

**DOCUMENT OF THE EUROPEAN BANK
FOR RECONSTRUCTION AND DEVELOPMENT**

Approved by the Board of Directors on 12 October 2021¹

North Macedonia

ESM Solar PV Transition

[Redacted in line with the EBRD's Access to Information Policy]

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¹ As per section 1.4.8 of EBRD's Directive on Access to Information (2019), the Bank shall disclose Board reports for State Sector Projects within 30 calendar days of approval of the relevant Project by the Board of Directors. Confidential information has been removed from the Board report.

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ABBREVIATIONS / CURRENCY CONVERSIONS

ac	Alternating current
bps	Basis points
CAGR	Compounded Annual Growth Rate
CAPEX	Capital Expenditures
CFADS	Cash Flows Available for Debt Service
CFE	Cash Flow from Financing
CFI	Cash Flow from Investments
CFO	Cash Flow from Operations
CO ₂	Carbon Dioxide
CHP	Combined Heat and Power
COD	Commercial Operation Date
CP	Conditions Precedent
DSCR	Debt Service Coverage Ratio
DSRA	Debt Service Reserve Account
EBIT	Earnings Before Interest and Tax
EBITDA	Earnings Before Interest Tax and Depreciation
ESM	Elektrani na Severna Makedonija
EPC	Engineering, Procurement and Construction
ERC	Energy Regulatory Commission
ESAP	Environmental and Social Action Plan
ESDD	Environmental and Social Due Diligence
EUR	Euro
EURIBOR	European Inter-Bank Offer Rate
FIT	Feed in Tariff
FIP	Feed in Premium
FX	Foreign Exchange
GDP	Gross Domestic Product
HPP	Hydro Power Plant
IFRS	International Financial Reporting Standard
IFC	International Finance Corporation
IPP	Independent Power Producer
LCOE	Levelized Cost of Energy
MKD	Macedonian Denar
MEPSO	Makedonski Elektroprenosen Sistem Operator
NECP	National Energy and Climate Plan
O&M	Operations and Maintenance
PV	Photovoltaic
PPA	Power Purchase Agreement
SSF	Shareholder Special Fund
TC	Technical Cooperation
TPP	Thermal Power Plant
WBIF	Western Balkans Investment Framework
Country's Currency Unit	1 Euros = 61.5 Macedonian Denar (as at 04 Feb 2021)

WEIGHTS AND MEASURES

1 kilowatt (kW)	=	1,000 watts (10 ³ W)
1 Megawatt (MW)	=	1,000 kilowatts (10 ³ kW)
1 Gigawatt (GW)	=	1 million kilowatts (10 ⁶ kW)
1 kilowatt-hour (kWh)	=	1,000 watt-hours (10 ³ Wh)
1 Megawatt-hour (MWh)	=	1,000 kilowatt-hours (10 ³ kWh)
1 Gigawatt-hour (GWh)	=	1 million kilowatt-hours (10 ⁶ kWh)
1 kilovolt (kV)	=	1,000 volts

PRESIDENT'S RECOMMENDATION

This recommendation and the attached Report concerning an operation in favour of JSC Elektrani na Severna Makedonija (the “Company”, “ESM”), a state-owned enterprise incorporated in the Republic of North Macedonia, are submitted for consideration by the Board of Directors.

The facility will consist of a sovereign-guaranteed loan to the Company in the amount of up to EUR 25 million. The loan will be guaranteed by the Republic of North Macedonia.

The operation is 100% GET and will enable the Company to construct and operate a 30MW_{ac} solar PV project across two sites on the exhausted coal mine of Thermal Power Plant (“TPP”) Oslomej for 10MW_{ac} and adjacent to coal fired TPP Bitola for 20MW_{ac} (the “Project”). This Project is part of the comprehensive just transition engagement between the Macedonian authorities and EBRD that started with the financing of 10MW_{ac} solar PV plant Oslomej 1 and that encompasses i) the development of a just transition diagnostic, linked to coal phase out and mitigation of social impacts; ii) supporting green investments for ESM located in the coal depended regions, and iii) TC support for renewable auctions to facilitate additional privately owned renewable energy generation. The Project will directly address the inequality implications of the green energy transition and define redeployment and reskilling opportunities in the wider regional labour market with a view to retrain the local workforce in cooperation with the relevant municipal and national authorities including the Ministry of Education and Science, local educational institutions and employment centres of the National Employment Agency.

The Project targets the Green and Inclusive transition qualities, and is expected to lead to CO₂ emission reductions [REDACTED] and more importantly to the reskilling of a significant share of the local workforce economically affected by the green economy transition.

TC support [REDACTED] for the project preparation has been provided [REDACTED]. Post-signing TC support with inclusive policy dialogue on regional economic development planning [REDACTED] will be financed [REDACTED].

I am satisfied that the operation is consistent with the Bank’s Strategy Republic of North Macedonia, the Energy Sector Strategy, the Green Economy Transition Approach 2021-2025, the Economic Inclusion Strategy, the Strategy for the Promotion of Gender Equality 2016-2020 and with the Agreement Establishing the Bank.

I recommend that the Board approve the proposed loan substantially on the terms of the attached Report.

Odile Renaud-Basso

BOARD DECISION SHEET

North Macedonia - ESM Solar PV Transition - DTM 52320	
Transaction / Board Decision	Board approval ² is sought for a sovereign-guaranteed loan of up to EUR 25m in favour of JSC Elektrani na Severna Makedonija (“ ESM ”, the “ Company ”, or the “ Borrower ”) for implementation of a 30 MW _{ac} solar photovoltaic (“ PV ”) project consisting of: (i) a 10 MW _{ac} “Oslomej 2” on the exhausted coal mine of TPP Oslomej as expansion to a 10MW solar PV plant under construction, and (ii) a 20 MW _{ac} “Bitola” plant adjacent to coal fired TPP Bitola (together the “ Project ”). The Borrower is the public utility company organised and existing under the laws of North Macedonia.
Client	ESM is a public electricity generation utility, fully owned by the Government of North Macedonia (Fitch: BB+/S&P: BB-) [REDACTED]. The Company provides around 90% of domestic production with installed capacity of around 1,478 MW (thereof around 56% TPP, 37% hydro, 2% CHP and 2% wind). [REDACTED].
Main Elements of the Proposal	<p><u>Transition impact:</u></p> <ol style="list-style-type: none"> Green – The Project is part of an overarching national just transition partnership with the Macedonian authorities. Whilst comparatively modest in size at 30 MW_{ac} it will almost double the current installed solar PV capacity in North Macedonia. Once fully operational, the Project is expected to produce nearly 48 GWh per year [REDACTED] of electricity and to displace [REDACTED] CO2 per annum. Inclusive – As part of a focus on ‘just’ transition, the Project will address the inequality implications of the green energy transition through supporting ESM’s role in regional economic development planning; the creation of a strategy for the development of nationally accredited market-relevant curricula; and the development a programme to define redeploying and retraining opportunities for [REDACTED] the affected local workforce. <p><u>Additionality:</u></p> <p>Risk mitigation: EBRD offers a longer tenor than available from the local banking sector that is necessary to structure the Project and reflective of its long-term nature.</p> <p>Capacity Building: The financing is complemented by a comprehensive TC package, required to ensure compliance with EBRD’s environmental and procurement standards.</p> <p>Standard-setting: ESM will be supported in improving its gender diversity standards by developing an Equal Opportunities Action Plan.</p> <p><u>Sound banking:</u></p> <p>Risk return profile is considered as good. The Company has a history of positive cash flow generation and credit risk is further enhanced by acceptable quality of the sovereign risk.</p>
Key Risks	<p><u>Electricity price risk:</u> The Project will sell electricity at the prevailing domestic or regional market prices. [REDACTED].</p> <p><u>Construction risks:</u> Whilst construction risk associated with solar PV is generally considered low, this Project will be the largest PV installation in the country to date. An experienced EPC contractor will be selected to construct the Project, using the Bank's Procurement Policies and Rules (PP&R), while an external technical consultant will also supervise the tendering and construction phases.</p>
Strategic Fit Summary	The Project is consistent with EBRD’s existing strategy for Republic of North Macedonia and the Energy Sector Strategy both of which target the Green Economy Transition through a more sustainable energy mix by increasing renewable energy capacity. The Project is consistent with the Green Economy Transition Approach, the Economic Inclusion Strategy, the Strategy for the Promotion of Gender Equality 2016-2020.

² Article 27 of the AEB provides the basis for this decision.

ADDITIONAL SUMMARY TERMS FACTSHEET

EBRD Transaction	A sovereign-guaranteed loan of up to EUR 25m to ESM for implementation of a 30 MW _{ac} solar PV project consisting of: (i) “Oslomej 2” – 10 MW _{ac} expansion of the “Oslomej” solar PV plant (currently under construction, DTM 50415) on the exhausted coal mine of TPP Oslomej, and (ii) “Bitola” – 20 MW _{ac} solar PV plant adjacent to TPP Bitola.
Maturity / Repayment	Term Loan: Tenor of up to 12 years from the date of signing of the Loan Agreement [REDACTED].
Potential AMI eligible financing	None
Use of Proceeds	<p>The proceeds of the Bank’s loan will be used to finance the construction and operation of a 30 MW_{ac} solar PV project in North Macedonia, consisting of 10 MW_{ac} “Oslomej 2” and 20 MW_{ac} “Bitola”.</p> <p>The use of proceeds will be monitored through the client’s ongoing reporting requirements under the Loan Agreement. Each disbursement requires evidence of the use of proceeds and confirmation by the technical consultant that the proceeds are needed for the Project.</p>
Key Parties Involved	<ul style="list-style-type: none"> • ESM – the Borrower and project developer; • Ministry of Finance of the Republic of North Macedonia – the Guarantor; • Makedonski Elektroprenosen Sistem AD (“MEPSO”) – the state-owned transmission system operator; • Energy Regulatory Commission (“ERC”) – the independent energy market regulator [REDACTED].
Conditions to disbursement	Standard for sovereign guaranteed loans including corporate documents, financing documents, guarantee agreement and compliance with ESAP for project preparation activities.
Key Covenants	[REDACTED] Execution of relevant loan, guarantee, and project agreements [REDACTED].
Security / Guarantees	Sovereign guarantee – Republic of North Macedonia (Fitch: BB+/S&P: BB-)
Associated Donor Funded TC and co-investment grants/concessional finance	<p>Project Preparation TC</p> <ul style="list-style-type: none"> • Environmental and Social Due Diligence [REDACTED] • Development of Basic Design and Technical Specifications [REDACTED] <p>Project Implementation TC</p> <ul style="list-style-type: none"> • Support with policy dialogue on regional economic development planning; a strategy for the development of nationally accredited market-relevant curricula; the development of a programme to define redeploying and retraining opportunities for a significant share of the affected local workforce [REDACTED].
EFSD Guarantees	N/A

[REDACTED]

INVESTMENT PROPOSAL SUMMARY

1. STRATEGIC FIT AND KEY ISSUES

1.1 STRATEGIC CONTEXT

North Macedonia's energy mix is dominated by domestic lignite coal-fired units and relies heavily on imports mainly in the form of gas and oil products. Coal is the main source of electricity and accounted for 50% of total generation capacity and 58% of electricity generation in 2019, one of the highest level in Europe. This level of coal dependence thus represents a major social and economic challenge in the context of the country's pledge to follow the European Union's decarbonisation path towards a carbon neutral economy by 2050 as a signatory to the Sofia Declaration on the Green Agenda for the Western Balkans. It is a particular challenge for ESM, the public utility, that accounts for 90% of the entire domestic production and that owns around 80% of the lignite-fired capacity.

By signing the 2020 Sofia Declaration, North Macedonia committed to develop and implement an integrated National Energy and Climate Plan ("NECP"), the drafting of which is currently finalized by the national working group based on the Energy Community Secretariat recommendation before the Government's adoption which is expected in H2 2021. Earlier this year, the Government has released its Enhanced Nationally Determined Contribution (NDC), which is in line with the draft NECP which envisages a 66% reduction of GHG by 2030 mainly to be achieved through the gradual decommissioning of the country's TPP fleet starting with Oslomej in 2021 and Bitola in 2027 whilst simultaneously increasing the share of RE in gross final energy consumption from 18% to 38% by adding 1.9GW (incl. hydropower) to the energy mix by 2030.

The withdrawal from coal is a fundamental transformation that will create a number of energy sector challenges and has significant social implications. Such transformation will require: i) deploying the large volumes of renewables capacity in order to ensure energy security in the context of an increasing electrified economy, and (2) developing an inclusive and sustainable 'just' transition programme for the coal sector that employs around 4,000 people directly. The EBRD has been instrumental in developing a strategic "just transition diagnostic" with the Macedonian authorities, ESM and the EU Delegation to North Macedonia to identify policy and investment opportunities nationally to create a just and green transition for the country's coal regions. This diagnostic encompasses (i) support for ESM's green investments, located in the coal depended regions, and (ii) support for private investors in RE (private solar tender and wind investments with combined capacity of 162MW) to add renewable energy to a country with serious capacity shortages and high reliance on lignite mining and generation. In this respect, the EBRD supported the design of the first competitive RE auctions for 35MW_{ac} private solar PV plants on state-owned land and 27 MW_{ac} on private land [REDACTED]. The EBRD also supported a PPP tender for a fully merchant 100 MW_{ac} solar PV plant at Oslomej mine, which was successfully concluded in April 2021. A second competitive tender process for 80MW of solar PV was launched in August 2021.

This operation will have a significant demonstration effect for the wider Western Balkan region that faces similar challenges and require a green, inclusive and just energy sector transition. It will add 30MW_{ac} of renewable generation capacity to almost double the country's existing installed solar PV capacity of 24MW. Once operational, the Project is expected to result in [REDACTED] carbon emission reductions. Furthermore, it will support the reskilling

of a substantial share of the local ESM workforce [REDACTED] affected by the green economy transition.

The Project will also support a ‘just’ transition by addressing the inequality implications of the green energy transition and define redeployment and reskilling opportunities in the wider regional and national labour market with a view to retrain the local workforce in cooperation with the Ministry of Education and Science (MoES), as well as local educational institutions and employment centres of the National Employment Agency.

There are significant pre-existing regional and national inequalities, as regional disparities in terms of economic development and labour market participation are significant and skills mismatches remain substantial. Specifically, the Southwestern region with the Kicevo municipality of Oslomej is among the three [REDACTED] regions (along with Northeastern and Polog) with high unemployment incidence (European Training Foundation, ETF 2021 Country Fiche). At the national level, while the country witnessed a large increase in the supply of tertiary-educated graduates, most of the current and near-future demand is for people with secondary vocational education (ETF 2019, Torino Process 2018-2020). The main challenge lies in the inability of the Vocational Education & Training (VET) system to respond to regional labour market’s needs and the resulting insufficient correlation of VET profiles and programmes with industry requirements.

Against this background, as part of the investment the Bank will enhance the capacity of ESM to actively contribute to regional economic development planning to ensure a ‘just’ economically diverse and sustainable transition to greener economy in the coal regions. The Bank will also support ESM to take an active role in the development of nationally accredited market-relevant curricula and a programme for retraining and redeploying its affected local workforce, in collaboration with all the relevant local, regional and national authorities including MoES and the EU Delegation.

Finally, the Project aims to extend upon the financing of the 10MW_{ac} Oslomej 1 solar PV project that is currently under construction and that benefited from comprehensive project preparation TCs to ensure highest technical and environmental standards are met. It provides a platform for continuous TC and policy dialogue to promote private renewables (solar auction and Oslomej PPP).

The Project is fully consistent with the objectives stated in the Bank’s:

- a) Strategy for Republic of North Macedonia, which aims to “support Green Economy Transition through a more sustainable energy mix” and “increased renewable energy capacity” as key priorities.
- b) Energy Sector Strategy’s which promotes “switching to less carbon-intensive sources, in particular from coal to renewables”.
- c) Green Economy Transition Approach.
- d) Economic Inclusion Strategy and Strategy for the Promotion of Gender Equality 2016-2020, which promote equal opportunities across sectors.

1.2 TRANSITION IMPACT

Primary Quality: Green

Obj. No.	Objective	Details
1.1	The percentage of EBRD use of proceeds allocated to the project that qualifies as GET is 50% or higher.	The use of proceeds will finance 30MW of solar PV assets that are expected reduce annual CO2 emission [REDACTED].
1.2	The project entails a package of policy dialogue, which fulfils the following conditions: a) The dialogue covers one or more green topics related to the GET approach; b) The dialogue aims to achieve a clear policy outcome (e.g. regulatory change); c) A relevant counterparty (normally Governmental authorities), which is in a position to implement the policy reform, is part of the dialogue; d) The policy outcome has a systemic and long term impact beyond project boundaries so it will influence other stakeholders and result in structural change; e) The dialogue is new in the context of the market/country/industry and is aligned with international best practices, and where relevant, the reform priority areas identified by EBRD's country strategy; and f) The dialogue has a well-defined budget, resources, work plan and timeline as well as appropriate benchmark indicators that monitor success in implementation.	<p>This Project is part of a broad partnership with the Macedonian authorities and ESM to promote a just and green transition. This partnership is the first example of such a dialogue in the Western Balkans with significant demonstration potential.</p> <p>The development of a “just transition diagnostic” is a strategic policy initiative aiming to i) identify suitable and concrete investments in the coal depended regions; and ii) develop an action plan – detailing investments and policy reform instruments – which will then be taken forward by the Government. The outputs will focus on activities that will benefit the countries coal regions and look to (a) accelerate decarbonisation; (b) support workers and local communities; and (c) support economic diversification. The diagnostic will be fully consistent with the requirements to access financing from the EU's Just Transition Mechanism (as set out in Member States “territorial just transition plans”). It is overseen by the Deputy Prime Minister, who is coordinating a cross Government working group to design and shape the work. The dialogue is supported by a dedicated consulting team [REDACTED].</p>
1.3	The environmental impact of the project is expected to meet or exceed one or more of the quantitative physical scale thresholds as outlined in the GET TI assessment methodology.	The project is expected to generate 48GWh of renewable energy p.a. This is equivalent to c. 0.85% of total domestic production of 5,658 GWh in 2019.

Secondary Quality: Inclusive

Obj. No.	Objective	Details
2.1	The project will significantly improve policy practices and standards.	<p>The Bank will enhance the capacity of ESM to actively contribute to a ‘just’ transition by supporting the regional economic development planning process and the formulation and delivery of a strategy for the development of nationally accredited market-relevant curricula for retraining the affected local workforce. This will ensure that the reskilling initiative contributes to the wider regional development needs.</p> <p>This will be underpinned by inclusive and gender-sensitive stakeholder engagement and decision making processes at all levels, and through the promotion of the facilitation of the collaboration between various relevant authorities and other stakeholders involved in the development of the just</p>

		transition diagnostic. At national level, this will include the Ministry of Education and Science (MoES), the Centre for Adult Education, the EU Delegation’s representatives working on the re-alignment of the national VET and adult education systems, the National Employment Agency (NEA), the Ministry of Environment and Physical Planning –where relevant, sectoral associations. At regional level, it will include NEA’s local employment centres, municipal authorities, trade unions, local NGOs, civil society.
2.2	The project will introduce a new, replicable and accredited training programme improving skills for [REDACTED] people from the inclusion target group in partnership with (local) vocational schools or universities .	<p>The Project will improve access to market-relevant skills and employment opportunities for affected workers by introducing a series of high quality nationally accredited retraining courses for the local workforce affected by the green economy transition, in partnership with local TVET institutes and based on an assessment of skill requirements across the regional labour market and other parts of ESM’s business. As ESM’s peers across the Western Balkans begin to grapple with their own energy transitions, this initiative will have strong demonstration effects. [REDACTED].</p> <p>To decide on the list of the most relevant courses, the Bank’s support will focus as a first step on a strategic workforce planning exercise, including a skills mapping with assessment of the skill gaps and related training needs of the workforce. In line with ESM’s demand for workers and contractors in other business areas, the retraining initiative will likely include [REDACTED] vocational courses to support miners and lower skilled workers in accessing jobs for construction workers, welders, mechanics or electricians and a technical course (with a focus on green skills and energy efficiency competences) targeted at power plant operators and other mid-skilled workers. The initiative will also comprise modules on re-employability as well as an entrepreneurship course, with a focus on agri-business. This reskilling and redeployment initiative will be developed in collaboration with the NEA’s local employment centres. Gender implications of the re-training programme will be considered throughout (e.g. the need to design gender-sensitive trainings). [REDACTED].</p>

1.3 ADDITIONALITY

Identified triggers	Description
A subsequent/consecutive transaction with the same client/group either with the same use of proceeds or in the same destination country (repeat transaction).	<p>The Bank provided a twelve year, EUR 5.9m loan to ESM in January 2019. The project supported the first utility-scale PV project in the country.</p> <p>The proposed financing will help the Company manage and maintain its commercial credit lines within the levels required to finance its ongoing capex requirements. Through this transaction, EBRD will provide a longer tenor financing [REDACTED] structured to align closer to the projected cash flows of the Project, streamlining further the maturity and overall risk profile of the Company’s debt liabilities.</p> <p>As part of IMF recommendations, North Macedonia’s government has passed laws to include all debt of SOEs in the definition and calculation of Public Debt-to-GDP ratio. Therefore, any form of external debt financing to ESM would be included in the public sector budget. As a result, ESM and the government</p>

	<p>decided that financing the solar PV project through a sovereign-guaranteed loan will be more efficient.</p>
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Additionality sources	Evidence of additionality sources
<p>Financing Structure</p> <ul style="list-style-type: none"> – EBRD offers financing that is not available in the market from commercial sources on reasonable terms and conditions, e.g. a longer grace period that is rarely available in the market, restricted foreign currency financing etc. Such financing is necessary to structure the project. – EBRD offers a tenor, which is above the market average and is necessary to structure the project. 	<p>EBRD’s participation in the financing of the Oslomej 2 and Bitola PV power plants is important in closing the funding of the project with reasonable terms and conditions, at a time when the Macedonian banking sector remains constrained in its ability to extend long-term EUR denominated loans.</p> <p>Proposed loan tenor is longer than available from local banking sector and is appropriate for the longer-term nature of the Project. [REDACTED].</p>
<p>Standard-setting: helping projects and clients achieve higher standards</p> <ul style="list-style-type: none"> – Client seeks/makes use of EBRD expertise on corporate governance improvements, including for climate risk management. – Client seeks/makes use of EBRD expertise on higher inclusion (e.g. adherence to labour standards which goes beyond the provisions set in PR2 of the environmental and social policy, development of comprehensive and institutional corporate social responsibility programmes), gender standards and/or equal opportunities action plans (e.g. improving women’s access to safe transport and/or women-led businesses participation in the client supply chain). 	<p>The Project is part of a broader partnership with the Macedonian authorities and ESM to promote a just and green transition. As part of this, the Project will address the inequality implications of the energy transition and define redeployment and reskilling opportunities which will strengthen the Project’s overall demonstration effect and is expected to further facilitate RE investments in the region.</p> <p>[REDACTED] As part of gender additionality, ESM will be supported in the review and improvement of its HR policies and practices, including the development of an Equal Opportunity Action Plan. ESM will identify new ways to introduce gender inclusion measures and foster women’s access to economic</p>

	<p>opportunities across all its operations, including (i) attraction, (ii) recruitment, (iii) retention, (iv) development, (v) retrenchment, (vi) governance, and (vii) promotion to managerial positions.</p> <p>Higher environmental and social standards especially in relation to biodiversity management and occupational health and safety standards. The Environmental and Social Action Plan attached to the financing includes specific undertakings and monitoring requirements that will ensure the Project's compliance with these standards including with the Inclusion targets.</p>
<p>Knowledge, innovation, and capacity building</p> <ul style="list-style-type: none"> – EBRD provides expertise, innovation, knowledge and/or capabilities that are material to the timely realisation of the project's objectives, including support to strengthen the capacity of the client (e.g. insufficiently experienced PE fund managers or clients unexperienced in complex PPP-type arrangements). 	<p>The financing is supported by a comprehensive TC package covering preparation and implementation of the Project which is required to ensure compliance with EBRD environmental and procurement standards.</p>

1.4 SOUND BANKING - KEY RISKS

Risks	Probability / Effect	Comments
Counterparty Creditworthiness	Low/ Low	<p>The repayment of the contemplated loan will rely on the Company's performance and capacity to service its debt, including the Project's successful implementation and contribution. The loan will be guaranteed by the Republic of North Macedonia.</p> <p><i>Mitigation:</i> North Macedonia's rating (BB+/BB-) is underpinned by a record of historic coherent macroeconomic and financial policy supporting the longstanding exchange-rate peg to the EUR. Whilst the economy contracted by 6.3% y-o-y in the first half of 2020 (4.5% contraction expected for full year) it is expected to grow by 3% in 2021³, benefitting from relatively low general government and SOE-guaranteed debt levels at 59.9% of GDP at the end of 2020. ESM is the state-owned electricity generation utility that provides 90% of domestic electricity production. The Company is cash generating and moderately leveraged. [REDACTED].</p>
Construction and cost overrun risk	Medium/ High	<p>Risks include cost overruns, delays in procurement and failure to achieve timely project completion, including delays in connecting to the grid.</p> <p><i>Mitigation:</i> An experienced EPC contractor will be selected for the construction. The procurement plan for the project will be developed in close cooperation with the Bank to ensure compliance with the Bank's Procurement Policies and Rules (PP&R). The appointment of an external PIU consultant will assist the Borrower to ensure on-time delivery of the Project. The utilization of the existing infrastructure on the project sites incl. grid connection points significantly reduces technical risks associated with the construction.</p>
Operation/technology	Low/ Medium	<p>The solar radiation may be lower than envisaged and/or the technology employed may fail to deliver expected electricity generation.</p> <p><i>Mitigation:</i> The solar radiation and energy yield projections have been calculated by an independent technical consultant. The plant will be constructed under an EPC contract, which will include performance & availability guarantees and warranties. The technical life of PV modules is considered around 20 years, which is well beyond the proposed loan tenor.</p>
Electricity price	Low/ Medium	<p>Following implementation of the Energy Law, ESM no longer benefits from electricity generation tariff and will sell the electricity at prevailing market price to the electricity suppliers in the Country, or the region.</p> <p><i>Mitigation:</i> Currently ESM would benefit from the market liberalization as the new price for the Universal supplier is 38.5 EUR/MWh and is below current market price of around 95 EUR/MWh (HUPX). Furthermore, the market liberalization is expected to motivate ESM to increase efficiency and decrease its operating costs. This will ultimately decrease its electricity production costs and increase its competitiveness on the electricity market. [REDACTED].</p>

³ EBRD Base Case macroeconomic scenario

Macro / COVID-19 Impact	Low/ Low	<p>Prolonged economic and social uncertainty as a result of the COVID-19 crisis could have an adverse effect on the financial situation of the Borrower and the guarantor as well as on the implementation of the Project.</p> <p><i>Mitigation:</i> The authorities responded quickly to the COVID-19 crisis with targeted and temporary fiscal policy support to limit the economic and social impacts of the crisis including (i) <u>raising funds from supranational entities</u>: the disbursement of a EUR 177m emergency aid from the IMF, a EUR 160m macro-financial assistance package from the EU along with EUR 62m repurposed from the IPA, emergency aid from World Bank of EUR 140m, (ii) <u>Eurobond</u> issues of EUR 700m each in in May 2020 and 2021, and (iii) <u>cuts to its monetary policy rate</u> by the National Bank. Following a 4.5% contraction in GDP in 2020 the economy is expected to rebound in 2021. [REDACTED].</p>
Interest rate and currency risk	Low/ Low	<p>The repayment capacity of the Borrower could be affected if EURIBOR increases over the term of the loan and/or by adverse movements in the FX rate.</p> <p><i>Mitigation:</i> [REDACTED] The currency of North Macedonia (MKD) is pegged to the EUR since 1997.</p>

2. MEASURING / MONITORING SUCCESS

<i>Overall objectives of project</i>	<i>Monitoring benchmarks</i>	<i>Implementation timing</i>
<ul style="list-style-type: none"> - Good financial and operational performance - On-time project implementation 	<ul style="list-style-type: none"> - Growth in revenues, profitability and cash flows - Completion according to the timeline and within the budget 	[REDACTED]

TI indicator(s), primary Quality: Green

Obj. No.	Monitoring indicator	Details	Baseline	Target	Due date	Donor
1.1	CO2 emissions avoided (tonnes/year)	Direct CO2 savings for using renewable energy	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
1.2	Renewable Energy - Electricity Produced (MWh/year)	Amount of electricity generated by the project from renewable sources (MWh)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
1.3	Renewable Energy capacity installed (MW _{ac})	Increased solar installed capacity (MW _{ac})	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
1.4	Policy advice delivered	Draft recommendations for improved policy/strategy for just transition submitted based on the just transition diagnostic.	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

1.5	Client engages in policy dialogue: providing substantial contributions to activities	ESM to participate in the preparation of the Just Transition Diagnostic through the Governmental working group established to steer the work.	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
1.6	Legal, Institutional or Regulatory Frameworks in target areas improved	Recommendations from Just Transition Diagnostic are materially implemented.	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

TI indicator(s), secondary Quality: Inclusive

Obj. No.	Monitoring indicator	Details	Baseline	Target	Due date	Donor
2.1	Client engages in policy dialogue: providing substantial contributions to activities	The Project will enhance the capacity of ESM to actively contribute to the preparation of regional economic development measures, in collaboration with other relevant stakeholders and in line with the Inclusion sections of the Just Transition diagnostics.	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
2.2	Recommended policy or strategy agreed by relevant stakeholder(s)	The Project will contribute to the preparation of a strategy for the development of nationally accredited market-relevant curricula for reskilling the local adult workforce, in collaboration with MoES.	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
2.3	Tailored training programme developed and implemented	With Bank's support and in collaboration with partner vocational institutes and technical colleges, ESM will develop and implement a series of tailored retraining courses.	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
2.4	Number of local population earning an accredited certification and enhancing their skills as a result of training	Number of local workers that will be retrained, enabling them to acquire accredited new skills to be redeployed within ESM or the broader regional and national labour market.	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Additional Indicator:

Gender Additionality	Practices of the relevant stakeholder improved (equal opportunity practices of the client)	Development and implementation of Gender Action Plan	[REDACTED]	[REDACTED]	[REDACTED]
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Delivery risks: Risks to the project TI relate to the ability of ESM (i) to develop the project to the agreed specifications and timeline and (ii) action the agreed retraining efforts and just transition contributions. The first is partially mitigated by ESM's prior experience of developing the 10MW, although major delays have occurred, while the second is partially mitigated by the significant technical support from EBRD which is already underway.

3. KEY PARTIES

3.1 BORROWER

ESM is a public electricity generation utility, fully owned by the Government of North Macedonia. The Company provides around 90% of the entire domestic production [REDACTED] The Company has an electricity generation licence [REDACTED]. It also holds a heat generation, distribution and supply licence. ESM has four subsidiaries, one of which is electricity trading company (ESM Trade), another subsidiary owns and operates non-generation assets like hotels and ski centres in the Country (ESM Turs) and the remaining two companies are maintenance companies that produce some equipment and spare parts.

Operations

As of December 2020, ESM's total installed capacity was 1,448MW of which 557MW (38%) was in hydro power plants, 824MW (57%) thermal, 60MW (4%) CHP and 37MW (3%) was wind. The Company has a pipeline of 30MW_{ac} of solar PV capacity (including this operation) equivalent to 2% of total combined capacity.

- The hydro assets comprise of 8 operating hydro power plants (HPPs) with an annual generation of 1,250 GWh.
- The thermal assets comprise of 2 thermal power plants (TPPs) providing base load of the company and the country. TPP Bitola has three blocks, each with 225 MW installed capacity and combined production of 3,600 GWh per year. TPP Oslomej's capacity is 125 MW, but currently operates less than 20 days per year as all nearby lignite deposits are exhausted.
- The combined heat and power (CHP) assets comprise of the existing 30 MW Energetika CHP and 30 MW Kogel CHP (acquired in 2018). The combined heat and electricity output of the two CHPs is about 121 GWh per year mainly used to supply the steel factory in Skopje and the nearby households with heat.
- The wind assets comprise of 36 MW wind farm in Bogdanci with annual production of about 100 GWh. Extension by 14MW to 50MW of this wind farm is planned to be operational by 2022 and will increase generation by 37 GWh per annum. [REDACTED].

3.2 GUARANTOR

The Guarantor is the Republic of North Macedonia. The country's public debt in Q4 2020 was at 59.9 per cent of GDP, just below the Maastricht criteria of 60 per cent of GDP. In 2020 the public debt increased 10.5 per cent points as a result of COVID measures.

The country's monetary policy continues to be anchored by the fixed exchange rate between the Macedonian Denar and the Euro, in place since July 1997. However, the peg could be threatened in a negative scenario, especially as reserves cover only six months of imports. In May 2020, the National Bank of North Macedonia cut its policy rate by 25 basis points to 1.5%, the lowest level on record. This was done despite the increased risks by COVID, as the

inflation and reserves remained stable, therefore allowing for an additional measure to support the economy.

In February 2021, S&P affirmed the sovereign rating at BB- with stable outlook. Fitch reaffirmed its BB+ rating with negative outlook in May 2021. Government measures to mitigate the impact of the pandemics and support the recovery of the economy are to result in a higher deficit in 2020 (from 2% in 2019 to 8.1% of GDP in 2020) and an increase in public debt. Under the assumption of a prolonged pandemic and that the government will be taking fiscal adjustment measures [REDACTED], the rise in the debt level is likely to be only temporary. Financing of the deficit is supported by the utilisation of the IMF Rapid financing instrument (EUR 176.5m), the EU Macrofinancial assistance (EUR 160m) and reallocation from IPA funds (EUR 62m), World Bank loans (EUR 140m). The government was also able to issue a 7-year Eurobond (EUR 700m) at favourable conditions (with a yield of 1.625 per cent), the lowest rate ever achieved by North Macedonia.

4. MARKET CONTEXT

North Macedonia is a net importer and domestic electricity is produced almost entirely from ESM's power plants. Electricity imports amount to approximately 20-30% of the total domestic electricity consumption and are mostly required to meet peak winter demand. The Macedonian electricity system has interconnection with the electricity systems of Serbia, Greece, Kosovo and Bulgaria (DTM 27768). Construction of the interconnection with Albania is expected to start Q2 2021 (DTM 46274). Because of interconnections, the regional grid can easily accommodate additional RES.

The country has made considerable progress towards meeting its Energy Community Treaty obligations and in liberalising its energy sector. Generation, transmission and distribution are fully separated. Transmission is owned and operated by Makedonski Elektroprenosen Sistem (MEPSO), a client of EBRD (DTM 44114 and 46274). The new Energy Law was adopted in May 2018 and fully, unbundled, liberalized the market and incorporated the Third Energy Package. The new law has put in place the legal framework to support competition in electricity supply and generation and ERC sets the tariffs only for transmission and distribution.

North Macedonia has multiple small private PV plants (less than 1 MW_{ac}) with 24MW_{ac} of installed capacity benefiting from FiT. The 10MW Oslomej PV plant financed by the Bank (50415) is the first utility size plant of this kind in the country and the first one to not rely on the FiT regime. The first competitive auction tenders under feed-in-premium (FiP) for 35MW_{ac} private solar PV plants on state-owned land and 27 MW_{ac} on private land were concluded at the beginning of 2020 [REDACTED]. In April 2021, ESM announced the results of its PPP tender, also supported by the EBRD, for a fully merchant 100 MW_{ac} solar PV plant at Oslomej mine site. [REDACTED].

The country has a single operational 36.8 MW wind power plant Bogdanci owned by ESM which benefits from the FiT. A tender for an additional 14 MW of capacity on the same location was relaunched by ESM in August 2020, while the first two private windfarms investment are in development stage.

North Macedonia is preparing its National Energy and Climate Plan (NECP) for the first time. In October 2020, it was the first Energy Community Contracting Party to submit its draft to the Secretariat. The draft NECP envisages a 66% reduction of GHG emissions by 2030 mainly to be achieved through the gradual decommissioning of the country's TPP fleet starting with Oslomej in 2021 and Bitola in 2027 whilst simultaneously increasing the share of RE in gross final energy consumption from 18% to 38% by adding 1.9GW (incl. hydropower) of predominantly privately owned RE generation capacity by 2030. The 10MW_{ac} PV plant of ESM under construction alongside this operation for an additional solar capacity of 30MW_{ac} aim to minimise the gap to the RES target and are in line with the decarbonisation strategy of the Company and the Country. Overall, ESM's long-term investment plans envisage the addition of 94MW of RES capacity and a potential 250MW CHP to replace the decommissioning of Block 1 in TPP Bitola.

Further details about the energy market in North Macedonia are set out in Annex 5.

5. FINANCIAL / ECONOMIC ANALYSIS

5.1 FINANCIAL PROJECTIONS

[REDACTED]

5.2 SENSITIVITY ANALYSIS

[REDACTED]

5.3 PROJECTED PROFITABILITY FOR THE BANK

[REDACTED]

6. OTHER KEY CONSIDERATIONS

6.1 ENVIRONMENT

Categorised B (ESP 2019) Due diligence confirmed that the environmental and social (E&S) impacts associated with a two small scale (10MW and 20MW) solar photo voltaic (PV) plants are generally site specific and can be readily mitigated through the implementation of a targeted action plan⁴. Independent Environmental and Social Due Diligence (ESDD) has been undertaken on the Project and an Environmental and Social Action Plan (ESAP) has been developed and will be agreed with the Client.

The E&S risks and impacts of the projects are to a large extent mitigated by the site selection at Bitola, using an area of land owned by the Client and use for commercial crop production and at Oslomej, a brownfield site used for disposal of surplus overburden from the lignite mine. Both sites are located over 1km from the nearest community and in close proximity to existing sub-stations with only a short cable connection required at Bitola and Oslomej 2 connection into already planned grid connection for Oslomej 1.

The ESDD included a biodiversity and critical habitat assessment, which identified that the area for Oslomej 2, where vegetation has re-generated since the area was last disturbed, is considered critical habitat for a number of amphibian and reptile species designated on Annex IV of the EU Habitats Directive. Adjustment of the site layout has avoided the most sensitive wetland habitats. Small sections of critical habitat have been identified at Bitola but have been avoided during the siting of the PV. At both sites panels have been elevated to 0.8m to allow taller grasses to be re-cultivated underneath to offset this habitat loss. A suite of biodiversity mitigation measures have been incorporated into the design and construction and a Habitat Reinstatement Plan will be developed within the existing mine site at Oslomej to compensate for the 8.6ha of lost woodland and scrub habitat and, if required, for any minor areas at Bitola due to the grid connection. Both sites have an Environmental Protection Elaborate approved in accordance with national legislation.

Due to the planned future development of 100MW of further solar PV at Oslomej, impacts on biodiversity are anticipated to be significant. With the mitigation measures described above, the Project itself will not make a substantial contribution to these impacts. The Bank will continue to explore opportunities to support the Client to enhance biodiversity through technical assistance to inform the approach for re-development of the mine site.

The Client will need to establish a team to implement the Project, and further develop the Environmental and Social Management Plans for construction and operation phases of the

⁴ Please see Annex 4 for managing forced labour risk in the solar PV supply chain.

project. Relevant construction phase mitigation measures, including those related to occupational and community health and safety, will need to be included in the Engineering, Procurement and Construction (EPC) contract and their implementation monitored by the Client. A PIU Consultant will be put in place and will provide biodiversity expertise to support the design and implementation of biodiversity offsets.

Implementation of the ESAP on the Oslomej 1 project has been generally satisfactory with some items requiring further work. To ensure compliance with the Bank's PRs and to address the gaps identified at the ESDD, an ESAP for the new Project has been developed and will be agreed with the Client. The Bank will monitor the implementation of the Project via annual E&S reports review and monitoring site visits as required.

6.2 INTEGRITY

In conjunction with OCCO, updated integrity due diligence was conducted on state owned Elektrani na Severna Makedonija (“ESM” or the Client), its directors and senior management [REDACTED] and it is [REDACTED] concluded that this Project does not pose unacceptable reputational risks to the Bank. [REDACTED].

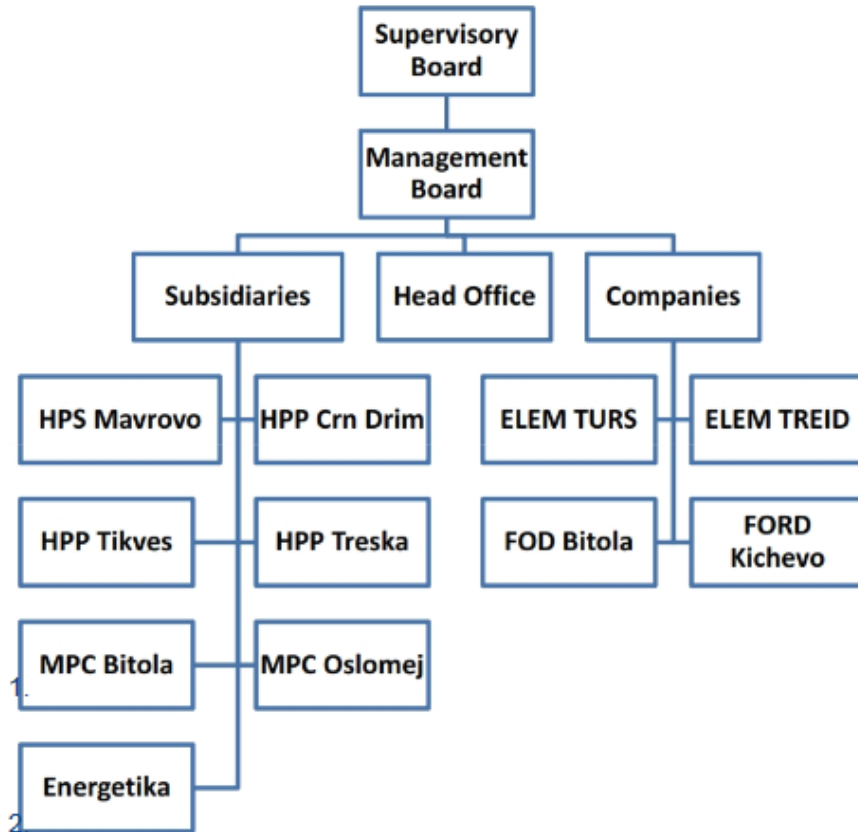
All actions required by applicable EBRD procedures relevant to the prevention of money laundering, terrorist financing and other integrity issues have been taken with respect to the project, and the project files contain the integrity checklists and other required documentation which have been properly and accurately completed to proceed with the project.

ANNEXES TO OPERATION REPORT

#	Name
ANNEX 1	Shareholding Structure
ANNEX 2	Financial Information
ANNEX 3	Project Implementation
ANNEX 4	Solar PV Supply Chain
ANNEX 5	Transition Impact Scoring Chart

ANNEX 1 – SHAREHOLDING AND ORGANIZATION STRUCTURE

ESM is 100% owned by the Government of North Macedonia. Below is the organization structure



ANNEX 2 – FINANCIAL INFORMATION

[REDACTED]

ANNEX 3 – PROJECT IMPLEMENTATION

Procurement classification – *Public sub-sovereign*

[REDACTED]. This is a repeater project for Elektrani na Severna Makedonija (ESM). The earlier 10MW_{ac} Oslomej Solar PV plant procured as open tender in accordance with the PP&R is currently under implementation. Hence ESM has earlier proven experience in procuring contracts in line with EBRD's procurement rules including the use of ECEPP. [REDACTED].

Project implementation arrangements:

The Project Implementation Unit (PIU) will consist of dedicated experts from ESM who will be overall responsible for the project activities. The PIU will be supported by a qualified PIU Consultant who will assist with project preparation activities including procurement. This consultancy team will also assist with the project implementation phase including engineering support and supervision as well as a Biodiversity Management study. [REDACTED].

Procurement arrangements:

The procurement of the main contract consisting of construction of 30MW_{ac} Solar PV Project will be procured as fully open tender in accordance with the requirements of the Bank's Procurement Policies and Rules (PP&R) for public sector operations by using ECEPP.

The intention is to use EBRD's standard tender documents for Works and FIDIC Yellow Book, Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Plant, and for Building Works, designed by the Contractor.

The contract will be subject to prior review by the Bank.

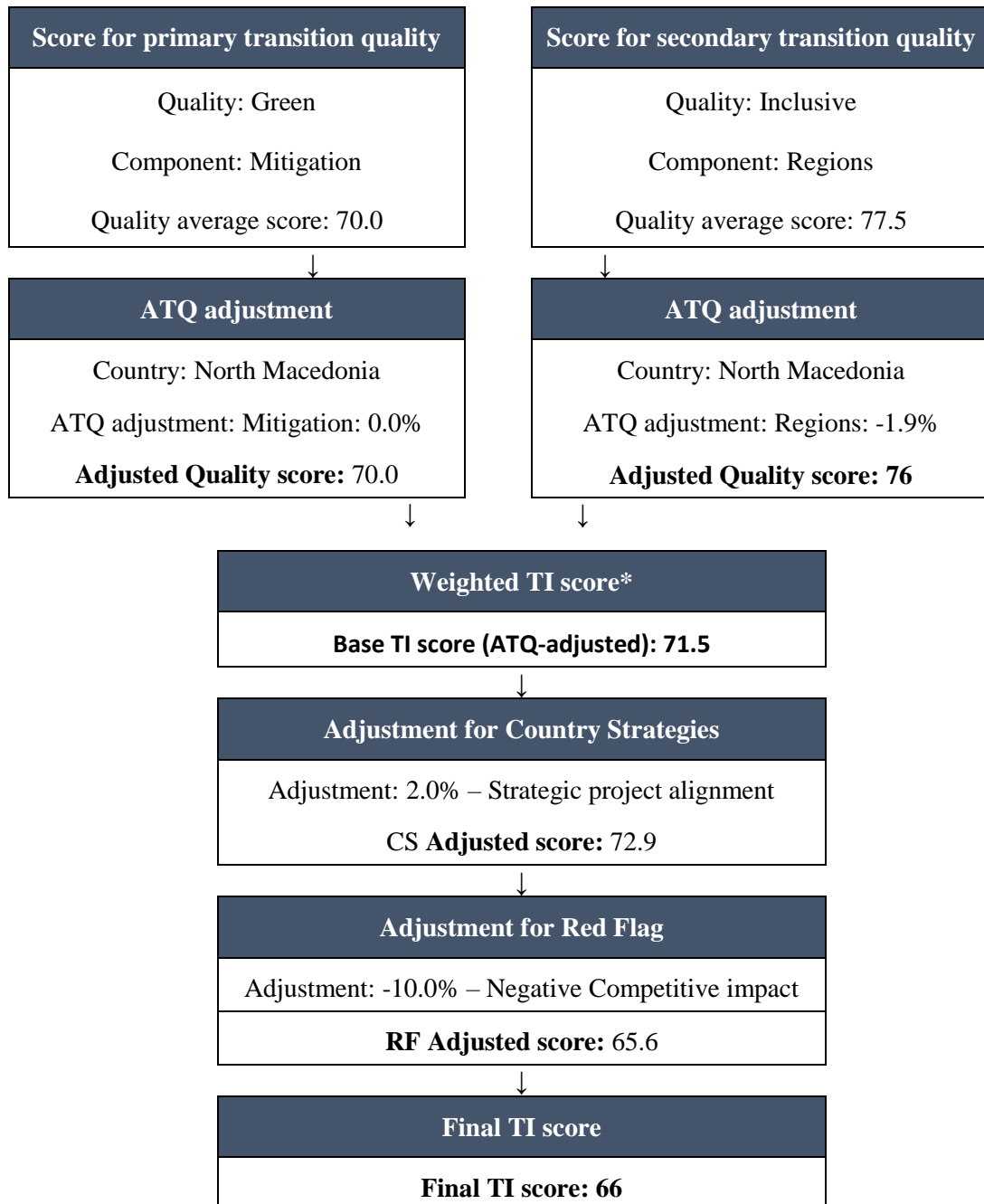
The consultancy contracts will be procured in accordance with the requirements set out in the PP&R in Section 5 Procurement of Consultant Services. [REDACTED].

ANNEX 4 – SOLAR PV SUPPLY CHAIN

Project implementation will take into account future guidance by the Bank on financing of solar photovoltaic installations in the light of allegations on the use of forced labour raised against the global supply chain for raw materials for the technology.

The Project is at the design stage and the solar panel supplier will be selected by the Engineering Procurement and Construction (EPC) contractor. [REDACTED].

ANNEX 5 – TRANSITION IMPACT SCORING CHART



*The Primary Quality score is weighted 75% for the calculation of the Base TI Score. The Secondary Quality is weighted 25%.

** Please remove this box if the financing uplifts are not applicable.