Stuttgarter Straßenbahnen AG

GREEN FINANCING FRAMEWORK

May 2022

1 Introduction

1.1 SSB Business Model

Stuttgarter Straßenbahnen AG (**SSB**) is one of the largest and most advanced local public transport companies in Germany. SSB is a German public limited company (Aktiengesellschaft, AG) registered at the local court (Amtsgericht Stuttgart) under HRB 69. SSB is wholly owned by the state capital Stuttgart via Stuttgarter Versorgungs- und Verkehrsgesellschaft mbH (**SVV**) and provides transport services as part of the Stuttgart Public Transport Association (Verkehrs- und Tarifverbund Stuttgart, VVS). In this role SSB is an integral part of the the city's endeavors to provide for a high quality of life for its residents.[1]

The company's business purpose includes the operation of

- the respective public transport vehicles as well as the provision and maintenance thereof,
- the related transport facilities and infrastructure as well as
- the management and utilization of company-owned real estate. [2]

SSB carries around 617 thousand passengers every day via 48 bus lines, 19 light rail lines, a rack railway and a cable car. [3] With over 3,300 employees, the company is one of the largest employers in Stuttgart. SSB has two subsidiaries, one focusing on travel services, the other on standardization of transport conditions and tariff regulations in the Stuttgart Public Transport Association.

With effect from January 1, 2019, the state capital Stuttgart granted SSB the permission to provide public transport services until December 31, 2040, in a direct award procedure (Direktvergabeverfahren) following the regulation (EC) No. 1370/2007.

1.2 Climate Strategy of the City of Stuttgart and the State of Baden-Württemberg

On October 26, 2017, the municipal Council of the City of Stuttgart passed the "Masterplan 100% Klimaschutz". The plan defines the city's strategy and main challenges on the path to achieving climate neutrality by the year 2050. The most important goal of the master plan in this context is to reduce greenhouse gas emissions by 95 percent by 2050 compared to 1990 levels. The plan also elaborates on the two key pillars of the respective transformation process:

1. Operating in an energy-efficient and low-emission manner
2. Expanding capacity while maintaining high quality service[4]

The commitment of the City of Stuttgart to achieve sustainable mobility further manifests in the action plan "Nachhaltig mobil in Stuttgart", passed on July 18, 2017, by the municipal Council of the City of Stuttgart. The manifest sets the aim to reduce pollution, noise, traffic and stress by reducing the amount of conventionally operated vehicles by 20 percent. A highly developed public transportation system is identified as the backbone of such a transition, as it can provide a compelling alternative to individual transport options. The action plan further includes clearly defined measures to be taken by

[1] https://www.ssb-ag.de/unternehmen/
[2] Annual Report 2019: Appendix 4
[3] SSB Zahlenspiegel 2020; https://www.ssb-ag.de/unternehmen/
[4] https://www.stuttgart-meine-stadt.de/masterplan-klimaschutz/

the city's public transportation sector, such as the expansion of the bus and rail line network and the increased usage of low-emission and even emission-free busses. Additional measures include the expansion of capacity and the simplification of access to mobility services through improved ticket and payment options.

Furthermore, the amendment to the Climate Protection Act of the State of Baden-Württemberg (Klimaschutzgesetz Baden-Württemberg) is in force since October 24, 2020.[5] The Climate Protection Act sets specific goals for reducing greenhouse gas emissions:

- The state's greenhouse gas emissions are to be reduced by at least 42 percent by 2030 compared to total emissions in 1990.
- By 2050, emissions are to be reduced by at least 90 percent compared with 1990 levels.

The Climate Protection Act requires the state government to perform a regular monitoring (yearly reporting) based on quantitative and qualitative surveys to check whether the measures implemented are paying off and whether the climate protection goals are being achieved.

As an outlook, the City of Stuttgart intends to become climate neutral by 2035. [6] In December 2021, the city commissioned the consulting firm McKinsey&Co to work with the city administration in order to examine how the climate targets can be achieved by 2035. This investigation is currently taking place. Depending on the results, there may also be implications for SSB and its own climate strategy. To anticipate this, SSB has set up its own working group "SSB Climate Neutral 2035".

Therefore, depending on the outcome of the abovementioned study and its potential implications for SSB, the company's climate strategy, objectives and activities described in the following may be subject to (more ambitious) changes in the future.

1.3 Climate Strategy of SSB

As a city-owned company, SSB has a long-standing commitment to sustainability and is determined to offer a broad range of environmentally friendly transportation solutions. SSB's services aim to reduce private car traffic by getting more people to switch to public transportation (i.e., modal shift), thereby improving efficiency of public mobility and thereby leading to a significant reduction of CO_2-emissions.

SSB takes on its environmental responsibility in contributing to a low-carbon future and is fully committed to achieve the goals that could be set out by the City of Stuttgart.

In order to tangibly execute on the city's climate strategy, SSB has defined the following specific goals:

- Continued expansion of transportation service offering
- Renewal and maintenance of infrastructure and vehicles
- Maintain high levels of service quality
- Operate in an efficient manner with streamlined processes
- Develop innovative transport solutions to further improve local transport services[7]

[5] https://um.baden-wuerttemberg.de/de/klima/klimaschutz-in-baden-wuerttemberg/klimaschutzgesetz/
[6] https://www.stuttgart.de/service/aktuelle-meldungen/januar-2022/gemeinderat-beauftragt-stadtverwaltung-die-erreichbarkeit-der-klimaneutralitaet-bis-zum-jahr-2035-zu-pruefen.php
[7] Strategie der SSB & Langfristprognose bis 2030

The top priority of SSB is to make people's everyday life easier, to keep quality of service on high standards, and to further expand the efforts already initiated in order to improve public transport in and around the City of Stuttgart.

The respective measures include substantial investments in the expansion of the rail-based infrastructure and the conversion and expansion of the bus fleet with environmentally friendly drive technologies. In this way, SSB is contributing to avoid harmful emissions.[8]

As means to delivering a more attractive overall service, SSB is also investing in digital infrastructure to improve the accessibility of mobility services in the region, for both private and business customers.[9] Providing easier access to SSB's services encourages the desired modal shift towards public transportation and away from individual transport options.

1.4 Sustainable Development Goals

In 2018, the municipal council (Gemeinderat) of the City of Stuttgart approved the resolution of the "2030 Agenda for Sustainable Development: Sustainability at a Local Level" ("2030-Agenda für Nachhaltige Entwicklung: Nachhaltigkeit auf kommunaler Ebene gestalten") of the Association of German Cities (Deutscher Städtetag) and the German section of the Council of European Municipalities and Regions (Deutsche Sektion des Rates der Gemeinden und Regionen Europas). The resolution emphasizes the importance of cities and municipalities in supporting the Sustainable Development Goals (SDGs) defined by the United Nations and stresses the importance of implementing concrete measures at the local level. As a result, the city of Stuttgart has set up a task force which initiates the required new processes and monitors the progress made. Furthermore, the City of Stuttgart is participating in a pilot project in cooperation with the Bertelsmann Foundation (Bertelsmann Stiftung) and the German Institute for Urban Studies (Deutsches Institut für Urbanistik) to test specific SDG indicators developed by a committee of experts in order to create a robust foundation for future strategies on sustainable development to build on.

SSB is focusing on the SDGs that are most relevant to its business activities, mainly comprising the following goals and the associated sustainability activities:

[8] Wirtschaftsplan SSB 2022-2027 Einleitung
[9] Wirtschaftsplan SSB 2022-2027 Investitionsplanung

SDG 3 – Good Health and Well-being

SSB's service offering has an immediate impact on public health and well-being by reducing the amount of dust, noise and exhaust emissions. Since 2020, SSB's bus fleet has exclusively used synthetic fuel (Gas to Liquid, GTL). This type of fuel is produced from natural gas with the addition of oxygen and steam, allowing to substitute oil-based fuel to a vast extent. Without the requirement of purchasing an expansive technology or the renewal of the bus fleet, SSB was able to demonstrate a reduction of nitrogen oxides by up to 20% and soot pollution by 50% in regular operation of the bus fleet due to the auxiliary heaters. As a result of the conversion, the entire bus fleet is categorized as "clean" by the EU Regulation (2009/33/EG) and the EU Clean Vehicle Directive (2019/1161).

Further measures that contribute to an improved air quality in Stuttgart are continuously being taken. Since January 2018, SSB's six inner-city bus lines were operated partly with low emission busses, since 2020 partly with emission-free busses. In 2020, SSB has installed special activated charcoal filters in the air-conditioning systems of its busses, effectively reducing nitrogen dioxide pollution in the bus interior by 70%.

Additionally, SSB has four fuel cell hybrid buses in its fleet and plans to purchase more buses with fuel cell technology. To refuel the buses, SSB has started operating its first own hydrogen filling station in 2020.

SDG 11 – Sustainable Cities and Communities

With its rail network of a total of 800 km in length, SSB contributes to the city's sustainable targets by providing high quality public transportation services and ensuring reliable and accessible transport for all citizens. The fare zone reform (Tarifzonenreform) in 2019 of the Verkehrs- und Tarifverbund Stuttgart had a measurable impact on better accessibility and therefore increased user-friendliness by reducing the number of zones from 52 to 8.

Further, SSB enables the city to continuously develop and grow its metropolitan activities without increasing traffic load by leveraging the existing transport infrastructure.

In addition, there is an ongoing extension and refurbishment of SSB's tracks, vehicles and services, by which the City of Stuttgart's sustainability targets to improve local mobility as well as accessibility of infrastructure, and to help reducing traffic load also going forward, are supported.

SDG 13 – Climate Action

SSB aims to reduce CO_2-emissions in order to keep improving its environmental footprint and to further reduce any negative impact of metropolitan transport activities on climate change. The entire rail vehicle fleet and all of SSB's properties are powered with 100% renewable electricity. Since 2016, the entire rail vehicle fleet is using hydroelectric power and all buildings are supplied with a mix of renewable energies[10] (e.g., wind energy, solar energy, hydroelectric power) since August 2012.

Additionally, SSB is actively exploring ways to further improve energy efficiency. In order to keep track, analyze and further improve SSB's power consumption, an energy audit (DIN EN 16247-1) was carried out in 2019. Since the energy-saving concept of the real estate division has been almost fully implemented, the energy audit revealed little new potential.

[10] On the electricity side, SSB purchases green electricity for its buildings. The heating technology of the properties is not operated with renewable energies (but mainly with gas or district heating).

1.5 Rationale for Green Financing

Green Finance Instruments have the primary target to foster the allocation of capital investments to climate-friendly projects and thereby contributing to SSB's sustainability goals. By issuing Green Finance Instruments, SSB follows the clear aim to align its funding strategy with its sustainability targets and to thereby comply with the integrated sustainability strategy as described above.

SSB is convinced that Green Finance Instruments will help diversifying SSB's investor base and to further broaden the dialogue with existing lenders.

2 The SSB Green Finance Framework

As important part of the continued endeavors to strengthen SSB's sustainability footprint, the company has established this Green Finance Framework. The purpose of this framework is to have a well-defined audit scheme for future issuances of Green Finance Instruments with respect to private placements, loans, promissory notes and any other green finance instruments in order to finance or refinance green investments with proven environmental benefits.

The SSB Green Finance Framework follows the ICMA Green Bond Principles (**GBP**) 2018 as well as the February 2021 edition of the LMA Green Loan Principles (**GLP**) and is structured into the following four key categories respectively:

1. Use of Proceeds
2. Process for Project Evaluation and Selection
3. Management of Proceeds
4. Reporting

In all of its financing undertakings related to Eligible Green Projects, SSB commits to providing all required information in a transparent and accurate manner in accordance with the GBP and GLP as set forth in this framework.

Additionally, based on relevance and feasibility to the extent applicable, SSB intends to comply with the EU Taxonomy.

The SSB Green Finance Framework may be updated on regular basis without prior notice to reflect potential changes in market practice as well as any updates in the GBP or GLP as they may occur.

2.1 Use of Proceeds

Funds of the Green Finance Instruments raised in compliance with this framework will be exclusively used to finance or re-finance, in whole or in parts, new and/or existing Eligible Green Projects.

The Eligible Green Projects comply, if applicable, with the criteria of the **EU Taxonomy regime**.[11] It is made sure that the respective projects meet all performance-related thresholds as set forth in the respective regime, thereby contributing to climate change mitigation in a substantial manner. The

[11] In general, SSB is not (yet) obliged to report corresponding ratios in accordance with the EU Taxonomy Regulation (e.g., within the scope of a non-financial statement). However, SSB is currently preparing to do so and therefore addresses the mentioned subjects in the following.

projects “do no significant harm” to any of the other five environmental objectives as defined in the EU Taxonomy and comply with therein defined minimum safeguards (e.g., OECD Guidelines on Multinational Enterprises).

With reference to SSB’s Eligible Green Projects, as defined below, all undertakings relate to the clean transportation category in line with the GBP and GLP.

Project Category	Illustrative Investment Cases	Examples of impacted KPIs	Good Health	Quality Education	Gender Equality	Affordable & Clean Energy	Economic Growth	Innovation / Infrastructure	Sustainable Cities	Responsible Production	Climate Action
Rail Networks, Vehicles and related Infrastructure	- construction of new tracks and depots	- Increased capacity (available seat km in total traffic, passenger km in regular traffic) - Customer satisfaction surveys (qualitative assessment of the projects’ contribution to improve the overall usability and accessibility of the public transport system)	✓				✓	✓	✓		✓
Bus Fleet	Transformation to zero-emission bus fleet, such as - charging infrastructure for zero emission buses - construction of new and refurbishment of existing bus depots for zero emission buses	- CO_2 emissions per km (gCO_2 / km) - Total fuel consumption of the bus fleet	✓				✓	✓	✓		✓

Rail Networks, Vehicles and related Infrastructure

Investments in this category support the transition towards a higher share of journeys in the City of Stuttgart via public transport. Projects such as the construction of new rail tracks and extension of current lines are required to provide the planned capacity expansion. Other projects, for instance the construction of a new depot, refurbishment of the rail vehicle fleet, the purchase of new ticket machines as well as upgrading the digital infrastructure are instrumental in providing the above mentioned desired high level of service quality.

Bus fleet

Since 2005, SSB has regularly used the method of a holistic assessment with the aim to obtain an ecological and economic consideration of different scenarios for the orientation of the strategy of action. In this way, it is possible to compare the expectations of the past and the findings from actual operation and thus develop new recommendations. Of course, SSB measures vehicle technologies by independent service providers in real operation with regard to emissions and consumption. The scenario consideration applied in the holistic assessment resulted in three fields of action.

The first field of action is saving primary energy. On the one hand, this involves further optimizing the efficiency of the conventional powertrain. In addition to measures on the engine and transmission, including the control system, this also includes driver training and suitable assist systems. The goal of using energy generated during braking for traction leads to the electric powertrain with suitable energy storage systems. When procuring new vehicles, SSB always invites tenders for technology that is more efficient and environmentally friendly than the currently applicable Euronorm. These vehicles are defined as low-emission buses. As of December 31, 2020, SSB had 54 hybrid buses, 4 zero-emission buses, and 127 Euro VI and 85 EEV in its fleet. All SSB diesel buses have nitrogen oxide reduction and closed particle filters.

The second field of action involves the use of alternative, if possible, CO2-neutral fuels. This includes tests with alternative fuels, e.g. fully synthetic fuels (defined as "clean" according to the Clean Vehicle Directive (CVD)), the testing of plug-in hybrid buses, as well as the use of hydrogen in conjunction with the fuel cell as an energy supplier. Since 2019, all diesel buses of SSB are fueled only with synthetic fuel, thus the entire bus fleet already meets the criterion 'clean' according to CVD. In 2020, SSB put its first own hydrogen filling station into operation.

The third field of action deals with the retrofitting of the existing fleet with exhaust aftertreatment systems and pollutant reduction systems. Currently, in this field of action, the reduction of emissions (nitrogen oxides) and viruses is being driven forward by the use of new types of filters for bus air conditioning systems. Since 2020, nitrogen oxide-reducing and virus-inactivating filters have been used, and since 2022, antiviral filters.

When renewing the bus fleet, a maximum vehicle age of 12 years is currently considered as a basis for planning.

The CVD mandates the percentage of clean and zero-emission vehicles for bus procurement in two reference periods (August 02, 2021 to December 31, 2025; January 01, 2026 to December 31, 2030). The minimum targets for clean and emission-free buses in local public transport are 45% for the first reference period up to the end of 2025 and 65% for the second period up to the end of 2030. At least half of the minimum targets for buses in local public transport must be achieved by emission-free vehicles. SSB relies on two technologies for the realization of zero-emission buses, firstly battery electric buses, and secondly fuel cell hybrid buses. The first 8 fuel cell hybrid buses are scheduled for delivery in 2022. It is very important to have a wide spread of technologies to ensure the highest possible availability of the overall system.

While switching to a zero-emission bus fleet is a defined goal of SSB, Stuttgart's hilly topography presents a greater challenge in this regard, reducing the range of buses compared to flat terrain.

2.2 Process for Project Evaluation and Selection

The Project Evaluation and Selection Process is vital to ensure the allocation of the Green Finance Instruments proceeds to identified Eligible Green Projects that are in line with one or more eligible criteria defined in Section 2.1 ("Use of Proceeds").

The selection of Eligible Green Projects is managed by a Green Finance Expert Group. The group consists of the Head of Accounting, Head of Controlling, Department of Environmental Protection, Department of Funding and the Executive Office, who have the knowledge of the Eligible Green Asset requirements.

The Green Finance Expert Group will manage any future updates to the Framework, including expansions to the list of Eligible Categories and changes in the Green Bond/Loan Standards and the EU Taxonomy, on a best effort basis, and oversee its implementation.

The accounting and controlling departments manage a list of Eligible Green Projects which will be reviewed on a regular basis. The department ensures the list matches the criteria outlined in Section 2.1. The list of Eligible Green Projects is validated by the Management Board and will be reported to the Supervisory Board of SSB.

2.3 Management of Proceeds

The accounting and controlling departments are responsible for SSB's processes for the management of proceeds.

All proceeds will be added to SSB's general funds and an equal amount will be allocated to Eligible Green Projects as defined in Section 2.1. The funds of any single Green Finance Instrument borrowed in the scope of this framework will be linked to one of the three categories of Eligible Green Projects. SSB aims to allocate the Green Finance Instrument proceeds within a timeframe of 6-9 months after issuance, in accordance with market practice.

In case any project no longer fulfills the criteria of an Eligible Green Project, SSB will provide a suitable substitution option and ensure an amount at least equal to all proceeds is allocated in qualifying projects.

2.4 Reporting

In order to ensure a high level of transparency, SSB will provide the following:

Allocation and Impact Reporting

SSB commits to report annually on the allocation of the net proceeds to the Eligible Green Projects. SSB intends to provide aggregated reporting for all SSB's Green Finance Instruments outstanding. The report includes e.g.:

- Description of the Eligible Green Projects within each category
- Type of financing instruments utilized and respective outstanding amounts
- Amount of funds allocated to each category of Eligible Green Projects
- the amount and/or percentage of financing versus refinancing
- the balance of unallocated proceeds (if any)

Where feasible and subject to data available, the report contains information on the environmental impact of the projects funded through the Green Finance Instruments. The report will contain qualitative as well as quantitative indicators suited to measure environmental impact. A list of exemplary KPI's can be found in Section 2.1. Reports will be available on SSB's website: www.ssb-ag.de

3 External Review – Second Party Opinion

SSB has engaged CICERO Shades of Green to conduct an independent assessment of SSB's Green Financing Framework. CICERO Shades of Green will assess whether the green financing framework is in line with the Green Bond Principles as well as the Green Loan Principles and whether the outlined Eligible Green Projects can support low-carbon and climate change resilient growth.

The Second Party Opinion will be made available on the company's website.