ADIF – Alta Velocidad – Second-Party Opinion

Sustainable Fitch Second-Party Opinion	Excellent
Framework Type	Green
Alignment	Green Bond Principles

See Appendix A for definitions of ICMA Principles. See Appendix B for details on Second Party Opinion. Date assigned: 23 August 2022.

Framework Highlights

- ADIF – Alta Velocidad (ADIF AV) has been issuing green bonds since 2017. This was initially done under the 2017framework, which was restricted to green bond issuances only, while the 2019 framework update allowed it to issue other instruments, such as green loans. The current green financing framework update broadens the sustainability ambitions, aligns with the EU taxonomy objective of climate change mitigation based on the information provided, and strengthens its governance, especially with regards to project selection and evaluation.
- Sustainable Fitch considers ADIF AV's green financing framework to be aligned with the four core principles of the ICMA Green Bond Principles 2021.
- Eligible projects under this framework fall under two categories related to clean transportation. These categories are investments related to new rail lines and rail lines extensions and investments related to maintenance, upgrades and energy efficiency of the rail system. Following interaction, we understand that ADIF AV intends to allocate most of the proceeds of the upcoming green bond(s) to finance new rail lines and rail extensions powered by clean electricity.
- These projects are eligible under the EU taxonomy objective of climate change mitigation. Alignment with the taxonomy requires projects meet the technical screening criteria (TSC), the do no significant harm (DNSH) criteria and the minimum safeguards criteria. We consider the eligible projects to be aligned with the EU taxonomy's TSC and the DNSH for the reasons explained in the "Use of Proceeds – Eligible Projects" section. Our assessment has not identified any controversies related to the minimum safeguards. ADIF AV is also a UN Global Compact (UN GC) signatory, while its code of ethics and conduct ratifies the UN GC and the International Labour Organization principles.
- Eligible projects are expected to contribute to the decarbonisation of the Spanish transportation sector, in line with the UN 2030 Agenda, mainly through rail network expansion and improved service availability. This is expected to lead to a shift from road and air transport to rail transport, leading to significant potential GHG-emissions saving as rail transport represents the most sustainable land transport solution on a passenger-kilometre (pkm) basis. The promotion of high-speed railway is a key pillar of the TEN-T project within the EU Green Deal goal to achieve a 90% reduction in transport-related GHG emissions by 2050.
- The climate impact of ADIF's rail network is directly proportional to the environmental impact of the energy source for the electricity used to power it. Renewable energy generation accounts for slightly more than one-third of Spain's total energy mix, suggesting that a large share of the electricity sourced from the grid comes from fossil fuel. It is positive from an environmental perspective that the company has been purchasing electricity with guarantee of origin (GO) from renewable sources since 2019. Purchasing GOs does not directly imply new additional renewable capacity created in a country, but it nonetheless accounts for a company's effort to mitigate its impact and supports the wider green financing incentives that are in place. These mechanisms are in turn expected to foster investments in renewable energy. In 2021, the electricity purchased with GO represented nearly 90% of the total energy consumed, therefore mitigating the adverse environmental effects.

Source: Sustainable Fitch, ADIF AV green financing framework

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Company Information

- ADIF AV is a public corporation operating under the supervision of the Spanish government; it was created after the split of ADIF into two distinct corporations; ADIF and ADIF AV. ADIF AV constructs and manages Spain's high-speed rail network, which is the world's second largest, behind only China, in terms of km of high-speed lines in operation. The company also manages the high-speed stations and the supply of energy. ADIF constructs, upgrades and maintains the conventional railway system.
- ADIF AV's strategic direction follows the 2030 Strategic Plan, which is aligned with national government initiatives such as the Spanish Recovery, Transformation and Resilience Plan and the Secure, Sustainable and Connected Mobility Strategy 2030 of the Ministry of Transports and Mobility and Urban Agenda. The company's strategic plan is also informed by the UN Sustainable Development Goals (SDGs) and the company undertook a consultation with all relevant stakeholders prior to finalizing its strategy.
- The strategic plan is formed of four key pillars: safety, service, sustainability and results-driven. For every pillar, ADIF AV has relevant KPIs to monitor its performance. Based on the evolution of the KPIs between 2019–2021, we observe that safety metrics have slightly deteriorated, as a result of a work accident in 2021 compared to none in the previous two years. The company also registered an increase in deliberate attacks on critical infrastructure from nine in 2019 to 13 in 2021. ADIF AV clarified that the occurrence of deliberate attacks against critical infrastructure is outside the company's control. We also observe a noticeable improvement within the sustainability pillar, with a 34% decrease in GHG emissions (in tCO_2e) and a 16% improvement in energy efficiency (in GWh equivalent).
- ADIF AV has an enterprise risk management system with a clear focus on safety due to the nature of its business. It is positive from an ESG perspective that the system has included climate change aspects since 2021. ADIF AV aims to have its entire rail network be analysed against extreme weather events and other climate change consequences by 2030. Fitch finds that the company could enhance its ESG risk model and improve the resilience of its infrastructure by implementing the Task Force on Climate-Related Financial Disclosures recommendations, which should allow it to evaluate climate-related risks and opportunities more effectively.
- ADIF AV has had a plan in place since 2019 to mitigate climate change, with ambitious emissions reduction targets for the short term (2025) and the long term (2030), aligned with the internationally recognised frameworks of the Paris Agreement and the SDGs; the EU 2030 climate and energy framework and the roadmap to a competitive low-carbon economy by 2050. Its plan also aligns with the sectorial frameworks described in the white paper on transport of the EU and the Railway Handbook produced by the International Union of Railways and the International Energy Agency. The plan to mitigate climate change encompasses five areas of action with corresponding short-term and long-term targets: energy efficiency, decarbonisation, energy management, improvement of the resilience of the rail infrastructure, and culture and environmental awareness across 17 programmes and 56 projects.
- Since the inception of the plan, ADIF AV has shown a significant positive evolution, with a reduction of its GHG emissions to 15,016tCO_2e in 2021 from 22,712tCO_2e in 2019. The climate change plan and its targets are comprehensive and ambitious, but the company could benefit from monitoring and disclosing its Scope 3 emissions, which represent the highest share of emissions for the majority of companies, according to the CDP. This would constitute a first step towards integrating emissions from the supply chain into the decarbonisation strategy.
- It is positive from an ESG perspective that the company has committed to review and update its climate change action plan to align it with a net-zero roadmap by 2050, which is considered as best practice.
- ADIF AV incorporates environmental criteria in its procurement process, and requires suppliers to comply with all requirements. Contract managers select the environmental clauses for each procurement process. The process and criteria used are not made publicly available. The company intends to develop a catalogue of environmental and social criteria for railway infrastructure procurement.
- The company has been a signatory of the UN GC since 2018 and joined Forética, Spain's representative on the World Business Council for Sustainable Development, in 2017. ADIF AV demonstrates high-level engagement with specific SDGs that are more material for the company by monitoring its progress towards specific, relevant targets that the company aims to contribute to as well as by expanding its partnerships and collaborations with relevant organisations.
- ADIF AV has a comprehensive environmental management system certified under ISO 14001, with the aim of mitigating negative environmental impact arising from its operations and which covers its most material topics of biodiversity protection, climate change mitigation, sustainable use of resources, and waste management and circular economy.

Source: Sustainable Fitch, ADIF AV management report 2021

Use of Proceeds – Eligible Projects

Company Material	Fitch's View
New rail lines and rail extensions	
• This category includes projects for the construction of high-speed lines that are already being executed, or are expected to be, as well as the lines already put into service.	• Sustainable Fitch was made aware of company's intention to allocate most of the funds of the next bond issuance to new rail and rail extension projects. This is in line with the historical disbursements made by ADIF AV across its previous transactions, which show a nearly 100% allocation to capital expenditure projects within this category. Evidence of this is made publicly available on the company's website through its green bond reports. • Passenger transportation by rail is the least polluting mode of transporting people, with emissions averaging around 35gCO_2e/pkm in the EU, compared to 80gCO_2e/pkm for buses and coaches, over 125gCO_2e/pkm for aviation and slightly more than 140gCO_2e/pkm for single-passenger cars. • Investments in new rail lines and in rail extensions are eligible under the EU taxonomy objective of climate change mitigation within the category of infrastructure for rail transportation. Since ADIF AV's high-speed rail network is fully electrified, Sustainable Fitch considers these investments as compliant with the TSC that require the infrastructure to be electrified or fit for use by zero-tailpipe CO_2 emissions trains. • To be fully aligned to the EU taxonomy, the company is also expected to demonstrate compliance with the DNSH criteria, especially those relating to the circular economy requirement of 70% of non-hazardous construction and demolition waste generated for reuse; those relating to pollution prevention and control, with appropriate mitigating measures for noise and vibration; and those related to biodiversity. It is also expected to comply with the minimum safeguards. ADIF AV has received funding from the EU Next Generation Recovery and Resilient Facility, which requires compliance with the DNSH criteria, and has implemented, in 2022, a new waste management model and climate change adaptation studies for potential projects; this indicates compliance with the previously mentioned DNSH criteria. • ADIF AV has been a UN GC signatory since 2018 and has robust labour and human rights policies in place that are aligned with the International Labour Organization principles. This gives Fitch reasonable assurance that minimum safeguards are met. • This use of proceeds is aligned with the ICMA Green Bond Principles category of clean transportation.
Maintenance, upgrades and energy efficiency of the rail system	
• This category includes projects aimed at improving the efficiency of the rail system and promoting sustainable transport. • The actions can be related to infrastructure and super structure such as signalling systems, electrification of the railway line or capacity improvement.	• Investments in rail systems infrastructure are eligible under the EU taxonomy's objective for climate change mitigation within the infrastructure for rail transportation category. • The EU taxonomy considers investments in energy efficiency, maintenance and upgrade of infrastructure dedicated to transport by rail as eligible investments as long as the investments are either dedicated to enabling zero tailpipe emissions infrastructure works or works that would allow the infrastructure to be fit for use by zero tailpipe CO_2 emissions trains within 10 years from the beginning of the activity. Such investments can be directed towards electrified trackside infrastructure and associated subsystems; or infrastructure, energy, on-board control-command and signalling, and trackside control-command and signalling subsystems. • Fitch finds that projects related to the upgrade, maintenance and energy efficiency improvements of zero

Company Material	Fitch's View
	tail emission infrastructure meet the EU taxonomy TSC. EU taxonomy alignment is verified as ADIF AV also complies with the DNSH criteria and the minimum safeguards, for the same reasons explained in the previous use of proceeds. • This use of proceeds is aligned with the ICMA Green Bond Principles' category of clean transportation.
Source: ADIF AV green financing framework	Source: Sustainable Fitch

Use of Proceeds – Other Information

Company Material	Fitch's View
• An amount equal to the net proceeds will be allocated to investments in one or more of the eligible green projects. • Eligible green projects include new and ongoing projects with disbursements up to two years prior to the issuance of the notes and up to 36 months after the launching date.	• ADIF AV shared information indicating that it intends to use the proceeds for investments in new lines or extension of existing lines. Those projects are new, and considered to increase the net additionality of the transaction. • ADIF AV's framework contains a lookback period of two years. There is nothing inherently wrong with setting a lookback period of two years, which is aligned with standard market practice among labelled bond issuers, especially for big infrastructure projects that tend to span more than five years until completion. • The scope of the eligible projects after the division of ADIF and ADIF AV is restricted to ADIF's AV core business activities of high-speed railways. As high-speed railways are fully electric in Spain, our view is there is no room for any non-compliant projects to be financed, such as projects involving fossil fuels.
Source: ADIF AV green financing framework	Source: Sustainable Fitch

Project Evaluation and Selection

Company Material	Fitch's View
• The ADIF AV economic management and financing department, in coordination with the financial planning and budget department and the environmental management department, will review the allocation of the projects annually. Additionally, the missions of those departments will be as follows: – To review and monitor the allocation of the proceeds of any green financing instrument for the lifetime of any financing instrument. – To replace any eligible green project which is no longer eligible with another eligible green project. – To monitor and treat potential environmental or social controversies associated with eligible green projects, until any green financing instrument is outstanding. Any project associated with such controversy will be excluded from the eligible project list and ADIF AV commits to substitute it with another eligible green project as soon as feasible. In this sense, the environmental management department has the power to indicate the environmental controversies that may imply the exclusion of a project. – To review, and if required, update the framework.	• Project selection and evaluation follows a predefined process, among relevant teams and with an emphasis on environmental criteria, which aligns with best practice. The economic management and financing department initially chooses potential projects eligible for funding with the assistance of the financial planning and budget department, while the environmental management department assesses the environmental or social controversies, if any, that may arise relating to the selected projects. Of note, the environmental management department has the power to ban projects, which we view as positive from an ESG perspective. • It is good from a governance perspective to see the involvement of multiple departments with different and complementary sets of skills and knowledge beyond the common finance skills as it provides internal checks and balances. The framework's ESG profile specifically benefits from the inclusion of the environmental management department. • Sustainable Fitch assesses positively the explicit inclusion of an exclusion clause for projects that are no longer eligible. • The framework benefits from including the potential exclusion of socially or environmentally controversial projects. The company has informed us that some of the criteria the environmental department follows for flagging controversies involve the existence of any open legal process related to environmental matters; potential negative environmental effects from projects which cannot be mitigated; or complaints from environmental associations and interest groups.
Source: ADIF AV green financing framework	Source: Sustainable Fitch

Management of Proceeds

Company Material	Fitch's View
• Until the total allocation of an amount equal to the net proceeds from the green financing instruments to eligible green projects, ADIF AV will temporarily invest an amount equal to the unallocated net proceeds from the green financing instruments in monetary funds managed following a responsible investment approach, in bank deposits, cash, or equivalents. • Payment of principal and interest of the green financing instruments will be made from ADIF AV general funds and will not be directly linked to the performance of the eligible green projects. • Auditors or any other third party appointed by ADIF AV will verify the internal tracking method and the allocation of funds from the green financing proceeds to the eligible green projects.	• The company plans to use unallocated proceeds in line with its general liquidity approach. This follows market practice, but ADIF AV could improve the traceability and accountability of management of proceeds by segregating funds in a specific green account. This would limit commingling of funds and allow for a discriminatory approach to how funds are used until full allocation. • The framework benefits from the fact that the unallocated proceeds will be temporarily invested following a responsible approach. ADIF AV has clarified that all placements of the company follow the responsible approach. • It is positive from an ESG perspective that the management of proceeds is verified by a third party, as it ensures the traceability of allocated and unallocated funds, and that both are used in alignment with the allocation report.
Source: ADIF AV green financing framework	Source: Sustainable Fitch

Reporting

Company Material	Fitch's View
• Within one year of the issuance of ADIF AV green bonds and until full allocation of an amount equal to the net proceeds of the green bonds issued, ADIF AV will annually publish on its website (http://www.adifaltavelocidad.es) the information below: – Annual updates on the amounts allocated to the eligible green projects. – Relevant expected impact metrics and where feasible actual impact metrics, related to the eligible green projects. – Annual report from auditors or any other third party appointed by ADIF AV, that will verify the internal tracking methods and the allocation of funds from the green bond proceeds to the eligible green projects.	• ADIF AV has clearly committed to both allocation and impact reporting, as shown by its historical disclosure of green bond reports since 2017. The company will disclose the information at the bond level and break it down on a project basis. This is in line with best market practice among labelled bond issuers, and provides strong granularity to investors and other stakeholders. • The company informed Sustainable Fitch that it has allocated the full share of proceeds from the previous green bond issuances to capital expenditure. It would benefit the framework's ESG profile to disclose this information in the allocation report. • The impact metrics the company will report on are comprehensive and provide a good basis on which to assess the positive environmental impact of the green projects. • Impact metrics include estimated average time saving, modal shift, GHG emissions avoided, savings in external costs, reduction of energy consumption and reduction of CO_2 emissions. The calculation methodology of these impact indicators follows the externally recognised criteria established by the European Commission in the document "Guide to Cost-benefit Analysis of Investments Projects. Economic appraisal tool for Cohesion Policy 2014-2020", published in 2014, and also valid for the current European funding period of 2021–2027. • We view that a verification of the impact report from a third party with qualified environmental credentials, while it is not a requirement of the ICMA Green Bond Principles, could benefit the framework by improving accountability and transparency of the data reported as well as assessing the actual environmental performance of the green projects.
Source: ADIF AV green financing framework	Source: Sustainable Fitch

Relevant UN Sustainable Development Goals

- Target 9.1: Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

- Target 11.a: Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning

- Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
- Target 13.2: Integrate climate change measures into national policies, strategies and planning

Source: Sustainable Fitch, UN

Appendix A: Definitions

Term	Definition
Debt types	
Green	Proceeds will be used for green projects and/or environmental-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Green Bond Principles or other principles, guidelines or taxonomies.
Social	Proceeds will be used for social projects and/or social-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Social Bond Principles or other principles, guidelines or taxonomies.
Sustainability	Proceeds will be used for a mix of green and social projects and/or environmental and social-related activities as identified in the instrument documents. The instrument may be aligned with ICMA Sustainability Bond Guidelines or other principles, guidelines, taxonomies.
Sustainability-linked	Financial and/or structural features are linked to the achievement of pre-defined sustainability objectives. Such features may be aligned with ICMA Sustainability-linked Bond Principles or other principles, guidelines or taxonomies. The instrument is often referred to as an SLB (sustainability-linked bond) or SLL (sustainability-linked loan).
Conventional	Proceeds are not destined for any green, social or sustainability project or activity, and the financial or structural features are not linked to any sustainability objective.
Other	Any other type of financing instrument or a combination of the above instruments.
Standards	
ICMA	International Capital Market Association. In the Second-Party Opinion we refer to alignment with ICMA's Bond Principles: a series of principles and guidelines for green, social, sustainability and sustainability-linked (or KPI-linked) instruments.
EU Green Bond Standard	A set of voluntary standards created by the EU to "enhance the effectiveness, transparency, accountability, comparability and credibility of the green bond market".

Source: Sustainable Fitch, ICMA, UN, EU Technical Expert Group

Appendix B: Second-Party Opinion Methodology

Second-Party Opinion

Second-Party Opinions (SPO) are a way for issuers to obtain an independent external review on their green, social, sustainability and sustainability-linked instruments.

As per the ICMA Guidelines for External Reviewers, an SPO entails an assessment of the alignment of the issuer's green, social, sustainability or sustainability-linked bond or loan issuance/framework/programme with the relevant principles. For these purposes, "alignment" should refer to all core components of the relevant principles.

Sustainable Fitch analysts vary analysis based on the type of instruments, to consider whether there are defined use of proceeds or KPI and Sustainability Performance Targets. The analysis is done on a standalone basis, separate to the entity.

Analytical Process

Analysis considers all available relevant information (ESG and financial). The reports transparently display the sources of information analysed for each section and provide a line-by-line commentary on the sub-factors analysed. The ESG analysts working on an SPO will also engage directly with the issuer to acquire any additional relevant information not already in the public domain or in instrument-related documentation.

An important part of the analysis is the assessment of the E and S aspects of the use of proceeds. In addition to the alignment with ICMA Principle and Guidelines, the analysis may also refer to major taxonomies (e.g. the EU taxonomy for E aspects, and the UN Sustainable Development Goals for S aspects).

Once the analyst has completed the analysis, with commentary for the related ESG Ratings, it is submitted to the approval committee, which reviews it for accuracy and consistency. Based on issuer preference and mandate, an SPO can be monitored (annually or more frequently, if new information becomes available) or on a point-in-time basis.

Scale and Definitions

	ESG Framework
Excellent	Framework structure is excellent in terms of alignment with ambitious best practises and proceeds are dedicated to excellent environmental and/or social activities/projects.
Good	Framework structure is good in terms of alignment with ambitious best practises and proceeds are dedicated to good environmental and/or social activities/projects.
Average	Framework structure is average in terms of alignment with ambitious best practises and proceeds are dedicated to average environmental and/or social activities/projects.
Sub-average	Framework structure is sub-average in terms of alignment with ambitious best practises and proceeds are dedicated to sub-average environmental and/or social activities/projects.
Poor	Framework structure is poor in terms of alignment with ambitious best practises and proceeds are dedicated to poor environmental and/or social activities/projects.

Source: Sustainable Fitch

Appendix C: Principles and Guidelines

ICMA Labelled: Green Bond

Four Pillars	
1) Use of proceeds (UoP)	Yes
2) Project evaluation & selection	Yes
3) Management of proceeds	Yes
4) Reporting	Yes

Independent External Review Provider	
Second-party opinion	Yes
Verification	No
Certification	No
Scoring/rating	No
Other	n.a.

1) Use of Proceeds (UoP)

UoP	
Renewable energy	No
Energy efficiency	No
Pollution prevention and control	No
Environmentally sustainable management of living natural resources and land use	No
Terrestrial and aquatic biodiversity conservation	No
Clean transportation	Yes
Sustainable water and wastewater management	No
Climate change adaptation	No
Eco-efficient and/or circular economy adapted products, production technologies and processes	No
Green buildings	No
Unknown at issuance but currently expected to conform with green bond principles (GBP) categories, or other eligible areas not yet stated in GBPs	No
Other	n.a.

2) Project Evaluation & Selection

Evaluation & Selection	
Credentials on the issuer's environmental sustainability objectives	Yes
Documented process to determine that projects fit within defined categories	Yes
Defined and transparent criteria for projects eligible for green bond proceeds	Yes
Documented process to identify and manage potential ESG risks associated with the project	No
Summary criteria for project evaluation and selection publicly available	Yes
Other	n.a.

Evaluation & Selection/Responsibility & Accountability	
Evaluation/selection criteria subject to external advice or verification	No
In-house assessment	Yes
Other	n.a.

3) Management of Proceeds

Tracking of Proceeds	
Green bond proceeds segregated or tracked by the issuer in an appropriate manner	Yes
Disclosure of intended types of temporary investment instruments for unallocated proceeds	Yes
Other	n.a.

Appendix C: Principles and Guidelines

ICMA Labelled: Green Bond

Additional Disclosure	
Allocations to future investments only	No
Allocations to both existing and future investments	Yes
Allocation to individual disbursements	Yes
Allocation to a portfolio of disbursements	No
Disclosure of portfolio balance of unallocated proceeds	Yes
Other	n.a.
4) Reporting	
UoP Reporting	
Project-by-project	Yes
On a project portfolio basis	No
Linkage to individual bond(s)	Yes
Other	n.a.
UoP Reporting/Information Reported	
Allocated amounts	Yes
Green bond-financed share of total investment	No
Other	n.a.
UoP Reporting/Frequency	
Annual	Yes
Semi-annual	No
Other	n.a.
Impact Reporting	
Project-by-project	Yes
On a project portfolio basis	No
Linkage to individual bond(s)	Yes
Other	n.a.
Impact Reporting/Information Reported (exp. ex-post)	
GHG emissions/savings	Yes
Energy savings	Yes
Decrease in water use	No
Other ESG indicators	Modal shift, savings in external costs and estimated average time saving
Impact Reporting/Frequency	
Annual	Yes
Semi-annual	No
Other	n.a.
Means of Disclosure	
Information published in financial report	No
Information published in ad hoc documents	Yes
Information published in sustainability report	No
Reporting reviewed	Yes
Other	n.a.

Source: Sustainable Fitch, ICMA
Note: n.a. – not applicable.