



EFSI Operation Scoreboard¹

PROJECT PRESENTATION	
<u>Project name</u>	NORTHVOLT ETT - LARGE SCALE BATTERY PLANT
<u>Promoter or financial intermediary</u>	NORTHVOLT AB
<u>Country of implementation</u>	Sweden
<u>Summary project description</u>	<p>The Project consists of the construction and operation in Skellefteå, Northern Sweden, of a greenfield manufacturing plant to produce advanced lithium-ion cells for batteries for electric vehicles, stationary storage and industrial applications, with an annual cells production capacity of 16 GWh. The Project represents the first phase in a planned build-up to a factory with a total capacity of 32 GWh (equivalent to batteries capacity for roughly 400-500 thousand electric vehicles per year). The Project addresses a perceived shortage in lithium-ion battery cells in Europe at the horizon 2022 due to the shift of the automotive industry to electric vehicles. The Project seeks to be competitive by going for a cutting-edge lithium-ion cell chemistry technology ("NMC 8:1:1"), maintaining continuous R&D, and through the vertical integration of upstream manufacturing of the cathode (including its precursor metal powder material) and other components, the use of low-cost renewable electricity, a high degree of automatisisation and digitization/advanced manufacturing technology (industry 4.0 / IoT), and the sourcing in the longer term of a potentially significant share of the materials in the Nordic countries.</p> <p>[...]</p>

¹ This Scoreboard of indicators reflects the information presented to the EFSI Investment Committee (IC) for its decision on the use of the EU guarantee for this operation. Therefore, the document does not take into account possible developments that could have occurred after this decision. Parts of this document that fall under the exceptions for disclosure defined by the EIB Group Transparency Policy, notably under the articles 5.5 (protection of commercial interests) and 5.6 (protection of the Bank's internal decision-making process), have been replaced by the symbol [...].

PROJECT PILLAR ASSESSMENT

Pillar 1

Contribution to EU policy		High
Cross-cutting objectives		
Climate Action		100.00%
EFSI		
Contribution to EFSI		100.00%
EFSI: Research, development and innovation		50.00%
Demonstration projects and programmes as well as deployment of related infrastructures, technologies and processes		50.00%
EFSI: Environment and resource efficiency		50.00%
Climate change actions		50.00%

Pillar 2

Quality and soundness of the project		Good
1. Growth	[...]	
2. Promoter capabilities	[...]	
3. Sustainability	[...]	
4. Employment	[...]	

This pillar evaluates the quality and soundness of the operation. This pillar is composed of up to four indicators which include:

- (i) "Growth" i.e. for example and where relevant the economic rate of return ('ERR'), which considers the project's socioeconomic costs and benefits, including its spillover effects;
- (ii) "Promoter capabilities" i.e. the capacity of the promoter/intermediary to implement the project and create the expected impact at the [final] beneficiary level;
- (iii) "Sustainability" i.e. environmental and social sustainability²;
- (iv) "Employment" i.e. the project's direct employment effect;
- (v) "Increasing access to finance and improving financing conditions including for final beneficiaries".

Pillar 3

EIB Technical and financial contribution to the project		High
1. Financial contribution	[...]	
2. Financial facilitation	[...]	
3. Advice	[...]	

This pillar measures the EIB's particular contribution to the project and its financing scheme in the form of financial and non-financial benefits which go beyond what commercial players would normally be able to offer. This dimension of value added is assessed through up to three indicators:

- (i) "Financial Contribution" i.e. improving the counterpart's funding terms compared to market sources of finance (interest rate reduction and/or longer lending tenor);
- (ii) "Financial Facilitation" i.e. helping to attract private financiers (for example through positive signaling effects), promoting synergies in co-financing with other public sources of funds including National Promotional Banks or EU financial instruments;
- (iii) "Technical Contribution and Advice" i.e. providing advice with a view to optimizing the financing package (financial structuring), or technical advisory services in the form of expert input / knowledge transfer – provided in-house by the EIB or in the form of assignments to external consultants – to facilitate the preparation or implementation of a project.

² For additional information on the EIB's assessment of the project's environmental and social aspects, please refer to the project's Environmental and Social Data Sheet (ESDS) published on the EIB website.

Pillar 4 – Complementary indicators

Additionality

In line with the EFSI objectives of supporting research, development and innovation (RDI), the operation supports an investment in an advanced innovative lithium-ion battery cell manufacturing facility whose output will be used in batteries for electric vehicles, stationary storage and industrial and consumer applications. Also the operation supports the EFSI objective of climate change actions as the expected use of the products will contribute to the reduction of greenhouse emissions and the use of polluting fuel, especially in the transport industry.

The operation addresses the market failure where the shift to e-mobility is practically inconceivable without a rapid building up of a domestic battery-manufacturing base. While the nascent market for battery cells in Europe appears to see exponential demand growth in the short to medium term, large industry players have proven to be reluctant to invest in European capacity as this is a risky, capital intensive and very specialised process step in the battery value chain.

The promoter is facing a sub-optimal investment situation arising from the limited access and/or prohibitive cost of financing charged by creditors/ investors because of the high risks associated with the Project and the lack of collateral

The operation falls under EIB Special Activities, in particular because of the exposure to the ongoing transformation of the automotive and energy storage industry, the possible rise in rival technologies and risk regarding the sourcing of feedstock for the cells. As such, the EIB would not be able to provide such type of financing support during the period in which the EU guarantee can be used, or not to the same extent, without EFSI.

The EIB' support and early involvement in the project sends a strong signal to other project parties (equity as well as debt investors) and is expected to crowd-in significant private sector financing.

The operation would be the first non-recourse project financing of a large scale battery plant.

The EIB has provided technical and financial structuring advice to the Promoter.

Set of indicators related to the macroeconomic environment

Sweden - Economic environment

Economic Performance

	SE 2017	EU 2017	US 2017	SE 2001-2007
GDP per capita (EUR, PPS)	36,385	29,996	43,470	34,257
GDP growth (%)	2.1	2.4	2.2	3.0
Potential GDP growth (%)	2.3	1.6	2.0	2.8
Output gap (% of potential GDP)	0.31	0.08	0.04	0.52
Unemployment Rate (%)	6.5	7.3	4.1	6.7
Unemployment Rate (%) - Y/Y change (% points)	-0.4	-0.9	-0.6	0.16
Bank-interest rates to non-financial corporations (%)	1.2	1.3	2.4	3.6
Bank-interest rates to non-financial corporations (%) - Y/Y change (% points)	0.06	-0.04	0.4	1.3
Investment rate (GFCF as % of GDP) - Total	25.0	20.2	20.5	22.4
Investment rate (GFCF as % of GDP) - Public	4.6	2.7	3.3	4.2
Investment rate (GFCF as % of GDP) - Private	20.4	17.4	17.2	18.2

Environment and Climate

	2013	2014	2015	2016	EU (latest available)
GHG emissions level (emissions in 1990=100)	79.4	77.4	--	--	77.1
Employment in the environmental goods and services sector	71,957	--	--	--	4,171,000
Resource productivity (Euro per kilogram, chain linked volumes (2010))	1.8	1.8	1.8	--	2.0
GHG emissions in non-ETS sectors (base year=100)	78.7	77.0	75.8	--	86.5
GHG emissions in non-ETS sectors, distance to EU 2020 target	-4.3	-6.0	-7.2	--	-4.2
Value added in the environmental goods and services sector (% of total VA)	1.8	--	--	--	2.3
Employment in the environmental goods and services sector (% of total employment)	17.8	--	--	--	22.1

General Sector Indicators

	2013	2014	2015	2016	EU (latest available)
Value added in Manufacture of electrical equipment (% of total)	--	--	--	--	0.8
Employment in Manufacture of electrical equipment (% of total)	--	--	--	--	--

Research, development and innovation

	2013	2014	2015	2016	EU (latest available)
Gross domestic expenditure on R&D (GERD) (% of GDP)	3.3	3.2	3.3	--	2.0
Gross domestic expenditure on R&D (GERD) distance to EU 2020 target (% of GDP)	0.69	0.85	0.74	--	0.97
Research and development expenditure - Government (% of GDP)	0.12	0.12	0.11	--	0.24
Research and development expenditure - Higher education (% of GDP)	0.9	0.91	0.88	--	0.47
Research and development expenditure - Business (% of GDP)	2.3	2.1	2.3	--	1.3
Research and development expenditure - Private non-profit sector (% of GDP)	0.01	0.01	0.01	--	0.02
Eco-innovation index (EU =100)	138.0	123.0	124.0	--	100.0

SME/midcap

	2013	2014	2015	2016	EU (latest available)
Share of SMEs with Access to Finance Difficulties (%)	20.8	30.1	21.2	20.4	20.9
Availability of Private equity (Thousand euro)	930,524	1,634,636	1,688,998	1,863,229	50,091,574
Availability of Venture Capital (Thousand euro)	236,169	287,870	172,540	189,863	4,035,807

- Country average for "GDP per capita (EUR, PPS)" is calculated in real terms

- EU value for "Bank-interest rates to non-financial corporations" corresponds to Euro Area average; Country average is the simple average between 2003 and 2007

- The EU value is displayed as the value in the year that corresponds to the latest value of the indicator in a particular country

Other indicators³

Key project characteristics

	Expected at PCR
Start of works	01.01.2018
End of works	31.12.2022
Project investment cost	[...]
EIB/EFSD eligible investment mobilised	[...]
External EFSD multiplier	5.04
External EIB (non-EFSD) multiplier	
Amount of private financing	[...]
Quick start (% of expenditure during 2015-2018)	
Co-financing with national promotional banks	0.00 MEUR
Co-financing with structural funds (ESIF)	0.00 MEUR
Co-financing with other EU instruments (i.e. Horizon 2020, Connecting Europe Facility, etc)	
Energy efficiencies realised	0.00 MWh/a
Climate Action indicator	15.00% Mitigation - Renewable Energy (transversal) / 80.00% Mitigation - Transport (transversal) / 5.00% Mitigation - Other (transversal)
Employment during construction - temporary jobs	0 person years
Employment during operation - new permanent jobs	1,398 FTE

³ For additional information on the EIB's assessment of the project's environmental and social aspects, please refer to the project's Environmental and Social Data Sheet (ESDS) published on the EIB website. The abbreviation PCR stands for Project Completion Report. If applicable, a difference between the amount of Project investment costs and EIB/EFSD eligible investment mobilized might derive from the fluctuation of the underlying exchange rate.