Note to Task Teams: The following sections are system generated and can only be edited online in the Portal. Please delete this note when finalizing the document.

Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 08-Feb-2019 | Report No: PIDISDSA25799
BASIC INFORMATION

A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Project ID</th>
<th>Project Name</th>
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<td>Moldova</td>
<td>P160829</td>
<td>Moldova Power System Development Project</td>
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<td>Ministry of Economy and Infrastructure, Moldova Energy Projects Implementation Unit (MEPIU)</td>
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Proposed Development Objective(s)

The Project Development Objective is to increase capacity and improve reliability of the power transmission system in Moldova.

Components

- Construction of Vulcanesti-Chisinau overhead line
- Extension of two existing substations
- Strengthening of power dispatch and metering system
- Technical Assistance and Project Management

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

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DETAILS

World Bank Group Financing
### B. Introduction and Context

#### Country Context

1. **Since the early 2000s, Moldova, has made significant progress in achieving inclusive growth, averaging 5 percent annually, and reducing poverty, which declined from 26 percent in 2007 to 11 percent in 2014.** Growth has been driven largely by consumption and poverty reduction mainly by remittances and pensions. Employment declined because of emigration and falling labor force participation, so wage income added little to improving living standards. Moldova is vulnerable to changes in external demand and climate shocks due to its small size, open economy, and reliance on agriculture. It is also at risk because of high external debt and a legacy of political instability. Emigration of the working-age population and an annual population decline of around 1½ percent add to the country’s economic, fiscal, and social fragility.

2. **After rapid growth and poverty reduction since the early 2000s, deteriorating external conditions and increased governance challenges slowed growth.** The decrease in real growth was attributed to fall in demand for Moldovan products both domestically and in the EU, as well as to the significant increase in energy prices. In 2015, the economy contracted by 0.5 percent due to: adverse external factors that reduced remittances from and halved exports to Russia; a summer drought; and a fraud in three large banks costing 12.5 percent of its GDP. The latter led to higher interest rates, an increase in public debt to 47 percent of GDP (up from 38 percent in 2014), and damage to business confidence. The authorities’ short-term economic agenda is thus dominated by the macro-fiscal...
3. **While Moldova recovered after 2015, economic growth remains below historical averages of 5 percent and is mainly led by consumption.** Following the banking fraud in 2014 and the subsequent contraction of the economy in 2015, growth rebounded reaching more than 4.5 percent in 2016 and in 2017. This was owing to robust private consumption largely driven by remittances and public and private wage increases. Lower interest rates, the stabilization of the financial sector, and the double-digit increase in public investments led to a recovery in gross fixed investments. Despite robust exports supported by good harvests in the past two years and a stronger leu, imports rapidly increased, resulting in a negative contribution of net exports to growth (~2.7 percentage points).

4. **In the medium term, growth is expected to remain below 4 percent and prone to considerable risks.** Favorable external conditions will support the ongoing recovery in remittances, further sustaining private consumption, which will remain the main driver of growth. Real growth in public transfers and the ongoing recovery in capital spending will help support growth in the medium term. In the longer term, Moldova’s economic outlook faces several challenges, including macroeconomic and fiscal stabilization, economic governance and transparency—especially in the investment climate—and the uncertain post-election policy environment.

5. **Increasing energy efficiency and security of energy supply are critical factors in improving Moldova’s economic competitiveness.** With declining efficiency and capacity to generate, Moldova is for 75% of its electricity demand dependent on imports of electricity from two sources: Ukraine and Kuchurgan power plant or Moldavskaya GRES (MGRES), a large power plant on the Left Bank of the Nistru. This reflects the fact that Moldova’s power system was designed as part of the former Soviet Union’s IPS/UPS power system and is carrying its footprints to this date. The combination of expensive domestically produced power with relatively expensive imported power due to a lack of effective connections to the West leaves Moldova with high priced electricity in the range of US$ 80/MWh.

**Sectoral and Institutional Context**

6. **The power sector in Moldova has achieved important results through a process of reforms and restructuring.** Ministry of Economy and Infrastructure (MoEI) is a primary policy setting body, responsible for defining energy priorities and leading the sector dialogue. Energy Regulatory Agency (ANRE), which was established in 1997, is in charge of regulating electricity, natural gas, petroleum, and district heating. ANRE is not subordinated directly to any central public authority but reports to the Parliament. The legal, functional and accounting unbundling, which took place in 1997, resulted in establishment of a state-owned enterprise – Moldelectrica (ME) that serves as Transmission System Operator (TSO), provides transmission services managing assets of the power transmission system and its dispatch center. A large part of the country’s distribution sector (approximately 80 percent of its demand) was privatized in 2000

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1 Moldova GRES (owned by Inter RAO UES and situated on the left bank of the river Nistru) has 12 units each rated 200 MW of nominal capacity. The net transfer capacity of power transmission network between Ukraine and Moldova varies depending on the system situations including MGRES production but up to 1,000 MW.
to a strategic investor – RED Union Fenosa (UF). Three private companies out of the country’s five power distribution companies – RE Chisinau, RED Centru, and RED Sud - were merged into one private company in 2008 and the company changed its name to Gas Natural Fenosa (GNF) in 2011 following a corporate merger of the lead company. The other two remained as state owned enterprises: RED Nord and RED Nord-vest, covering the remaining 20% of the distribution sector. After the country joined Energy Community (EnC) 2 as a Contracting Party in 2010, Moldova started implementing the EU Energy Package in 2015 by separating distribution and supply at regulated prices. GNF’s electricity supply functions were transferred in 2015 to a newly established Gas Natural Fenosa Furnizare Energie (GNFFE), while UF became a distribution only company. Two other companies - RED Nord and RED Nord-Vest were initially separated into electricity distribution and supply divisions, and merged in 2017 into two companies: Furnizarea Energiei Electrice Nord (FEE Nord) for supply and RED Nord for distribution. Several existing regulatory acts were revised, and new acts developed with support from the Energy Community Secretariat (EnCS) to align the Moldova’s power sector regulation with the EU’s energy acquis and EU Energy Directives.

Figure 1. Moldova Electricity Sector Structure

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2 The Energy Community is an international organization which brings together the European Union and its neighbors to create an integrated pan-European energy market. The organization was founded by the Treaty establishing the Energy Community signed in October 2005 in Athens, Greece, in force since July 2006. The key objective of the Energy Community is to extend the EU internal energy market rules and principles to countries in South East Europe, the Black Sea region and beyond based on a legally binding framework.
Limited generation capacity in the Right Bank, while majority of supply comes from the Left Bank and Ukraine, impedes security of electricity supply. Moldova’s annual electricity consumption (excluding the Left Bank) was 4,270 GWh on average from 2013 to 2017. The highest level of peak load was registered at 784 MW in 2017. Domestic generation sources located on the Right Bank of Nistru River, including three Combined Heat and Power (CHP) plants and one run-of-river Hydro Power Plant (HPP) cover only about 20% of the annual consumption of the Right Bank. The CHP plants in Moldova are heavily constrained since a significant share of electricity generated is dispatched primarily to meet heat load. The country’s exposure to renewable energy has been limited so far with 2.84 MW of solar and 23.93 MW of wind power as of August 1, 2018. The remaining electricity demand for the Right Bank, which accounts 80 percent of the electricity demand, is met by two external sources: MGRES located in the Left Bank and power supply from Ukraine. MGRES was commissioned in 1964 and is operated by a subsidiary of InterRao UES. MGRES’s generation price is based on a non-transparent cost structure, because the Transnistrian authorities and the MGRES pay only a small fraction of the plant’s gas consumption. The current situation

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3 The country’s Renewable Energy Law and Energy Strategy, both created in 2007, requires the use of energy produced from renewable sources up to 20 percent of the total gross domestic consumption and 10 percent of annual electricity production by 2020.

4 Inter Rao UES is Russian diversified energy company that manages assets in Russia, Europe and the CIS in areas of electricity generation, sales, trading, and engineering. The aggregate capacity of power plants under Inter RAO Group control is about 33.5 GW (as of May 16, 2018) and its consolidated revenue reached 917 billion Rubles in 2017.

5 MGRES generates electricity with low-efficiency single cycle gas-fired units. The price of electricity sold by MGRES does not
may not be sustainable because it depends on the willingness of Gazprom to continue the accumulation of gas arrears. Furthermore, the upcoming changes in the regional gas market, including the development of the TurkStream gas pipeline which will create a new alternative for supply of Russian gas to Turkey (and Southeast Europe), may significantly affect future transit of Russian gas through Moldova, thereby putting seriously at risk the arrangement under which MGRES obtains natural gas. The availability of reduced prices for natural gas sold to MGRES to generate electricity is therefore not guaranteed over a long term thus posing a significant risk to energy security. Electricity imports from Ukraine would also present significant risks for security of supply given the vulnerability of Ukraine gas and electricity sector to imports from Russia.

Figure 2: Historical Electricity Supply-Demand Balance (GWh)

![Figure 2: Historical Electricity Supply-Demand Balance (GWh)](image)

Source: World Bank Group

8. Transmission network is integrated with Ukraine and UPS/IPS but not synchronized with Romanian grid. Moldova’s transmission network consists of 5,978 km of transmission lines at three primary voltage levels: 400, 330, and 110 kV, operated synchronously with the former Soviet Union’s UPS/IPS systems. Moldova’s and Ukraine’s transmission networks were designed, built and operated as an integrated system during the Soviet era. They are operated technically as one synchronized power system.
system and are mutually dependent\textsuperscript{6}, though Moldelectrica and Ukrenergo operate their own systems within own countries’ geographical boundaries. Interconnections with Ukrainian power system include 11 lines of 110 kV and seven lines of 330 kV\textsuperscript{7}. In fact, the Moldovan system is technically a component of a larger loop within the Ukrainian transmission system. The Ukrainian electricity flowing into the Moldovan transmission system ensures the latter’s balancing and frequency control even when no electricity imports are contracted from Ukraine. Ukraine itself depends on Russia for the primary frequency control. As for a connection with Romanian power system, which is part of the European Network Transmission System Operators for Electricity (ENTSO-E), only three isolated 110 kV transmission lines are connected with part of the Romanian system for local supply. One single circuit 400 kV line from Moldova’s Vulcanesti substation (SS) to Romania’s Isaccea SS was operated when Romanian system was part of the UPS/IPS system but currently is not in operation as Romanian system is synchronized with the ENTSO-E system.

9. **Competition in the power market is severely limited due to lack of domestic supply and key legislations.** Full market opening was initiated by the ANRE in March 2005 and Moldova’s Electricity Law states that the wholesale market is competitive, but the full market opening has never been carried out due to limited sources of domestic supply and delayed implementation of key sector legislations. Only a few customers, which account for 10 percent of annual electricity consumption, are supplied at unregulated rate. The wholesale electricity market is based on a number of bilateral contracts (between distribution companies, unregulated consumers, independent generators, and other power suppliers/traders) and does not have an organized spot market (power exchange). The relationships between market participants are set by the Power Market Rules approved by ANRE. Although there are twenty licensed suppliers at non-regulated tariffs having the legal right to import and export energy, the state-owned Energocom\textsuperscript{8} has a de-facto monopoly on imports from Ukraine and purchases from MGRES, and effectively acts as a single buyer. Even when GNF (formerly UF) attempted lately to conclude direct negotiations with MGRES and Ukrainian suppliers, it was unable to do so because of non-transparent procurement arrangements and limited number of suppliers, who preferred to ‘negotiate’ directly with Energocom. With support by the EnCS, the GoM adopted in 2017 the Electricity Procurement Guidelines to ensure transparent electricity procurements. However, the procurement arrangements remained vulnerable to possible concerted action between Enercogom, MGRES and DTEK, a Ukrainian supplier, as the last two companies continued the practice of ‘direct negotiations’ with Energocom outside the formal procedure. Thus, neither real competition nor a trading framework exists, and market-based price references are missing.

\textsuperscript{6}Ukraine is dependent on the Moldovan transmission system to supply power to the Odessa region. Moldova, in turn, depends on electricity flows from Ukraine to balance and ensure frequency control of its own transmission system. This is based on an informal agreement between the TSOs of both countries under which Moldova bears the transmission losses associated with providing power to the Odessa region in exchange for receiving Ukrainian electricity to ensure adequate balancing power and frequency control. Those two flows are netted out against each other and reconciled at regular intervals. MGRES cannot provide the necessary balancing power and frequency control for the Right Bank because it does not have the stand-alone gas turbine necessary for that.

\textsuperscript{7}One 330 kV line from Balti substation to Dnistrovska HPP of Ukraine, two 330 kV lines from Ribnita substation to Kotovsc substation of Ukraine, and four 330 kV lines from MGRES power plant to three substations in Ukraine.

\textsuperscript{8}The GoM established the State Enterprise Energocom in 2005 as a single buyer (importer) of electricity for distribution companies with the objective to reduce the price volatility in the electricity market then by “mixing” electricity purchased from MGRES with cheaper electricity imports from Ukraine. However, such arrangement enabled Energocom to become later “de facto” market operator because UF preferred to purchase electricity through Energocom rather than to negotiate directly with MGRES, as long as electricity imports from Ukraine were limited by network congestion during winter.
10. **The transmission and distribution sectors are efficient but remain financially vulnerable.** Moldova’s transmission losses are relatively small and amounted to 2.68 percent in 2017. Also, the privatized distribution sector has been operated efficiently. The country’s largest distribution company, GNF, had merely 6.65 percent of distribution losses with almost 100 percent of collection rate for the first quarter of 2018. Despite the sector’s efficient operation, it remains financially vulnerable due to delays in adjusting regulated electricity tariffs (for residential consumers), particularly after the devaluation of the Moldovan Lei (MDL) in 2014/2015. Given that about 80 percent of electricity is imported and denominated in US$, the levels of tariffs became inadequate to cover the power sector operating costs and debt service obligations. Electricity tariffs were adjusted to cost recovery levels in 2016, and in 2017 a mechanism was put in place as part of an IMF program to allow for a recovery over five years of the accumulated tariff deficits. In addition, tariff methodologies for transmission and distribution were revised in early 2018. While the distribution tariff methodology adopted by ANRE incorporated key recommendations from the World Bank related to the long term financial viability of this segment, the transmission tariff methodology remains less favorable in this respect, primarily due to the uncovered exchange rate risk on foreign currency borrowing for ME. After its steep depreciation in 2014/2015, the MDL has appreciated against the USD from 2016 to 2018 and ME has been able to achieve small positive net income, though in terms of cash-flow the debt service on USD denominated loan contracted in the 2000’s remains challenging. Given the scale and financing in foreign currency denominated debt of the proposed interconnection project, ANRE indicated, during the discussions preceding the adoption of the existing transmission tariff methodology, that specific it would consider specific cost recovery mechanisms outside of the normal methodology for these investments.

11. **Asynchronous interconnection with Romania was identified as an optimal solution to improve security of electricity supply and to establish a competitive electricity market in Moldova.** Responding to the GoM’s request, the World Bank launched in 2015 Electric Power Market Option Study (P146401) funded by ESMAP to analyze three power system development options to address the country’s sector issues: 1) self-sufficiency; 2) synchronous interconnection with Romania and 3) asynchronous interconnection with Romania. The Study concluded that neither of self-sufficiency options, which assumed construction of new generation plants inside the Right Bank fueled by natural gas or coal, would be able to strengthen the country’s energy security due to potential increase of dependency on external energy sources. The options were also found to be the most expensive for the country. The synchronous interconnection option was found sub-optimal, as the synchronous interconnection is only possible 10-15 years later after all the preparations are completed and therefore the option could not resolve the imminent security of supply issue. As a result, the Study confirmed the asynchronous interconnection with Romania via Back-to-Back (BtB) link⁹ while maintaining energy trades with Ukraine and MGRES, as the least cost and most optimal solution to improve the security of supply and ensure a competitive electricity market. Following the study’s recommendation, GoM has taken a strategic decision in 2015 to establish the asynchronous interconnection with Romania, which consists of construction of a 600 MW BtB station and domestic transmission network reinforcement. The preparation of its Feasibility Study and Environmental and Social Impact Assessment was launched in 2015 funded by European Bank for

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⁹ Romanian power system and Moldovan power system are not synchronously operated and cannot be immediately connected as the connection to Romanian power system, Continental European power system, requires significant amount of preparation work as explained in paragraph 12. Therefore, the immediately connection is only possible through an installation of so-called back-to-back station, where electric current is converted to direct current (DC) and then converted back to alternate current.
Reconstruction and Development (EBRD). In 2017, the World Bank agreed with EBRD, European Investment Bank (EIB) and EU that the construction of the BtB station will be financed by the EBRD, EIB, and EU Neighborhood Investment Fund, while the domestic transmission network reinforcement will be supported by the World Bank.

12. **Access to Romanian electricity market will improve security of supply and increase competition in Moldova.** Romanian electricity market, operated by the country’s market operator (OPCOM), is considered as one of the most successful electricity markets in Europe. Well balanced and low-carbon generation mix in Romania includes 28 percent from hydro, 25 percent from coal, 17 percent from nuclear, 15 percent from natural gas and 11 percent from wind. The overall surplus of electricity and abundant amount of wind resource in the Romanian power market are attractive for Moldova. The average Day Ahead Market price at OPCOM from 2015 to June 2018 is 39.3 EUR/MWh, which is 1.9 EUR/MWh cheaper than an average current contract price with MGRES. Besides this price advantage in Romanian markets, an access to Romanian markets is expected to create downward pressures on bid prices offered from MGRES and Ukrainian suppliers due to increased competition. As the Romanian organized power market is competitive and transparent, interconnection to the Romanian market is expected to increase the transparency and competition in the Moldovan power market. By securing an access to Romanian market, Moldova will be able to diversify its electricity supply.

13. **To complement the interconnection infrastructure development, IFIs agreed to support the sector reform and the electricity market establishment.** The GoM committed to continue implementing the electricity sector reform with support from development partners under a sector reform program – the Power Sector Action Plan (PowerSAP) - to enhance the establishment of a competitive electricity market in Moldova while ensuring cost recovery for the investment. PowerSAP was developed jointly by EBRD, EIB, EU, EnCS, and the World Bank in partnership with the GoM. PowerSAP will support various reform agenda including: ME’s corporatization; establishment of third party access to network; drafting of Wholesale Electricity Market (WEM) rules; and capacity enhancement for ANRE. Transmission tariff review is also part of PowerSAP to ensure the cost recovery of the proposed asynchronous interconnection investments. In parallel, the Bank’s ongoing ESMAP funded study, Promoting Competition in Moldovan Electric Power Market through Regional Integration (P166195) will identify an optimal electricity market design to enable the efficient operation of the new infrastructure and to achieve competitive and transparent markets. The market study, which will be concluded in early 2019, preliminary recommended Moldova to set up a common bidding zone with Romania, integrate with Romanian OPCOM, and implement auctioning of cross-border capacities. The recommendation is aligned with recommendations of the Bank’s previous study: Electric Power Market Option Study (P146401).

14. **While asynchronous interconnection is a near-term priority, synchronization of Moldovan and Ukrainian power systems with ENTSO-E systems is pursued in parallel as a long-term goal.** Moldova signed a Partnership Agreement with Ukraine and Romania to support the synchronization of the Ukraine and Moldovan power systems with the entire European power system. In 2016, a consortium comprised of ENTSO-E member TSOs conducted a Pre-Feasibility Study on the synchronous interconnection, which analyzed the feasibility of the proposed synchronization and necessary measures to synchronize with the ENTSO-E system. In July 2017 both countries agreed to carry out catalogue of measures necessary for the synchronization, including a comprehensive Feasibility Study, tests and measurements of generation
units, and harmonization of operational handbooks among others. The two sides have started a series of tests at their generation plants in Ukraine to study the possible synchronous operation with support from USAID and will start steady and dynamic stability studies under the Feasibility Study in 2019 followed by a one-year island operation of the two systems and a harmonization of operational handbooks. The World Bank estimates that the preparation process for the ENTSO-E synchronization could take more than ten years, based on its over 20-year experience of ENTSO-E synchronization supports for Poland, Romania, Hungary, and more recently Turkey.

C. Proposed Development Objective(s)

Note to Task Teams: The PDO has been pre-populated from the datasheet for the first time for your convenience. Please keep it up to date whenever it is changed in the datasheet. Please delete this note when finalizing the document.

Development Objective(s) (From PAD)
The Project Development Objective is to increase capacity and improve reliability of the power transmission system in Moldova.

Key Results

15. Key Results (TBC)
   The PDO-level results indicators are the following:
   (a) Increased transmission capacity along the Vulcanesti-Chisinau corridor (MW)
   (b) Reduced interruptions in the electric path between Chisinau and Vulcanesti (number)

16. The intermediate results indicators are as follows:
   (a) Construction of the 400 kV Vulcanesti – Chisinau transmission line (km);
   (b) Substation extension in Vulcanesti and Chisinau completed (Yes/No);
   (c) SCADA/EMS and MMS upgraded (Yes/No);
   (d) Percentage of women employed by Moldelectrica (percentage); and
   (e) Percentage of members in affected communities along the OHTL reporting that their engagement in the public consultations under the project was useful and represent their views and preferences (percentage).

D. Project Description

17. The Project will consist of four components: Component 1: Construction of the 400 kV Vulcanesti-Chisinau overhead transmission line (US$46.3 million); Component 2: Extension of two existing substations (US$14 million); Component 3: Strengthening power dispatch and metering system (US$7.2 million); and Component 4: Technical Assistance and Project Management (US$2.5 million).
18. More detailed Project description is provided below:

19. **Component 1: Construction of Vulcanesti-Chisinau overhead line (US$46.3 million).** This component will support domestic transmission network reinforcement that will enable the effective operation of cross-border interconnection between Moldova and Romania. The Component will finance the construction of a new 400 kV Vulcanesti – Chisinau single circuit OHTL (approximately 158 km) at a total cost of US$46.3 mln. The new 400 kV Vulcanesti-Chisinau line is necessary to satisfy the N-1 contingency criteria, but also enable stable operation of the proposed BtB station. Single circuit configuration with a conductor capacity of 900 MW is confirmed as sufficient to achieve the necessary reliability and capacity targets. The current project design proposes connection of the new 400 kV OHTL to Vulcanesti SS and Chisinau SS\textsuperscript{10}. The component will also support a supervisor consultant (firm), which will supervise project implementation.

20. **Component 2: Extension of two existing substations (US$14 mln)** consisting of (i) upgrade of 330 kV Chisinau SS (US$12 mln); and (ii) extension of 400 kV Vulcanesti SS (US$2 mln). The upgrade and extension of the two existing Ss at Vulcanesti and Chisinau are necessary to accommodate the new 400 kV OHTL. To allow the connection of the new 400 kV OHTL to Chisinau SS, which does not have 400 kV level, three single-phase 400/330 kV auto-transformers with an installed capacity of 210 MVA each (630 MVA in total) will be installed within the existing substation area. A new 400 kV bay, 330 kV bus bar extension, 400/330 kV switch gears, and control and protection devices will be also installed in the SS. As Vulcanesti SS has 400 kV voltage level, the modification is smaller compared with Chisinau SS. New 400 kV bay with associated switchgears will be installed in a vacant space within the substation area. A supervisor consultant will be hired to support project implementation.

21. **Component 3: Strengthening of power dispatch and metering system, (US$7.2 million).** This Component will finance (i) upgrade of ME’s Supervisory Control and Data Acquisition System / Energy Management System (SCADA/EMS) (US$3 mln); (ii) upgrade of ME’s Meter Management System (MMS) (US$2 mln); (iii) construction of a new headquarters (HQ) building for ME to accommodate the new Central Dispatch Center (CDC) (US$2 mln); and (iv) consulting services for technical specifications for SCADA/EMS and MMS (US$0.2 million). Existing SCADA/EMS and MMS are outdated and require immediate upgrades. The new SCADA/EMS will be installed within the new CDC inside the new HQ building. The site proposed for the new HQ building is located within the industrial zone in peripheral Chisinau about 5 km east from the city center. The proposed building will be constructed on a 1.5 ha vacant land plot owned by ME. The site is currently used as a warehouse and open storage area for equipment and materials, and a parking yard. The new HQ will be a five-story building accommodating office spaces for about 300 employees and would allow dispatch center functionality in line with modern requirements. ME’s current CDC is outdated and unsuitable for a modern SCADA/EMS and MMS. Relocation of ME’s HQ and CDC to the new site will increase security, improve employees work environment, and enable to accommodate new technologies.

\textsuperscript{10} OHTL’s alternative connection scheme. ME proposes an alternative connection scheme, where the OHTL connects from Chisinau SS directly to the BtB, while BtB is then connected to Vulcanesti SS and Romanian Isaccea SS. Presumably the alternative connection scheme has slightly better reliability by creating a loop among Chisinau-BtB-Vulcanesti-MGRES-Chisinau, however it will require construction of the additional 400 kV bay in the BtB, and will not require construction of the Vulcanesti SS. The Project progresses. The two connection schemes are presented in more detail in Annex 2.
The existing CDC will be kept as back-up requiring significantly lower lease and maintenance costs.

22. **Component 4: Technical Assistance and Project Management** (US$2.5 million). This component will finance (i) project management (US$1.45 mln); (ii) environmental audit of PCB pollution at Vulcanesti SS (US$0.2 mln); (iii) capacity building and training to MEPIU and ME (US$0.5 mln); and (iii) ME and MEPIU audit (for 5 years) (US$0.35mln). The detailed scope of the component will be agreed during the project implementation.

E. Implementation

Institutional and Implementation Arrangements

23. MoEI will oversee the project implementation on behalf of the GoM. MoEI’s role will be to ensure that the project is implemented in an efficient manner, consistent with the project objectives and agreements signed with IDA and other development partners. Daily project implementation duties will be delegated by the MoEI to its MEPIU, established under the Government’s Decree No 1276 of December 21, 2000, as an independent legal entity, responsible for the day-to-day management of the IFI-funded projects, with specific focus on procurement, contract administration, financial management, accounting, and reporting. MEPIU, as the fiduciary agent of the MoEI, has therefore almost 20 years of experience in implementing World Bank and other donors’ projects (including Energy I, closed in 2003 and Energy II, closed in 2012). The unit is staffed with highly qualified and experienced professionals, both in technical, as well as in financial management and procurement aspects. MEPIU will also take on the reporting functions on behalf of the Government. MEPIU will carry out the fiduciary responsibilities (disbursement, financial management, procurement, and monitoring & evaluation) under the Project in compliance with the requirements and safeguard policies of the World Bank, to be outlined in the Credit Agreement and Project Operational Manual. MEPIU will manage flow of funds on behalf of the ME for the purposes of the project.

24. ME will be supporting the MEPIU on technical aspects. ME’s management and technical personnel will be closely involved in all stages: procurement design, preparation of bidding documents (especially technical specifications), evaluation of bids and selection of contractors, engineering design, construction, installation, testing, commissioning, and quality control. The proposed project TA support under Component 4 and allocate budget to finance training and capacity building activities for ME with special focus on environmental/social safeguards, fiduciary aspects – procurement and financial management, and communication during the project implementation. Detailed implementation arrangements can be found in Annex 3 and will be presented in the POM.

25. The Bank has facilitated collaborations among the GoM, development partners, and other key stakeholders from the beginning of the overall project. Specifically, the High-level Donors Coordination Group and Technical Working Group jointly launched by the Bank and GoM since 2016 are aimed to ensure better coordination among all stakeholders for preparation of the overall asynchronous interconnection program and for effective and efficient implementation of agreed sector reforms.
B. Results Monitoring and Evaluation Arrangements

26. The Project will be monitored by teams in ME and the MEPIU/MoEI, based on agreed monitoring arrangements and required reporting procedures. ME has the capacity and experience to monitor investments from a technical and safeguard perspective, and MEPIU has gained significant experience in monitoring the implementation process and measuring outcomes. Progress will be reviewed using the PDO and intermediate results indicators.

27. The MEPIU will be responsible for providing the required quarterly implementation progress status reports and elaborating an M&E manual as part of the PIM, which will guide the overall M&E activities. Activities to be monitored include the timely and efficient construction and commissioning of the transmission line and associated substations, quality control, and processing of payments to contractors approved by the owner’s engineer. The PIU will also closely monitor the effective implementation of all safeguards instruments (Environmental and Social Management Plan (ESMP), Resettlement Action Plans (RAPs), citizen engagement activities and the Grievance Redress Mechanism designed under of the project, as well as the successful completion of studies and training activities.

28. Project-specific data on the agreed monitoring indicators will be collected by ME. Section VI presents the project’s Results Framework that defines specific outcomes and results to be monitored under this project. In addition, the World Bank will carry out the normal review procedures for procurement, regular supervision missions, financial monitoring reports, quarterly reports provided by ME, independent annual financial audits of the project, and financial statements of ME.

29. The monitoring of and reporting on Component 4 will be the responsibility of the ME. The project manager for the ME will, through the PIU, be responsible for monitoring and reporting on the implementation progress of various technical assistance activities and outcomes achieved. Monitoring and reporting procedures will be guided by the M&E framework.

Note to Task Teams: The following sections are system generated and can only be edited online in the Portal. Please delete this note when finalizing the document.

F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

The proposed Bank Project is a part of the entire asynchronous interconnection project for Moldova, where the four donors – World Bank, EBRD, EIB and EU – will have distinct financing contributions. The overall asynchronous power interconnection project consists of two major parts: (a) Construction of a new BtB station, which will be financed by EBRD/EIB/EU; and (b) Construction of a new 400 kV Vulcanesti – Chisinau single circuit OHTL (approximately 158 km), and extension of existing 400kV Vulcanesti SS and upgrade of 330kV Chisinau SS, which will be financed by the World Bank. The two projects will be financed independently, hence there are two separate standalone projects. The 400 kV Vulcanesti-Chisinau OHTL route crosses a number of 31 territorial administrative units within ATU Gagauzia, Cahul, Taraclia, Cimislia,
Hincesti and Ialoveni rayons, and Chisinau Municipality. The Vulcanesti substation is located in the Southern part of the country close to Romanian and Ukraine borders, while the Chisinau substation is located at 15 km south from the city center of Chisinau. In addition, the Bank Project will finance the construction of a new headquarters (HQ) building for ME to accommodate the new Central Dispatch Center at an existing land belonging to ME in Chisinau.

G. Environmental and Social Safeguards Specialists on the Team

Mohamed Ghani Razaak, Social Specialist
Cesar Niculescu, Environmental Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

<table>
<thead>
<tr>
<th>Safeguard Policies</th>
<th>Triggered?</th>
<th>Explanation (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td>Yes</td>
<td>In 2017 the GoM and the EBRD, EIB, EU and WB decided on financial arrangement for the overall asynchronous power interconnection project. It was agreed that EBRD/EIB/EU will finance the construction of the BtB and the WB will finance the construction of the new OHTL and affiliates SSs extension/upgrade. The two projects will be financed independently, hence these are two separate standalone projects. The World Bank and the EBRD/EIB/EU agreed to carry out project’s preparation and implementation in parallel, based on the feasibility study committed by EBRD in 2015 for the overall asynchronous power interconnection project, and prepared by the independent consultant consortium. The feasibility study included also the preparation of an Environmental and Social Impact Assessment (ESIA) together with a general Environmental and Social Management and Monitoring Plan (ESMMP), a Land Acquisition and Compensation Framework (LACF) and a Stakeholder Engagement Plan (SEP) in line with the best international practice and relevant EBRD and World Bank requirements. All these documents (ESIA, ESMMP, LACF and SEP) were</td>
</tr>
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</table>
publicly disclosed in-country and on the Bank's website prior to project appraisal.

Though the ESIA was done for the overall interconnection including the BtB, the Bank-financed transmission project is designed to operate independently of the BtB. Thus, a clear distinction should be made between the EBRD/EIB/EU and the WB funded projects, including for the purpose of ESIA and parties’ responsibilities for safeguards under the two projects respectively. WB’s responsibilities within ESIA for social and environmental safeguards will only refer to the above four components funded by WB.

All environmental and social safeguards related aspects included in the whole ESIA package were thoroughly reviewed by the Bank in a manner consistent with the Bank’s Safeguards Policies and Procedures, World Bank Group (WBG) General Environmental Health and Safety Guidelines, documented in a technical summary note next to the existing ESIA, and disclosed in-country and on the Bank’s website prior to project appraisal.

Overall, it was concluded that the environmental and social impacts associated with the Project identified as part of ESIA, together the proposed mitigation measures are satisfactory for the WB Environmental and Social Safeguards requirements. Since the detailed design for the transmission line construction will be developed at the early stage of project implementation, the existing ESIA and its general ESMMP were found the most appropriate environmental instruments to address project’s environmental concerns in accordance with OP 4.01. The ESIA/ESMMP has identified most likely impacts and determined the processes, procedures and responsibilities for the preparation and implementation of site-specific ESMPs, including mitigation measures and monitoring plans, to be developed once detailed design for each specific site becomes available.

Overall the ESIA confirmed that the Bank’s financed project’s environmental and social impacts will be
site-specific, not irreversible, and manageable if the mitigation measures are duly achieved through the implementation of the ESMMP. The potential negative environmental impacts identified for the Bank project are those normally associated with transmission line construction as well as operations and maintenance (O & M). The construction phase will require clearing of vegetation to prepare the site for the construction of transmission towers, campsites, material storage facilities, substations and access roads. Other potential impacts, besides those generated by the construction activities, include potential damages to protected areas and/or biodiversity, including species and habitats of conservation concern. Toxic pollution from the transmission line construction and the substation extensions can also result from the leakage of PCBs from equipment that contains such hazardous substances.

The Project will finance a technical audit/assessment for the entire Vulcanesti substation site to identify the exact level of pollution and type of contaminants. The technical audit/assessment will provide recommendations for appropriate and the most cost-efficient clean-up solutions/measures, which could be then separately funded by a grant such as GEF or EU dedicated grants.

The likely impacts of the operational phase include electromagnetic field emissions, the collapse of towers and/or transmission lines due to inclement weather, mishaps resulting from power theft, etc. Also, both the construction and O&M phases could result in on-site or near-site soil and water contamination from spillage of potentially hazardous materials, air pollution from dust and noise from vehicles and machines, fires, the destruction of scenic beauty, etc. Potential impacts are related to safety and public health due to electrocution risk to the public, by direct contact with high-voltage equipment and lines, and also by induced voltages, especially in the case of vehicles and farm machinery that transit beneath transmission lines. Humans and farm animals can also risk electrocution or nuisance
shock when inadequate grounding at substations energizes metal objects.

In addition, the Project’s Component 3 will finance the construction of a new headquarters building for MEnE in an existing land in Chisinau belonging to Moldelectrica. This sub-project is anticipated to have limited, reversible and insignificant environmental and social impacts due to building construction activities. Anticipated environmental impacts during the construction works will be noise pollution, emissions of particulate matter/dust to air, domestic waste water, disposal of excavation materials and hazardous materials. A site-specific ESMP was prepared, publicly consulted and disclosed in-country and on the Bank’s website prior to project appraisal.

<table>
<thead>
<tr>
<th>Performance Standards for Private Sector Activities OP/BP 4.03</th>
<th>No</th>
<th>Not Applicable/ No private sector activities under the project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Habitats OP/BP 4.04</td>
<td>Yes</td>
<td>The line construction and maintenance activities might also affect vegetation and wildlife as it requires clearing of land in forested and rural areas. Roads, towers construction, and transmission line installation requires land clearance along the 158 kilometers length OHTL that may lead to loss of native plant species which impacts animal species in natural habitats. Hence, OP/BP 4.04 is triggered and ESIA, and respectively the site-specific Environmental and Social Management Plans (ESMPs) to be prepared shall provide mitigation measures to ensure effective compliance with the policy requirements. The eventual vegetation, trees, and native plants losses will be compensated so that the net result will be a zero-biodiversity loss.</td>
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</table>

The proposed OHTL route mostly crosses agricultural lands and grasslands, but also some areas with important habitats for bird species – lakes, slopes, continental steppes, forest belts etc. For this reason, a particular, more detailed impact assessment of the LEA 400 kV Vulcănești-Chișinău project on biodiversity have been carried out by independent consultants, and the main results and conclusions of the Biodiversity Impact Assessment Report were
considered in the final ESIA and ESMMP. Because the project area will be designed perpendicular on the migration corridors, the impact assessment on biodiversity have been focused on the main risks – electrocution, collision and habitat loss – and took into consideration all migratory birds that are crossing the proposed area, with a particular attention to vulnerable, endangered and critically endangered species at national and international level. It was considered a large area of 10 km on both sides of the OHTL route, taking into consideration natural protected areas on this surface and requirements of migratory bird species. Based on these assessments, the ESIA and the general ESMMP proposed detailed mitigation measures to reduce the mortality risks associated with the electrocution and collision to ensure that the residual risks for the birds are minimal.

Consideration of the key effects of the proposed project indicates that the comprehensive set of mitigation measures, when implemented, will reduce significantly the potential negative impacts of the transmission line. Such mitigation will ensure that the birds’ risks associated with electrocution, collision and loss of feeding/resting habitats are minimized and ensure that the EBRD’s performance requirements, the World Bank safeguards, and national regulation are met. In addition, it should be stated that transmission line, poles and towers may be of benefit to birds for nesting, roosting or perching, especially in those areas where suitable natural nest sites and roosting substrates are rare, such as in cultivated areas and plains. The integrity of the protected areas will not be affected if the proposed mitigation will be implemented.

No important bird species for conservation will be affected by loss of breeding habitat.

No critical habitats were identified within the project area of influence.

All expected adverse environmental impacts will be avoided and/or mitigated through provisions adopted during the project preparation phase.
and/or the development of the transmission line final route design.

<table>
<thead>
<tr>
<th>Section</th>
<th>Triggered</th>
<th>Description</th>
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<tbody>
<tr>
<td>Forests OP/BP 4.36</td>
<td>No</td>
<td>The project is not expected to have impacts on forests, and it is confirmed that there shall be no commercial logging undertaken. The transmission line crosses very small areas of forests, protection belts and shrubs areas. However, mitigation aspects are covered in the environmental impact assessment (ESIA/ESMMP) and will be further specified in the site-specific ESMPs. An appropriate vegetation management plan shall be developed in order to minimize the trees cutting within the working corridor. The exact number of trees to be cut, including the species and the owners, will be established during detailed design. As such, the eventual vegetation, trees, native plants losses will be compensated so that the net result will be a zero-biodiversity loss.</td>
</tr>
<tr>
<td>Pest Management OP 4.09</td>
<td>No</td>
<td>The project does not include any activities related with pest management.</td>
</tr>
<tr>
<td>Physical Cultural Resources OP/BP 4.11</td>
<td>Yes</td>
<td>Transmission line construction can affect cultural sites such as areas of archaeological, historical, or religious significance. Burial sites and buried artifacts may be disturbed, especially when trenches are required for transmission towers. Therefore, OP 4.11 was triggered to include procedures and responsibilities for managing works in culturally and historically significant areas and accidentally discovered or chance find cultural artifacts to ensure that Cultural Heritage assets will not be adversely affected by World Bank-financed projects.</td>
</tr>
<tr>
<td>Indigenous Peoples OP/BP 4.10</td>
<td>No</td>
<td>There are no indigenous people in the project area as defined by OP/BP 4.10.</td>
</tr>
<tr>
<td>Involuntary Resettlement OP/BP 4.12</td>
<td>Yes</td>
<td>The policy is triggered because the Project requires land both for permanent and temporary use. Since the Bank financed project is limited to the OHTL construction, main land needs are for transmission towers and related construction sites for the 158 km OHTL that will cross several administrative units, namely Autonomous Territorial Units of Găgăuzia, Cahul, Târâcia, Leova, Cimişlia, Hânceşti, Ialoveni and Chişinău districts. The OHTL is proposed to consist of 511 towers to be located at an average distance of 350 meters from each other. Even</td>
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though the proposed OHTL route was designed to be at a significant distance from human settlements, still there will be some impacts associated with acquisition of lands and relocation of built structures. The land acquisition will potentially have an impact on land use, access to lands, ownership and incomes in the communities dependent upon the land. A total of eight settlements are found located within the corridor of impact and more than 75% of the land passed by the OHTL is farmlands, vineyards or orchards, which are mostly used as leased lands owned by the State. Hence, most probable impacts would be temporary economic displacement during construction period. However, since the exact locations of OHTL towers are unknown at this stage, actual impacts including number of project affected persons and land lots cannot be enumerated to prepare site-specific instruments such as RAPs. Therefore, framework approach has been used and a Land Acquisition and Compensation Framework (LACF)/Resettlement Planning Framework (RPF) have been prepared outlining the broader impacts, potential mitigation measures and entitlement framework to guide safeguards for due diligence tasks of the project. The potential adverse social impacts including resettlement of households, access restriction and relocation of built structures within the right-of-way corridors will be assessed through preparing site specific safeguards instruments such as RAPs. In preparing site specific safeguards instruments, due attention will be paid to ensure vulnerable groups including women who are de-facto household heads are clearly listed as beneficiaries of compensation and rehabilitation assistance will be included to address specific social issues of such groups, if needed.

<table>
<thead>
<tr>
<th>Safety of Dams OP/BP 4.37</th>
<th>No</th>
<th>The project does not include any dams.</th>
</tr>
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<tbody>
<tr>
<td>Projects on International Waterways OP/BP 7.50</td>
<td>No</td>
<td>Project does not have any impact on international waterways. This project will not involve discharges to or extraction of water from any international waterways or any tributary or other body of surface or groundwater that is a component of any such waterway. This project will not involve discharges to or extraction of water from any international</td>
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The World Bank
Moldova Competitive Power Market Project (P160829)

<table>
<thead>
<tr>
<th>Projects in Disputed Areas OP/BP 7.60</th>
<th>No</th>
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<tbody>
<tr>
<td></td>
<td>The project will not be located in disputed areas as defined by OP/BP 7.60.</td>
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<tr>
<th>KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT</th>
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</table>

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The Project's environmental and social impacts will be site-specific, not irreversible, and manageable if the mitigation measures are duly achieved through the implementation of the general ESMMP and subsequent site-specific ESMPs.

The construction of a new OHTL as well as replacement of key equipment and infrastructure facility improvements in high voltage substations may cause physical displacement and resettlement issues. There will be land acquisition and potential temporary access restrictions for farmers and others may result in economic displacement. These adverse social impacts including resettlement of households, access restriction and relocation of built structures within the right-of-way corridors and around the substations can be mitigated and safeguards instruments will be prepared.

Establishing the OHTL route has been done to prevent and minimize the impact on protected areas and biodiversity. The crossing of natural sensitive areas has been avoided as much as possible. The proposed project will not have negative effects nor damage the natural and social environment.

Although no towers will be located within State Natural Protected Areas, the line will come within 0.2 km to 8.4 kilometers of several of these areas. A total of 25 towers will be within or close to Emerald sites (sites that are proposed to become protected areas) and important forests and bird areas. According to the preliminary technical study, the project area is located outside of Emerald sites (with one exception – Bugeac Steppe), and potentially will not affect the habitats of the protected species. ESIA study recommended the deviation of OHTL route in order to avoid if possible the crossing of Bugeac Steppe. As a result of this deviation the OHTL length increased at 158 km comparing with the previous option (149 km) and the number of towers increased consequently (511 towers comparing with 492 towers).

All expected adverse environmental impacts will be avoided and/or mitigated through provisions adopted during the project preparation phase and/or the development of the transmission line final route design. At the detailed design stage, the optimization of the route will be continued so as to avoid passing through or near sensitive areas, especially the Emerald site Bugeac Steppe.

The likely impacts of the operational phase include electromagnetic field emissions, the collapse of towers and/or transmission lines due to inclement weather, mishaps resulting from power theft, etc. Also, both the construction and O&M phases could result in on-site or near-site soil and water contamination from spillage of potentially hazardous materials, air pollution from emissions related to potential SF6 insulation of high voltage equipment, from dust and noise generated by vehicles and machines, from fires, the destruction of scenic beauty, etc. Potential impacts are related to safety and public health due to electrocution risk to the public, by direct contact with high-voltage equipment and lines, and also by induced voltages, especially in the case of vehicles and farm machinery that transit...
beneath transmission lines. Humans and farm animals can also risk electrocution or nuisance shock when inadequate grounding at substations energizes metal objects.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:
Potential environmental and social impacts are not significant. No potential indirect and/or long term impacts due to anticipated future activities in the project area are envisaged. The Project’s environmental and social impacts will be site-specific, not irreversible, and manageable if the mitigation measures are duly achieved through the implementation of the ESMPs. Finally, it is expected that the Project will have a positive impact in the short and long term, not only at local level, but also at national level. This impact is related to job creation, improved access to alternative sources of electricity, security of supply and improved competition on the market.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.
The ESIA assessed three alternative OHTL routes based on technical (length of line, number of towers, soil conditions, etc.), environmental (crossings of protected areas, rivers, forests, soil type, etc.), socio-economic (location of villages, land use, etc.), and cultural (archaeological sites, monuments, etc.) factors among others. The final route was selected as the one that minimized impacts on land use and disturbance to local populations as well as reduced impact on protected areas. As much as possible, the route will run alongside other existing linear features such as roads, other public infrastructure sites, and the borders of agricultural fields. It should be noted that at the detailed design stage, the tower locations can be adjusted taking into account standard design level surveys and land acquisition plan implementation.

Consideration of the key effects of the proposed project indicates that the careful routing of the new 400 kV transmission line together with the identification of a comprehensive set of mitigation measures, which when implemented, reduces the potential effects of the transmission line significantly. This indicates that the project objective of identifying technically feasible and economically viable solution which causes the least disturbance to the environment has been meet. The described mitigation will ensure that the risk species associated with electrocution and collision are minimized, and also ensure low residual impacts for the birds, in accordance with the EBRD’s performance requirements, the World Bank safeguards, and national regulation are met.

Integrity of the protected areas will not be affected if the proposed mitigation will be implemented.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.
The Ministry of Economy and Infrastructure (MoEI) will take overall responsibility for project implementation delegating safeguards responsibilities to its Project Implementation Unit (MEPIU). MEPIU is staffed with highly qualified and experienced professionals, both in technical and safeguards aspects, will ensure project implementation in accordance with the Operations Manual (OM), as well as that the EMP provisions are fully integrated into project implementation, conducting monitoring and reporting required by the World Bank. The main responsibilities with regard to day to day implementation of safeguards requirements are assigned to Moldelectrica (ME), who are well prepared and have long time experience in this regard. ME has demonstrated its technical capacity to maintain, rehabilitate and invest into the transmission system, and has experience in implementing Bank funded projects, as well as EBRD/EIB funded projects. MEPIU has qualified environmental and social specialist including consultants to also support safeguard management and implementation functions. MEPIU will follow the mechanism of development and execution of environmental documents in line with the requirements of environmental legislation, good international practice and the World Bank OP 4.01.
An ESIA and a general ESMMP has been developed and individual (site-specific) Environmental and Social Management Plans (ESMPs) will be produced for each subproject, including detailed environmental mitigation measures, institutional framework for preventative arrangements, environmental monitoring program. This will be achieved through the mechanism for the continuous refinement and effective implementation of the environmental mitigation measures, including careful selection of transmission route, location of the towers and substations in a way that would prevent as much as possible and environmental damage, destroying of landscape, pollution of air and soil; ensuring labor safety and health impacts during construction, observation and monitoring etc. The ESMPs provisions will form part of the design documents for the Project and will be included in construction contracts for proposed activities, both into specifications and bills of quantities. Furthermore, the Contractors will be required to include the cost in their financial bids and required to comply with the ESMP provisions while implementing the project activities.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.
During the preparation of this project including the preparation of the ESIA package informed consultations were held with key stakeholders. This informed consultation will be continued during the implementation of the project. In addition, the project has a very robust Grievance Redress Mechanism (GRM) for documenting and addressing concerns raised by citizens.

B. Disclosure Requirements

<table>
<thead>
<tr>
<th>Environmental Assessment/Audit/Management Plan/Other</th>
<th>Date of receipt by the Bank</th>
<th>Date of submission for disclosure</th>
<th>For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors</th>
</tr>
</thead>
</table>

"In country" Disclosure
Moldova
26-Dec-2018

Comments

Resettlement Action Plan/Framework/Policy Process

<table>
<thead>
<tr>
<th>Date of receipt by the Bank</th>
<th>Date of submission for disclosure</th>
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</thead>
<tbody>
<tr>
<td>03-Dec-2018</td>
<td>27-Dec-2018</td>
</tr>
</tbody>
</table>

"In country" Disclosure
C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?
Yes
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?
Yes
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?
Yes

OP/BP 4.04 - Natural Habitats

Would the project result in any significant conversion or degradation of critical natural habitats?
Yes
If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?
Yes

OP/BP 4.11 - Physical Cultural Resources

Does the EA include adequate measures related to cultural property?
Yes
Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?
Yes

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?
Yes
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?
Yes

The World Bank Policy on Disclosure of Information
Have relevant safeguard policies documents been sent to the World Bank for disclosure?
Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?
Yes

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?
Yes

Have costs related to safeguard policy measures been included in the project cost?
Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?
Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?
Yes

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APPROVAL

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| Koji Nishida |

Approved By

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| 08-Feb-2019 |
| Practice Manager/Manager: | Sameer Shukla  
| 08-Feb-2019 |
| Country Director: | Satu Kristiina Kahkonen  
| 10-Feb-2019 |

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