportation, distribution, and storage of green hydrogen.
- **The Latvian government has introduced mechanisms like the "Green Corridor" to streamline the development of SAF projects**. Additionally, Latvia's favourable tax regime, including special economic zones and free ports, offers significant incentives for SAF production.
- **The interest of the SAF industry in establishing local production facilities in Latvia** is underscored by recent developments in Riga and Liepāja. Specifically, the announced Norsaf and Pars Terminal projects are set to focus on aviation biofuels, positioning Latvia as a player in the SAF market. These initiatives aim to provide the necessary SAF capacity to comply with blending mandates, ensuring

that the region meets its environmental goals and supports the aviation sector's transition to greener fuels.

- **Strong demand from local and regional airlines ensures a consistent and substantial demand for locally produced SAF**. This collective effort among regional carriers is crucial in driving the transition to greener fuels, ensuring that Latvia can contribute to and benefit from the global push towards environmental sustainability. This demand provides a stable market for SAF producers, bolstering the economic feasibility and long-term success of SAF projects in Latvia.

  As the largest airline in the region, AirBaltic, headquartered in Latvia, is expected to be a significant consumer of SAF. This commitment to sustainability and reducing its carbon footprint aligns with the broader objectives of the SAF industry, ensuring a consistent and substantial demand for locally produced SAF.

- **SAF production stimulates local economic growth by creating high-value manufacturing jobs**. The establishment of SAF production facilities requires skilled labour, leading to new employment opportunities in engineering, research and development, and plant operations. Additionally, the increased demand for biomass feedstocks and renewable energy projects supports local agriculture and energy sectors, further boosting the economy.

SWOT analysis of Latvia's access to and use of SAF

Figure 4. SWOT analysis of Latvia's access to and use of SAF.

Strengths	Weaknesses
1. The **largest airline in the region**, AirBaltic, is nationally owned and centres most of its operations from RIX. It is expected to be the biggest consumer of SAF within the Baltic region. 2. Development of projects is faster due to **regulatory instruments** such as the green corridor, free ports and SEZ allowing for economic incentives and reduced bureaucratic load. 3. There is **high potential for the development of PtL projects** due to non-biological feedstock availability and market conditions.	1. Latvia is a **relatively small market**, providing lacking feasibility for scaling production, feedstock supply, or off-take demand. 2. The market is not attractive or sufficient for **investor entry** to develop production facilities at a large scale. 3. There are **financing burdens** concerning high borrowing costs and lack of access to affordable capital, limit the economic feasibility when taking in mind high initial investments necessary for development. 4. Within the national government there is **no clear strategic vision** to implement SAF domestically. There is a lack of strategy for fuel procurement, as well as the individual responsibilities within the SAF scope is divided across multiple ministries. There are also concerns regarding stringent environmental regulations. 5. **Energy is still quite expensive within domestic markets**, hindering economic feasibility. 6. With **shifts in global politics**, such as the election of leaders who oppose stringent environmental agreements, there is a risk that Europe's push for greener fuels may face challenges. If the European Union were to lower its regulations to remain competitive, this could negatively impact the demand for green

Opportunities	Threats
1. There is existing cooperation with other countries within **infrastructure projects** (e.g., Rail Baltica). 2. **Infrastructure concerning fuel supply to airports** is well developed and operated by direct fuel suppliers and announced fuel producers. 3. **Port areas are under continuous development**, with green corridor and SEZ regulations allowing for better conditions for project fulfilment. Airport infrastructure is governed and owned by the fuel suppliers and is under continuous development to adapt to new technologies. 4. There is Hintco market maker as a **guaranteed fuel off-taker**. 5. **Existing feedstock availability** is currently being applied for lower value-add projects, creating the possibility for redirection of these resources for SAF projects.	1. There is a possibility of **entrance of foreign players** into the import or production market, as well as the existence of production facilities in neighbouring countries. 2. **Local production can become unfeasible** in the case of the existence of cheaper production which would be imported to domestic markets. 3. With **shifts in global politics**, such as the election of leaders who oppose stringent environmental agreements, there is a risk that Europe's push for greener fuels may face challenges. If the European Union were to lower its regulations to remain competitive, this could negatively impact the demand for green fuel, increasing investor hesitancy in the sector. 4. Ongoing **geopolitical tensions**, particularly with Russia and the Ukraine conflict, pose significant risks to investment stability in the region. 7. There is a **lack of cooperation and knowledge sharing** between industry players and government institutions.

Considering the above-mentioned, it was agreed to focus on facilitating medium support for SAF production. Overall, the strategy of **facilitating medium support for SAF production aligns with an approach to enhancing Latvia's energy independence and fostering the development of high-value industries**. This approach guarantees that Latvia will not only contribute to but also benefit from the global transition to greener fuels. Moreover, it advances the country's economic viability without necessitating substantial government expenditures.

Selected scenario for Latvia

Facilitating medium support for SAF production scenario aims to develop the SAF production sector without requiring government investments. **Based on the intended purpose and provided analysis, this scenario is identified as the most feasible option for enhancing access to and use of SAF in Latvia.**

Figure 5. Overview of the most feasible scenario in Latvia

Expected results

- **2030:** compliance with EU regulations is ensured with facilitated SAF imports, voluntary SAF demand has increased.
- **2050:** compliance with EU regulations is ensured with local SAF production.
- **Government expenditure on SAF policies:** medium.
- **Support for local production facilities:** medium.

Economic Feasibility

- The effect upon the consumption, investment, government expenditure, and net export functions that affect the GDP.
- Effect upon the aggregate sum spent by airlines upon fuel, and how that effects their cost structure.
- Total emissions from the aviation sector, and the savings incurred through the use of SAF.
- The price of the SAF that is produced at the production facility throughout the RefuelEU period.

Qualitative criteria

Compliance with EU regulation	High
Political support	Medium
Stakeholder support in SAF ecosystems	High
Ease of implementation	Medium
Flexibility	Medium
Risks	Medium

Quantitative criteria

SAF production quantity (annual)	100,000k tons of SAF
Adoption rates of SAF	RefuelEU
Impact on SAF Minimum Selling Price (MSP) in 2035 (annual)	0.0%
Environmental impact in 2035 (annual)	14.3%
Total government expenditure on policies until 2035 (total)	EUR 0
Total socio-economic net benefits until 2035 (total)	EUR 0

Proposed policy measures

Feedstock sustainability

- Transposing RED III Directive and implementing the appropriate regulations regarding feedstocks.
- Setting priority feedstocks and plans for their development in policy planning documents. Ensuring the sustainability criteria for feedstocks are no harsher than the ones set out in EU-level frameworks.
- Improving information availability on SAF production and import regulation to ensure market players are informed of the sustainability criteria for SAF.
- Support the development of alternative and green energy projects with the strategic objective of reducing electricity prices below the EU average.

Supply-side

- Developing a clear guidance on the legal requirements for the production, storage, transportation, and refuelling of SAF, as well as for the development and deployment of alternative fuel infrastructure at airports.
- Developing clear guidance on the legal requirements for the production, storage, transportation, and refuelling of green hydrogen, as well as for the development and deployment of green energy infrastructure at airports.
- Promoting active grant support.

Demand-side

- Developing unified communication strategy to raise public awareness and support for green energy and SAF.

Other enabling measures and systems

- Increasing skills, resources, and capabilities within government bodies to effectively manage and implement green energy and SAF initiatives.
- Setting up a simple reporting system.
- Creating a “one stop shop” for SAF.

3. Key lessons learned

3.1 Lessons learned from the project implementation

The insights gained during the project have provided valuable guidance that will significantly enhance the effectiveness of future project execution.

Table 3. A summary of the lessons learned.

Effective stakeholder engagement	Recognising that the successful expansion of access to and utilisation of SAF is fundamentally contingent upon the engagement of market participants and their willingness to establish and grow their operations within Latvia and Estonia, it was deemed critical from the project's inception to ensure robust involvement of these key actors throughout all phases of the initiative. Early on, it became clear that fostering meaningful participation from market stakeholders would be pivotal to achieving project objectives and driving sectoral development. Throughout the project, principal stakeholders expressed a strong preference for group workshops over individual interviews, viewing the collaborative setting as considerably more productive and conducive to generating actionable insights. This collective approach not only enabled stakeholders to network and share perspectives but also empowered them to actively shape the project's recommendations. Their engagement in these group forums contributed to a heightened sense of ownership and accountability for the outcomes, strengthening commitment to the subsequent implementation of strategic proposals and enhancing the overall probability of success.

3.2. Analysis of elements that can be replicated in other EU MS and/or regions

The lessons learned throughout the project present valuable opportunities for replication across other EU Member States. The table below outlines the key project components that are most suitable for adoption in similar contexts.

Table 4. A summary of Project's elements that can be replicated in other EU MS and/or regions.

Deliverable 2: AS-IS report and gaps analysis on the current state of access to and use of SAF in LV and EE	In addition to other findings, the report delivers a thorough examination of successful approaches for advancing SAF development in Finland, Poland, and Denmark. This analysis encompasses a detailed exploration of each country's policy frameworks, legislative environments, and the various support mechanisms utilised to facilitate sector growth. By systematically documenting these best practices, the report becomes a valuable tool that can be readily shared with other EU Member States. Disseminating such comprehensive insights will significantly broaden the collective knowledge and understanding of SAF implementation across the European Union. Moreover, it provides other countries with actionable lessons and proven strategies, allowing them to draw inspiration from established models and consider customising these approaches to suit their own regulatory and market conditions. Ultimately, this exchange of information encourages greater alignment and accelerates the adoption of effective SAF policies throughout the region, fostering innovation and progress in sustainable aviation.
Deliverable 5: Report on a series of information and training workshops	The project incorporated targeted capacity-building initiatives specifically tailored for public institutions, with the objective of enhancing their comprehension of SAF and broader green energy projects. These training sessions provided a robust foundation for elevating institutional knowledge and equipping public sector professionals with the necessary tools to effectively advocate for and support the expansion of green energy initiatives within their respective countries. By fostering a deeper understanding of SAF and its strategic importance, the trainings are

	expected to drive more informed decision-making and increase institutional readiness to champion similar projects. Furthermore, disseminating these training programmes to other MS could play a pivotal role in raising awareness and appreciation of SAF and green energy projects at the EU level. Sharing best practices and knowledge transfer through such capacity-building activities not only supports the harmonisation of expertise across regions but also encourages cross-border collaboration. This approach can ultimately accelerate the adoption and implementation of sustainable aviation and green energy solutions, strengthening the overall resilience and competitiveness of the sector throughout Europe.
Deliverable 6: Report on a series of promotional events dedicated to increase interest from local and foreign traders and investors in SAF potential in Latvia and Estonia	The project also encompassed the development of bespoke pitch materials that clearly articulated the unique value propositions of each participating country. In addition, a suite of targeted awareness-raising video content was produced, specifically designed to enhance public understanding of SAF and broader green energy concepts. These communication assets were carefully tailored to resonate with both domestic and international audiences, effectively highlighting each country's strategic advantages and commitment to sustainable energy solutions. Adopting and replicating such marketing and educational materials in similar projects across other MS could substantially elevate overall awareness and comprehension of SAF and green energy opportunities. By leveraging these well-crafted resources, stakeholders—including policymakers, industry leaders, and the general public—can gain a clearer perspective on the benefits, challenges, and commercial potential of sustainable aviation initiatives. This strategic dissemination of information not only supports the harmonisation of messaging across the EU but also fosters a more informed and engaged ecosystem, ultimately contributing to the acceleration of green energy adoption and the strengthening of sectoral competitiveness at both regional and EU-wide levels.

4. Project's follow up activities

PwC recommends that national authorities take a structured and phased approach to implementing the project's recommendations over the 12 months. Gradual and sequential execution of these recommendations will facilitate effective integration and promote sustainable outcomes.

3.2. Follow up activities in Estonia

For the scenarios selected in collaboration with the beneficiaries, a brief roadmap was developed outlining the required actions and steps to be taken, resource considerations (including administrative capacity and financial resources) and stakeholder responsibilities. The roadmap is structured into three phases: (1) short-term measures to be implemented during the project, (2) medium-term measures, and (3) long-term measures.

Table 5. Roadmap for scenario implementation in Estonia.

Policy	Required actions	Stakeholder responsibilities	Timeline
Improving the regulatory framework regarding feedstocks	Transposing RED III Directive and implementing the appropriate regulations regarding feedstocks (e.g., sustainability criteria): 1. Setting priority feedstocks and plans for their development in policy planning documents. 2. Ensuring the sustainability criteria for feedstocks are no harsher than the ones set out in EU-level frameworks. These could potentially be added to the draft law amendments to the Liquid Fuel Act.	Ministry of Climate	Q4, 2025
	Improving information availability on SAF import regulation to ensure market players are informed of the sustainability criteria for imported SAF.	Transport Administration and The Environmental Board	Q4, 2025
Improving the regulatory framework regarding production and import	Implementing the appropriate aspects concerning SAF production from ReFuelEU Regulation: • Competent authorities; • Penalties for non-compliance. Expected to be included in the draft law amendments to the Liquid Fuel Act.	Ministry of Climate	Q2, 2025 - implemented

Policy	Required actions	Stakeholder responsibilities	Timeline
	Clarify and integrate SAF transport and storage requirements into the Liquid Fuel Act.	Ministry of Climate, Ministry of Regional Affairs and Agriculture	Q4, 2026
Continuing investment attraction measures	Continuing activities that support the attraction of investment, e.g., such activities of the Estonian Investment Agency as: • information services and investment preparation. • investment proposals and visits. • consulting and project management. • facilitating contacts, negotiation with authorities. • organising recruitment and identifying suitable properties.	Estonian Investment Agency	Q2, 2026
Ensuring grant support	Promote active grant support. Ministries can significantly aid SAF importers in acquiring EU funding by: • providing support letters to enhance their application credibility. • conducting workshops on application procedures and offering expert advisory services, thus streamlining the funding application process and increasing the likelihood of success.	Ministry of Climate	Q1, 2026
	Developing a targeted grant instrument to support SAF infrastructure expansion. A dedicated grant mechanism to accelerate the deployment of SAF infrastructure. The proposed instrument would offer annual funding of up to EUR 2m, supporting capital investments and enabling technologies critical to SAF production and distribution. Potential funding source: The revenue generated by the EU ETS is mainly directed into national budgets, and member states are required to invest it in renewable energy projects, energy efficiency enhancements, and low-carbon technologies. These investments could be used for SAF production projects.	Ministry of Climate, Ministry of Finance	Q4 2026
Adhering to the EU regulatory framework	Implementing the SAF blending mandates laid out in the ReFuelEU regulation, including those for e-fuels, delegating the responsible authorities and establishing penalties.	Ministry of Climate	Q2, 2025 - implemented
Improving communication to wider society	A unified communication strategy should be developed to raise public awareness and support for green energy and SAF by engaging diverse audiences through platforms like social media, seminars, and brochures, while also defining a clear budget and mechanisms to evaluate its effectiveness.	Ministry of Climate	Q4, 2026
Building capacities for SAF	Increase skills, resources, and capabilities within government bodies to effectively manage and implement green energy and SAF initiatives.	Ministry of Climate	Q1, 2026

Policy	Required actions	Stakeholder responsibilities	Timeline
	Educational institutions need to be urged to develop study programmes to educate the professionals on green energy, including SAF, technologies and sustainability practices, encouraging innovation and informed participation in the industry. This can also be organised with the participation of industry stakeholders, e.g., by creating a SAF lab or by organising apprenticeships.	Ministry of Climate, Ministry of Education and Research	Q4, 2027
Setting up a simple reporting system	An easy-to-use reporting mechanism needs to be established for aircraft operators to facilitate the adherence to their obligations set out in the ReFuelEU Regulation.	Ministry of Climate	Q2, 2025 - implemented
Creating a "one stop shop" for SAF	A "one stop shop" would streamline processes and services related to SAF, by providing a centralized hub that offers comprehensive support, resources, and guidance for stakeholders, making it easier to navigate regulations, access incentives, and implement green energy projects. The "one stop shop" should include information on: • comprehensive information on the regulatory framework for aviation fuel and SAF; • responsible authorities and their roles for aviation fuel and SAF; • information detailing available EU funding opportunities and deadlines, ensuring producers stay informed.	Estonian Investment Agency	Q2, 2026

3.2. Follow up activities in Latvia

For the scenario selected in collaboration with the beneficiaries, a brief roadmap was developed outlining the required actions and steps to be taken, resource considerations (including administrative capacity and financial resources) and stakeholder responsibilities. The roadmap is structured into three phases: (1) short-term measures to be implemented during the project, (2) medium-term measures, and (3) long-term measures.

Table 6. Roadmap for scenario implementation in Latvia.

Policy	Required actions	Stakeholder responsibilities	Timeline
Improving the regulatory framework regarding feedstocks	Transposing RED III Directive and implementing the appropriate regulations regarding feedstocks (e.g., sustainability criteria): 1. Setting priority feedstocks and plans for their development in policy planning documents. 2. Ensuring the sustainability criteria for feedstocks are no harsher than the ones set out in EU-level frameworks.	Ministry of Climate and Energy, Ministry for Smart Administration and Regional Development, Ministry of Transport	Q4, 2025
	Improving information availability on SAF production and import regulation to ensure market players are informed of the sustainability criteria for SAF.	Ministry of Transport or The Civil Aviation Agency	Q4, 2025
Facilitating energy price competitiveness	Support the development of alternative and green energy projects with the strategic objective of reducing electricity prices below the EU average.	Ministry of Climate and Energy, Ministry for Smart Administration and Regional Development	Q4, 2027
Adhering to the EU regulatory framework	Implement the appropriate aspects concerning SAF production from ReFuelEU Regulation: • Competent authorities, monitoring mechanism. • Penalties for non-compliance. This is expected to be included in the draft law amendments to the Law on Aviation.	Ministry of Transport	Q4, 2025
Improving the regulatory framework regarding production and import	Develop a clear guidance on the legal requirements for the production, storage, transportation, and refuelling of SAF, as well as for the development and deployment of alternative fuel infrastructure at airports.	Ministry of Climate and Energy, Ministry for Smart Administration and Regional Development, The State environmental Service	Q4, 2026

Policy	Required actions	Stakeholder responsibilities	Timeline
	Developing clear guidance on the legal requirements for the production, storage, transportation, and refuelling of green hydrogen, as well as for the development and deployment of green energy infrastructure at airports.	Ministry of Climate and Energy, Ministry for Smart Administration and Regional Development, The State environmental Service	Q4, 2026
Continuing investment attraction measures	Continuing activities that support the attraction of investment, e.g., such activities of the Investment and Development Agency of Latvia as: • information services and investment preparation. • investment proposals and visits. • consulting and project management. • facilitating contacts, negotiation with authorities. • Polaris process. • Nation branding. • Large and strategically significant investment coordination council	Ministry of Transport, Investment and Development Agency of Latvia	Q2, 2026
Ensuring grant support	Promoting active grant support. Ministries can significantly aid SAF importers in acquiring EU funding by: • providing support letters to enhance their application credibility. • conducting workshops on application procedures and offering expert advisory services, thus streamlining the funding application process and increasing the likelihood of success.	Ministry of Transport, Ministry of Climate and Energy	Q1, 2026
Improving communication to wider society	A unified communication strategy should be developed to raise public awareness and support for green energy and SAF by engaging diverse audiences through platforms like social media, seminars, and brochures, while also defining a clear budget and mechanisms to evaluate its effectiveness.	Ministry of Climate and Energy, Ministry of Economics	Q4, 2027
Building capacities for SAF	Increase skills, resources, and capabilities within government bodies to effectively manage and implement green energy and SAF initiatives.	Ministry of Climate and Energy, Ministry of Transport	Q4, 2026
Setting up a simple reporting system	An easy-to-use reporting mechanism needs to be established for aircraft operators to facilitate the adherence to their obligations set out in the ReFuelEU Regulation.	Ministry of Transport	Q1, 2026
Creating a "one stop shop" for SAF	A "one stop shop" would streamline processes and services related to green energy, including SAF, by providing a centralized hub that offers comprehensive support, resources, and guidance for stakeholders, making it easier to navigate regulations, access incentives, and implement green energy projects.	Ministry of Transport or The Civil Aviation Agency	Q2, 2026

Policy	Required actions	Stakeholder responsibilities	Timeline
	The “one stop shop” should include information on: • comprehensive information on the regulatory framework for aviation fuel and SAF; • responsible authorities and their roles for aviation fuel and SAF; information detailing available EU funding opportunities and deadlines, ensuring producers stay informed.		

5. Project description summary

The project supports the development of SAF in Estonia and Latvia by fostering cross-sector collaboration, targeted policy support, and increased stakeholder awareness.

Table 7. Project description summary.

Developing technological solutions and production possibilities for sustainable aviation fuel in Estonia and Latvia

Project title for communication to a wide audience
Developing Potential for Sustainable Aviation Fuel in Estonia and Latvia

Summary
Latvia and Estonia have decided to enhance their understanding of SAF regulations and production possibilities to enable them to choose the best policy mix to increase access to and use of SAF.
To achieve this, Ministry of Climate of Estonia and the Ministry of Transport of Latvia have requested support from the European Commission via the Technical Support Instrument.

Context
The EU air transport sector has been consistently expanding, which has led to a rise in greenhouse gas emissions. To address this, the ReFuelEU Aviation Regulation was introduced as part of the European Green Deal, mandating a specific proportion of sustainable aviation fuel (SAF) to be provided at EU airports.
Unlike traditional fossil jet fuel, SAF has significant potential to reduce emissions in the aviation industry. However, current production and consumption levels of SAF remain minimal, giving potential for domestic SAF production.

Support delivered
The project involved collaboration with national experts from the energy, environmental, and aviation sectors in both Estonia and Latvia to bolster local capacity in SAF policy to increase the access to and use of SAF in both countries.
Activities encompassed a thorough analysis of current SAF access and use, comparison with international best practices, and the development of tailored policy recommendations to enhance the access to and use of SAF in Baltic region.
These activities were implemented during the 16-month project period both in person and online.
The primary objectives were to build practical expertise, reinforce cooperation between key sectors, and equip participants to assess, advance, and implement sustainable aviation fuel solutions in Estonia and Latvia.

Results achieved
Throughout the project, Estonia and Latvia benefitted from tailored technical support, encompassing:

- AS-IS, gaps, and potentials analysis on the current state of access to and use of SAF in Estonia and Latvia.
- Review of European best practices in supporting SAF development projects.
- Recommendations for tailored policy scenarios to increase access to and use of SAF in each country.
- Awareness raising campaign and training workshops dedicated to improving understanding of the importance and local potential of SAF

Supporting visuals and materials

Visuals
Annex 1 – Factsheet
Annex 2 – Promotional materials
Annex 2.1. – Pitch deck for Latvia.
Annex 2.2. – Pitch deck for Estonia.
Annex 2.3. – Promotional video for Latvia.
Annex 2.4. – Promotional video for Estonia.
Social Media
Annex 3 – SAF Spotlight Newsletter article

Annex

Annex 1 – Factsheet

Presentation attached separately “Annex_1_Factsheet.pdf”

Annex 2 – Promotional materials

Annex 2.1.: Pitch deck for Latvia.
Attached separately "Annex_2.1_LV Pitch deck.pdf"

Annex 2.2.: Pitch deck for Estonia.
Attached separately "Annex_2.2_ EE Pitch deck.pdf"

Annex 2.3.: Promotional video for Latvia.
Attached separately "Annex_2.3_ SAF Video LV.mp4"

Annex 2.4.: Promotional video for Estonia.
Attached separately "Annex_2.4_ SAF Video EE.mp4"

Annex 3 – SAF Spotlight Newsletter article

Latvia and Estonia: Unlocking strategic pathways to sustainable aviation fuel in Baltic region

As the aviation industry faces mounting pressure to decarbonize, Sustainable Aviation Fuel (SAF) continues to be a critical solution for reducing greenhouse gas emissions. Latvia and Estonia, two Baltic nations with distinct energy landscapes and market dynamics, are actively shaping their strategies to enhance SAF access and even explore SAF production. This article explores their respective plans, challenges, and opportunities, drawing on a detailed comparative assessment.

The Article is developed within the project “Developing Technological Solutions and Production Possibilities for Sustainable Aviation Fuel in Estonia and Latvia” organized in cooperation with the European Commission's Reform and Investment Task Force (SG REFORM), the Ministry of Transport of the Republic of Latvia and the Ministry of Climate of the Republic of Estonia. The project was carried out by PwC EU Services, in a close collaboration with between the PwC member firms in Latvian, Estonian, along with PwC's global strategy consulting division Strategy&.

Latvia: Supporting Regional SAF Production Hub

Latvia’s approach to SAF is rooted in leveraging existing feedstock resources, which are currently used for lower value-add projects. The country sees significant potential in redirecting these resources toward SAF initiatives. Notably, Latvia is well-positioned for Power-to-Liquid (PtL) projects due to favorable market conditions and the availability of non-biological feedstocks.

Two major SAF production projects have been announced: Pars Terminals in Riga, utilizing the HEFA pathway with rapeseed oil, and NorSAF in Liepāja, which combines Alcohol-to-Jet (AtJ) and e-fuel production.

Infrastructure and Policy Support

Latvia boasts well-developed fuel supply infrastructure at airports, operated by direct suppliers. Ports and Special Economic Zones (SEZs) are under continuous development, with infrastructure being adapted to support SAF production.

Policy-wise, SAF project development benefits from mechanisms like green corridors, SEZs, and free ports. Yet, the national regulatory framework is still evolving, with gaps in production, transport, refueling, and reporting rules that are planned to be addressed in upcoming months.

Economic Feasibility and Strategic Role

Latvia faces challenges such as high capital costs and limited access to capital, which constrain investment. Although a relatively small market, Latvia’s strategic position in the Baltics - supported by two major harbors, strong feedstock availability, and a rising share of renewable power generation - creates favorable conditions for SAF production.

Latvia plays a central role in regional SAF uptake. AirBaltic, the largest airline in the region, is headquartered in Riga and is expected to be one of the biggest SAF consumers. Latvia’s policy instruments and active industry interest position it as a production and export hub for SAF in the Baltic region.

[*Placeholder: Latvia's video*]

Estonia: Pragmatic Focus on SAF Import

Estonia generates significant quantities of wood-based waste and carbon emissions from its industrial activities, both of which present potential feedstock sources for sustainable aviation fuel (SAF) production. Despite this theoretical availability, several challenges impede the practical use of these resources. High electricity prices in Estonia increase operational costs, making local SAF production economically challenging. Additionally, strict regulatory standards for e-fuels further complicate the feasibility of domestic SAF manufacturing. These obstacles, combined with limited investor interest to date, have prevented the effective utilization of Estonia's industrial byproducts and emissions as SAF feedstocks.

Economic Feasibility and Strategic Role

Estonia faces significant challenges regarding the economic feasibility of local SAF production. Elevated electricity prices and a limited labor pool drive up operational costs, while the country's small market size and relatively high capital costs further undermine competitiveness. As a result, Estonia is primarily plans to position itself as a SAF importer.

Regulatory Framework and Demand

SAF demand in Estonia is largely shaped by the ReFuelEU regulation, which mandates that aviation fuel suppliers incorporate a SAF blend. The economic impact of SAF in Estonia is projected to be most significant toward the end of the regulation's implementation period. To meet these requirements, the government must continue aligning national policies with ReFuelEU and consider potential avenues for SAF industry development.

Comprehensive analysis of regulatory factors, demand forecasts, available feedstocks, infrastructure, and stakeholder input confirms that Estonia's most viable scenarios revolve around supporting SAF imports. Factors such as low local demand, more competitive production costs abroad, and anticipated SAF production capacity in neighboring Baltic states all contribute to the conclusion that domestic SAF production is currently not economically justified.

[*Placeholder: Estonia's video*]

To summarize

Latvia and Estonia are charting distinct paths toward SAF adoption. Latvia is positioning itself as a regional production and export hub, supported by active industry interest and strategic infrastructure investments. Estonia, on the other hand, is focusing on SAF import, recognizing the economic and political realities that limit local production feasibility. Both countries are aligning their regulatory frameworks with EU mandates, but face unique challenges and opportunities shaped by market size, feedstock availability, and geopolitical factors. Their evolving strategies will play a crucial role in the Baltic region's contribution to sustainable aviation and the broader transition to greener fuels.

To learn more about SAF in Latvia, please reach out to **Artūrs Kokars**, Aviation Department Director Ministry of Transport, arturs.kokars@sam.gov.lv

To learn more about SAF in Estonia, please reach out to **Taivo Linnamägi**, Director General Aviation Department, Ministry of Climate, Taivo.Linnamagi@kliimaministeerium.ee

Visit our website:

Find out more about the Technical Support Instrument:

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