



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

Appraisal Stage | Date Prepared/Updated: 18-Jul-2019 | Report No: PIDISDSA25813



BASIC INFORMATION

A. Basic Project Data

Country Turkey	Project ID P162762	Project Name Turkey Energy Efficiency in Public Buildings	Parent Project ID (if any)
Region EUROPE AND CENTRAL ASIA	Estimated Appraisal Date 22-Jul-2019	Estimated Board Date 22-Oct-2019	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing	Borrower(s) Republic of Turkey	Implementing Agency Ministry of Energy and Natural Resources, Ministry of Environment and Urbanization, General Directorate of Construction Works	

Proposed Development Objective(s)

The project development objectives are to reduce energy use in central government buildings and inform the development of sustainable financing mechanisms to support a scaled-up, national program for energy efficiency in public buildings.

Components

1. Energy efficiency investments in central government buildings
2. Technical assistance and implementation support

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	200.00
Total Financing	200.00
of which IBRD/IDA	150.00
Financing Gap	0.00

DETAILS

World Bank Group Financing



International Bank for Reconstruction and Development (IBRD)	150.00
Non-World Bank Group Financing	
Trust Funds	50.00
Clean Technology Fund	50.00

Environmental Assessment Category

B-Partial Assessment

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context



Country Context

Turkey has achieved commendable economic and social development results since the early 2000s, raising it to the world's 17th largest economy and establishing it as a global presence. Macroeconomic stability, broad social and economic reforms, closer economic ties with the European Union (EU), and a transformation of a significant part of the economy away from agriculture into manufacturing and services were core contributors to Turkey's growth. Turkey's Gross Domestic Product (GDP) per capita rose from US\$3,084 in 2001 to US\$10,602 in 2017; poverty incidence more than halved and extreme poverty fell even more dramatically. Turkey's growth for the 2010-2016 period continued to be impressive, averaging 6.7 percent annually, in sharp contrast to many other middle-income countries. Despite being hit by adverse shocks in 2016 linked to the failed coup attempt, the economy has shown notable resilience: growth in 2017 was at 7.4 percent, supported by a substantial fiscal stimulus. However, the economy has entered a challenging period in mid-2018 with output contracting, unemployment rising, and inflation at close to 20 percent. Tight monetary policy and the release of a New Economic Program in September 2018 provided some confidence to investors after a period of intense market volatility. But the economy remains vulnerable to market sentiments and the focus now is on implementation of critical reforms to sustain Turkey's development achievements.

Turkey's current Government was formed in July 2018, following national elections held in June 2018. In September 2018, the Government launched the National Economic Program (NEP) which sets out Turkey's macro-fiscal and structural reform strategy and is a comprehensive statement of the Government's policy intent for the near-term. The NEP is being implemented while the Government prepares for approval of Turkey's 11th Development Plan for the 2019-2023 period, which will set out the longer term structural reforms to be pursued in order to address Turkey's development challenges, such as improving productivity, tackling energy supply security and energy efficiency to ensure sustained growth, and building the skills of its population to reap the benefits of greater global integration.



Sectoral and Institutional Context

Energy efficiency is critical for Turkey to sustain its economic growth while meeting its commitments for climate change and environmental sustainability. Turkey's energy intensity (that is its energy use per unit of GDP, or 0.12 toe/2010 US\$1,000 of GDP in 2016) was slightly higher than that of OECD countries (0.11) and EU countries (0.07 to 0.10) and compares favorably with many of its neighboring countries in Eastern Europe and the Balkans. However, as energy use per capita in Turkey rises (from its current 1.5 toe per capita compared with 4.2 in OECD countries), its energy intensity is expected to grow. This high intensity negatively impacts energy security—Turkey's energy imports have increased in recent years, from US\$37.2 billion in 2017 to about US\$43.0 billion in 2018, and it accounts for almost 19 percent of the country's total imports. It also has a negative impact on the environment, with the energy sector accounting for 72.2 percent of the country's greenhouse gas (GHG) emissions in 2017.

The government has recognized the importance of energy efficiency (EE) as evidenced by its inclusion in various policy documents. These include the Energy Efficiency Law (2007), Secondary legislation on Energy Performance of Buildings (2009), Electricity Market and Security of Supply Strategy (2009), the National Climate Change Strategy (NCCS, 2010-2020), the National Climate Change Action Plan (NCCAP, 2011-2023), the Energy Efficiency Strategy (2012) and the successive Energy Efficiency Action Plan (2016). The government places energy efficiency as a key component of its energy security strategy through its 10th and draft 11th Development Plans. The National Energy Efficiency Strategy of 2012 calls for a 10 percent reduction in energy intensity across all sectors, and the National Energy Efficiency Action Plan (NEEAP), approved in January 2018, calls for US\$11 billion investment in energy saving measures to reduce consumption by 23.9 million tons equivalent petroleum (14 percent) by 2023.

Turkey is also committed to energy efficiency in the context of climate, having ratified the UNFCCC in 2004 and its Kyoto Protocol in 2009. The national greenhouse gas (GHG) inventory submitted to the UNFCCC Secretariat in April 2019 reports the total GHG emissions in 2017 were 526.3 million tons of CO₂ equivalent. Turkey's per capita CO₂ emissions for 2017 was 6.6 tons of CO₂ equivalent, well below OECD average of 9.02, and CO₂ emissions intensity was 0.30 kgCO₂/2010 US\$, which is above OECD average of 0.23. In 2015, Turkey submitted its Nationally Determined Contribution to UNFCCC, for the first time committing to reduce its GHG emissions by 21 percent by 2030 compared to the business as usual scenario. This is to be achieved through several new policies and measures, including those related to energy efficiency improvements. However, the financing sources and mechanisms to implement such policies and measures are recognized as key constraints, which caused Turkey to request the Bank to explore climate finance possibilities in early 2019.

Recent World Bank and other assessments have identified substantial potential for energy efficiency gains across all sectors. A 2015 World Bank assessment of Turkey's EE framework¹ concluded that the policy and regulatory framework was strong, as are the various programs and financing mechanisms to support the industrial sector which represents almost 30 percent of the energy consumed. However, substantial potential remains for rationalizing energy use, with estimates of 25 percent in the industrial sector and 30 percent in the building sector. Suitable financing schemes were identified as a gap across all sectors. Over the past decade, the government and international financial institutions (IFIs) have made several billion available in credit lines and guarantee schemes to support industrial facility modernization and EE which have contributed to more than 9.7 million toe of savings. However, the building sector has lagged behind.

Global experience has shown that energy efficiency improvements in the public buildings sector can help stimulate market development and lead by example. Many countries in Europe, North America and Asia have implemented aggressive public building renovation programs as a way of building capacity of the market actors (energy auditors, technical designers and architects, construction firms, energy service companies or ESCOs, etc.), spurring market development and demonstrating results. Turkey is keen to follow this experience, and has initiated some pilot efforts, including energy audits of 166 central government buildings conducted by the Ministry of Energy and Natural



Resources (MENR) in 2014-15. In 2016, MENR commissioned a study to assess the potential for EE in public buildings. The study estimated that there are about 175,280 public buildings (including central, regional and municipal facilities) in operation across the country. Based on a recent Bank assessment, the technical EE potential in public buildings is about 10,043 GWh annually requiring about TRY 64.5 billion (US\$18 billion) of investments. Assuming about 25 percent of the total investment is financially viable in creditworthy institutions, and about 20 percent of those are willing to invest, the market potential would be about TRY 5.6 billion (US\$1 billion) per year which would lead to about 1,500 GWh per year and almost TRY 840 million (US\$150 million) in annual budgetary savings.

Despite attractive payback periods and energy savings potential identified through energy audits, energy efficiency financing in public buildings in Turkey is plagued by several policy and market barriers. These include:

- a. *Perverse incentives*, as public building administrators have little incentive to lower costs as it would generally lead to a corresponding budget reduction. Such investments may not result in any positive recognition while potentially introducing new risks from new technologies and practices.
- b. *Public procurement policies* which typically favor the lowest upfront cost, and lack agreed methods for selecting and contracting ESCOs.
- c. *Lack of budgets or financing* since government building administrators often lack sufficient budgetary resources for costly capital upgrades, are not able to retain the energy cost savings across budget years to repay the financing and are generally subject to borrowing restrictions and other financing limitations.
- d. *Limited technical and implementation capacity* across central (line ministry), municipal government agencies, banks and service providers to undertake and review energy audits, select viable EE measures, assess quality of designs, mobilize financing, and support the implementation and monitoring of EE projects. The energy audit industry remains at the theoretical stage since most building audits were never implemented, resulting in energy savings not deemed credible by investors and financiers.
- e. *High transaction costs* for individual public building EE projects, which may be small (typically US\$250,000-350,000 per building), yet complex to prepare, implement and finance.

These barriers above have collectively contributed to an undeveloped public building renovation market in Turkey, and, as a result, a lack of credible data on actual investment costs for EE renovations and energy savings, and nascent energy audit, renovation and ESCO² business models. Without these building blocks in place, and a lack of consensus on how best to develop the market, no sustainable or scalable financing mechanisms have been developed nor supporting institutional structures, for public building programs to be implemented. Thus, there is an opportunity to develop an initial investment program managed by the public sector targeting central government buildings to help catalyze the public building renovation market and generate demonstrable energy savings and social co-benefits. Common ownership of central government buildings and public financing would allow for early investments to be bundled to reduce costs and inform future programs in terms of typical investment costs, energy savings, typical EE measures, returns on investment, etc. for broader dissemination. This initial phase could also pilot newer technologies and approaches (e.g., piloting use of local ESCOs, deep building renovations and near-zero energy buildings, renewable energy technologies), standardize approaches and audits/ contracts, bundle smaller projects to help lower purchasing and implementation costs and build capacity of all the relevant market actors (e.g., building administrators, energy auditors, designers, construction firms, ESCOs, equipment suppliers, financiers). Eventually, a scaled-up, national-level public-sector program could help bring in new equipment suppliers and service companies

¹ Turkey: Institutional Review of Energy Efficiency, May 2015.

² An energy service company, or ESCO, is a company that enters into an energy performance contract with a client, agreeing to reduce energy use at an agreed level with their compensation tied to verified energy savings. A variety of firms could bid on ESCO tenders, including EE consulting firms (or “EVDs” in Turkey), engineering companies, construction firms, equipment suppliers, leasing companies and qualified service providers.



and thus increase competition, reduce costs, create jobs and foster a sustainable ESCO industry—as shown in other countries such as Canada, Germany, Japan, the Republic of Korea, and the United States.

The private sector could contribute substantially to the energy efficiency agenda, but multiple challenges remain.

While there are about 40-45 registered EE consulting companies in Turkey, only about 10-12 are active as ESCOs. These firms have had some successes in the industrial sector mostly with single-technology retrofits, but have not been able to penetrate the public buildings market due to lack of agreed methods for selecting and contracting ESCOs and budgeting rules, their weak balance sheets, perceived risks of creditworthiness and repayment from public clients, the need for comprehensive multiple-technology solutions and a lack of clear rules of the game (e.g., distrust of third-party energy audits, process for bidding and selection, protocols for determining and verifying energy savings, etc.). Without a critical mass of investments, the market has been unable to test and refine various approaches and the government has been reluctant to make sweeping policy and regulatory changes without ‘proof of concept’.

Mobilizing finance for development remains a core principle for a national program for energy efficiency in public buildings.

Leveraging the private sector and optimizing the use of scarce public resources is a critical element for a proposed, national program. As noted above, there are a range of policy, market, financing and knowledge barriers that will need to be addressed by an initial phase of the program supported with public funds. The proposed policy support and other technical assistance activities (e.g., public budgeting and procurement reviews, development of a national program with sustainable financing mechanisms, development of business plan for İller Bank) will be important elements to introduce more sustainable financing mechanisms in subsequent phases and design a broader program to serve the full public buildings (both central and municipal buildings). Eventually, the goal will be to crowd in commercial financing from local banks and private investment through ESCOs in order to develop and sustain a fully market-based program.

The provision of CTF resources will be critical for early market development.

Significant efforts are needed to overcome the above-mentioned barriers and develop a sustainable and scalable public building renovation program in Turkey. Designing and demonstrating a process for conventional and deep building renovations³ (audits, designs, renovation and verification of energy savings), document investments and actual energy budgetary savings, seek improvements in the audit/design/construction processes over time, provide training to contractors, etc. to build awareness of EE potential, credibility of energy and budgetary savings, build capacity of contractors, etc. As the market develops, the risks associated with such investments are better understood and the experience, capacity and track record of the local ESCOs improves, a shift to IBRD financing and eventually commercial will be initiated. CTF funds will be critical to enable this market development and transformation by helping to build capabilities within the market and defray the risks associated with financing public building renovations.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

The project development objectives are to reduce energy use in central government buildings and develop sustainable financing mechanisms to support a scaled-up, national program for energy efficiency in public buildings.

³ Conventional renovations refer to implementation of EE measures with simple payback periods typically under 8-12 years and 20-30% energy savings. Deep renovations are designed to maximize energy savings (usually 50+% energy savings) with payback periods in the 15-20-year range. Deep renovations typically focus more on building envelop measures, such as thicker wall/roof insulation and better windows (e.g., triple-pane) and doors in order to minimize heating and cooling loads.



Key Results

Progress towards the PDO would be monitored according to the following indicators: (a) projected lifetime energy savings from energy efficiency (EE) investments in central government buildings (MJ); and (b) design and approval of sustainable financing mechanisms to support a national program for energy efficiency in public buildings.

D. Project Description

Project Components

The Project would include two components: (i) energy efficiency investments in central government buildings; and (ii) technical assistance (TA) and project implementation support.

Component 1. Energy efficiency investments in central government buildings (US\$150 million IBRD, US\$46.2 million concessional CTF loan). Under this component, MoEU will support the renovation of central government and central-government affiliated buildings (i.e., public buildings under central line ministries, such as schools and hospitals). It is expected that such subprojects will generate demonstrable energy cost savings and social co-benefits, which would form the basis for developing a national-level program for EE in public buildings. While there is no database of eligible buildings, a previous MENR study, supported under the IBRD/GEF SME Energy Efficiency Project estimated that there are about 175,280 public buildings in Turkey, of which at least 5% are likely to be central government or affiliated buildings, which would require about US\$1.8 billion of investment. It is estimated the Project could renovate 700-800 buildings, depending on the building sizes and measures undertaken. The PIU has identified an initial subproject pipeline consisting of 50 buildings for Year 1 and over 100 buildings for Year 2. This positive response from the line ministries is due to the current formulation of fully grant financing (line ministries are not obligated to include the cost of the renovations in their budget), the outsourcing of work (line ministries will not have to undertake any additional work, procurement, etc., which will be outsourced to MoEU's PIU), and the benefits line ministries receive from renovated building with improved performance and lower costs.

- a. *Component 1(a): Conventional EE investments in central government buildings [US\$155 million, including US\$130 million IBRD, US\$25.2 million CTF concessional loan].* Under this subcomponent, MoEU will renovate eligible buildings, based on periodic calls for proposals, to improve EE performance. Agreed building eligibility criteria include: (i) ownership by (or assigned to) the central government (excluding publicly-owned enterprises, private buildings with public agency tenants); (ii) must be structurally and seismically safe⁴, with no high flood risk, not had a full EE renovation in the past 10 years and be at least 5 years old⁵; and (iii) no plans for office moves, closure, building demolition or privatization. If Project applications exceed available annual investment thresholds, applicants will be ranked based on existence of energy audits, energy performance certificates or a registration ID in MENR's portal for monitoring energy consumption, higher energy consumption (kWh/m².year), larger number of beneficiaries, and broad geographic coverage.

⁴ For buildings constructed after 2000, proper licenses and certifications should be available to ensure seismic compliance based on the latest regulation. For buildings constructed before 2000, an engineering assessment may be required to confirm if the building meets the current seismic code for structural stability and safety. If deficiencies are identified, these costs can be added to the cost of the renovation but only if the payback period is under 12 years. If not, the building will have to be removed from the Project.

⁵ Buildings older than 5 years show reasonable energy savings potential and buildings older than 20 years may have seismic risks beyond the Project scope.



Eligible investments⁶ have been agreed and are further elaborated in the Project Operations Manual. The Project would seek to ensure minimum technical performance of the renovated buildings (i.e., Turkish Class C energy performance certificates or higher) and should include a minimum savings of 20%, an investment cost of at least US\$50,000, but not more than US\$1,000,000, and a maximum simple payback period of under 12 years for the combination of measures.

CTF funds under this component would be used to support deeper renovations that offer substantial energy savings. Subprojects eligible for deeper renovation measures should provide at least 20% in additional savings (compared with the savings from only measures under the 12-year payback period) with a payback period under 20 years. For such investments, measures with a combined payback period under 12 years will be financed from the IBRD loan and the CTF concessional loan would cover the additional incremental costs associated with the deeper renovations (i.e., measures with payback periods between 12 and 20 years).

- b. *Component 1(b): Energy service company investments [US\$30 million, including US\$20 million IBRD, US\$10 million CTF concessional loan].* For selected buildings with sufficient baseline service quality (i.e., proper heating and cooling), MoEU will renovate select eligible buildings using ESCOs under energy performance contracts, as agreed with the line ministries and beneficiaries. Unlike traditional audit-design/works contracts, these would involve an initial audit followed by a design-build contract based on energy savings with some payments tied to verified energy savings. In order to defray the higher risks and uncertainties associated with ESCO contracts, it is proposed that the initial US\$10 million worth of ESCO contracts be financed by the CTF concessional loan and, once the model has been sufficiently tested and refined, remaining ESCO contracting would be financed and scaled-up by the IBRD loan. ESCO procurements are also expected to allow newer technologies to be incorporated under Component 1b.
- c. *Component 1(c): Pilot near-zero energy buildings [US\$11 million CTF concessional loan].* Under this component, MoEU would seek to renovate 5-10 buildings with high demonstration value (e.g., architectural or engineering university, technical convention center) in the different climatic zones in Turkey in order to showcase the concept of NZEB integrated design and renovation techniques (e.g., cool/green roofs, ventilated facades, daylighting/shading, water recycling/harvesting, advanced controls) and newer technologies (e.g., building-integrated solar PV, condensing boilers, geothermal heat pumps). Such technologies and approaches will be evaluated and assessed for possible inclusion as core measures for Component 1a in later years of the Project and the larger national program.

Component 2. Technical assistance and implementation support (US\$3.8 million CTF grant, US\$4 million in-kind contributions from MoEU and MENR⁷). While the Energy Efficiency Law and various regulations provide a strong basis for EE in the public sector in Turkey, additional efforts are required to refine secondary legislation and provide the necessary support for Project implementation to ensure its sustainability and eventual scale-up. This component would support various TA activities, to be managed by both MoEU and MENR.

- a. *Component 2(a): TA to MoEU [US\$2.1 million CTF grant, US\$2.0 million in-kind contribution from MoEU].* This subcomponent will include the following TA activities: (i) project development costs for early

⁶ Eligible investments would include building envelope measures (roofs/wall insulation, windows, doors), heating/cooling systems, water heating, pumps/fans and lighting. Some renewable energy (RE) applications (e.g., rooftop solar PV, biomass heating, solar water heating, geothermal heat pumps) could also be considered if they meet the economic criteria and are primarily used to offset the building's electricity/fuel use (rather than to generate power to sell to the grid). A limited amount of funds could be allocated for non-EE measures (e.g., rewiring, minor structural repairs, painting, seismic safety, etc.) provided that the overall Project could still have a simple payback period under 12 years.

⁷ Project funds will not be used to pay MoEU and MENR staff, office space or operating expenses, so staffing and offices, etc. will be included as in-kind contributions from MoEU and MENR.



subprojects including communication and outreach to solicit applications for future years, experts for energy audit and technical design reviews, technical support to assess ESCO proposals, energy savings monitoring (subproject's first year), monitoring software, etc.; (ii) support evaluations of early subprojects and NZEB pilots including developing case studies to document investment costs, measures implemented, actual energy savings and lessons; (iii) comprehensive training program for building renovations for design/construction firms, energy managers, MoEU staff and provincial branch offices, women in EE field, operations and maintenance for building administrators, etc.; and (iv) support program management and PIU, including technical and fiduciary/safeguard capacities.

- b. *Component 2(b): TA to MENR [US\$1.7 million CTF grant, US\$2.0 million in-kind contribution from MENR].* The TA activities under MENR would include: (a) capacity building for ESCO market development through training of ESCOs, regulatory support and development of procedures and templates (e.g., audits, M&V plans, arbitration mechanisms), case studies from early subprojects; (b) energy monitoring from subprojects and enhancements to the building consumption database (ENVER portal); (c) review of regulatory adjustments needed to support EE in public buildings and ESCOs, including budgeting rules to allow for budget savings retention, external financing of public building renovations, public procurement rules to support ESCOs in public sector and energy-efficient equipment and materials; (d) development of appropriate financing agreements, such as energy service agreements, consistent with Turkish Law for use with central and municipal buildings; (e) preparing of an investment plan for Iller Bank to join the program in 1-2 years (to extend coverage to municipal buildings); and (f) development of a national program plan for EE in the public sector, including central and municipal buildings, public lighting, water, etc., relying on sustainable and more commercial financing mechanisms to serve the broader public sector in Turkey.

Rationale for CTF funds. The CTF funds will support the systematic development of the market. This will include supporting the process of building renovations—from the energy audit through verification of savings and operations and maintenance—in order to build the capacity of the service industry, demonstrate and disseminate results and build credibility of the business and financing proposition for EE investments in buildings. As the market develops, the risks associated with such investments are better understood and the experience, capacity and track record of the local ESCOs improves, a shift to IBRD financing will be initiated. In parallel, CTF funds will be critical to develop a framework for a sustainable, national program. Therefore, critical CTF grant funds would be used to help develop appropriate financing agreements, such as energy service agreements, for use by Iller Bank and other financiers for future phases of the program and to develop the local ESCO market so eventually the vast public building stock could be renovated using revolving schemes and more commercial financing sources. Eventually, it is expected that some banks (e.g., Iller Bank, TKYB) would be able to enter the market and eventually private ESCOs and commercial banks would be able to finance these buildings without the need for public financing.

Transformation potential. The public building market in Turkey is substantial, with more than 175,000 public buildings and investment potential in the tens of billions of US dollars. The Government adopted its NEEAP Plan in January 2018 which calls for US\$11 billion to be invested and a national reduction in energy use of 14 percent by 2023. The NEEAP includes 10 actions related to the building sector, including investment programs to be launched by MoEU and Iller Bank. The construction and equipment industries are well developed and eager to access the very large public buildings market. The social sectors, covering education (schools, universities, dormitories) and health centers comprise over 56,018 buildings (about one-third of the public building market) across the country and are tasked to identify and implement EE measures, offering huge replication potential. Government office buildings account for an additional 39,164 buildings creating additional market



opportunities. Therefore, this Project will establish a critical platform to realize this vast market and has the potential to transform the building renovation market in Turkey. The additional elements of deep renovations (under Comp 1a) and NZEBs (under Comp 1c), building-integrated RE (Comp 1a, b and c), ESCOs (Comp 1b), etc. will provide additional boosts to the market as will the development of a national, scaled-up program for EE in public buildings. An important selection criterion for the NZEB pilots will be the demonstration value, such as an architecture or engineering university, to provide a showcase for what is possible to help inspire the next generation.

E. Implementation

MoEU's General Directorate for Construction Affairs (GDCA) would assume overall responsibility for the Project and serve as the main implementing agency. A project implementation unit (PIU) has been established to manage Components 1 and 2a, related to the public building sector and Project implementation. The PIU, currently includes 10 staff and will hire additional consultants, would be responsible for: (i) raising awareness about the Project; (ii) building screenings to ensure eligible criteria are met; (iii) procurement for the energy audits, detailed designs and technical specifications, renovation works, construction supervision, energy savings verification/energy performance certificates, and TA consultancies; (iv) supervision, review and approval of all energy audits, designs and renovations; (v) financial management; (vi) safeguards compliance; and (vii) Project monitoring and reporting. In order to define the roles and responsibilities and ensure a common understanding on the building renovation process and procedures, Memorandum of Understandings (MoUs) will be signed between the MoEU and line ministries (or central government institutions), and Project Initiation Letters will be countersigned by the subproject beneficiaries at the beginning of each subproject.

The PIU will collaborate with the relevant ministries or central government institutions to identify and select buildings to be renovated and to coordinate implementation of the renovation works with the subproject beneficiaries. For coordination and implementation of the Project, MoEU will chair a Project Monitoring Committee (PMC). The PIU will liaise closely with MENR on any issues within MENR's areas of expertise and may have consultations with other relevant agencies and organizations (e.g., line ministries, municipal associations, NGOs).

MENR will also have a PIU to manage Component 2b, which comprises TA activities under its competency such as the design of suitable financing agreements for banks, development of an investment plan for Iller Bank, ESCO training, development of M&V protocols, development of an arbitration mechanism for energy savings disputes, etc. In addition, a Working Group (WG) consisting of MoEU and MENR staff will be established to support the PIU in the procurement, supervision and approvals of energy audits for building renovations and NZEB pilots, as well as ESCO contracts.

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

Project has a national scope and will be available to all central government buildings in Turkey. Exact locations of the sub-projects will not be known during the project preparation and appraisal stages. Site specific safeguard issues will be addressed during the sub-project's ESMP/ESMP checklist stage.



G. Environmental and Social Safeguards Specialists on the Team

Arzu Uraz Yavas, Social Specialist
Esra Arikan, Environmental Specialist
Merve Ayse Kocabas Yurtkuran, Environmental Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	<p>In general, environmental impacts from the project are expected to be mainly positive, by considering energy consumption reduction, which has direct linkage to decrease in GHG emissions of Turkey. Emission reduction of pollutants such as sulfur dioxide, nitrogen oxides and dust and/or reductions in emissions of greenhouse gases such as carbon dioxide are major environmental benefits of energy efficiency project. The activities defined under the project include energy efficiency upgrades in government buildings, which may require small scale construction works in existing public buildings. In this respect, no new construction is expected, and therefore no new land will be permanently used or converted. Environmental impacts will be limited with noise, dust generation, vehicle emissions, waste management and workers health and safety. Impacts expected to be temporary and easily manageable. In this regard, project is defined as Category B under OP 4.01 and an Environmental and Social Management Framework (ESMF) is suggested as Environmental and Social Management instrument since the exact sub-projects will not be fully identified during project preparation stage.</p> <p>ESMF covers the estimated impacts for small-scale construction, renovation, retrofitting and installation works relating to the activities planned under this component. The ESMF includes a checklist Environmental and Social Management Plan (ESMP) which is tailored for building rehabilitation and renovation activities.</p>



Sub-project ESMPs will mainly address i) establishing and adhering to general good housekeeping, ii) emission (including dust, noise, etc.) control, iii) workers health and safety, iv) use of non-toxic materials, and v) proper waste management as well as hazardous waste management. Waste and hazardous waste management in building renovation and energy efficiency works are critical since they may include handling and disposal of asbestos containing material (ACM), use and disposal of lead based/containing paint, disposal of mercury containing compact fluorescent lamps and other fluorescent bulbs, etc. and these are detailed in the ESMF as guidance. Turkey improved its environmental management legislation on hazardous waste management during the EU acquis phase, therefore it is not expected that there will be major gaps to fulfill WB safeguard standards. Turkey licensed several facilities as temporary and final disposal (incinerators, etc.) sites for hazardous wastes. In addition, there are licensed hazardous waste recovery sites (waste oil, accumulators, etc.). The ESMF includes an assessment section on availability and capacity of such facilities to be used as waste disposal sites.

The sub-project ESMPs will be a part of the bidding documents and subsequently become part of the construction contract.

No category A-type subprojects nor category A-type activities will be implemented within the project.

In general, the project's social impacts are expected to be positive, since the energy efficiency upgrades in municipal government buildings will contribute to the creation of 'green jobs' and lead to better working conditions and higher comfort levels for staff and users of the retrofitted buildings (e.g. in terms of heating, window sealing, air, and light quality). Improving energy efficiency in local government facilities and operations is expected to lead to several positive social benefits, such as lower energy costs, economic benefits through job creation and market development, better overall



working environment in municipal buildings and demonstrated leadership in energy efficient investments by municipalities. No significant negative social effects are anticipated as part of this project, as none of the investments supported are expected to have any large-scale, significant and/or irreversible negative impacts, nor is any land acquisition or displacement of people or economic activities planned. Since the reconstruction works will be carried out in existing facilities used by members of the municipality, there will be a temporary transitional impact for these users. This impact can be minimized through thorough, two-way communication with the management of the building (e.g. to minimize work disruptions for the users as much as possible) and through the proactive provision of information to users.

The ESMF puts forward measures for carrying out public consultations, ensuring public safety (e.g. traffic or pedestrian safety) and putting in place a grievance redress mechanism to respond to possible end user complaints linked to the energy efficiency upgrades (e.g. noise or dust due to the construction works). MoEU has a hotline `Alo181` which is both accessible via phone and website by citizens and other stakeholders. Since this hotline covers all issues related with the Ministry, the PIU will establish a transparent and comprehensive project level GRM before project implementation phase with the aim of resolving and administering the grievances that could be encountered during renovation of public buildings. Grievances will be addressed at multiple levels.

Performance Standards for Private Sector Activities OP/BP 4.03	No	
Natural Habitats OP/BP 4.04	No	Project only involves small scale construction/rehabilitation works in existing public buildings. No impacts are foreseen on natural habitats. Any project triggering OP 4.04 will be ineligible for project financing.
Forests OP/BP 4.36	No	Project does not involve any activities which will trigger this policy. Project only involves small scale construction/rehabilitation works in existing public buildings.



Pest Management OP 4.09	No	Project will not involve any land clearing or relevant use of pesticides. Neither it will involve purchasing of pesticides.
Physical Cultural Resources OP/BP 4.11	Yes	Mainly, the project will not involve significant excavations and demolition. On the other hand, some of the old municipality buildings may registered as first degree cultural asset by Ministry of Culture and Tourism. In such cases, MoEU will prepare necessary reports and obtain the relevant permit from related institutions of Ministry of Culture and Tourism.
Indigenous Peoples OP/BP 4.10	No	There is no indigenous people identified in Turkey.
Involuntary Resettlement OP/BP 4.12	No	MoEU will ensure that: (i) the buildings selected by the municipalities will not require land acquisition to carry out the energy efficiency retrofits; (ii) the energy efficiency retrofits will not impact the public buildings users negatively through possible loss of income or assets; (iii) there are no other issues (pending court cases, legacy issues etc.) that may trigger OP 4.12 on the lands acquired previously which are used for this project. As a part of its due diligence, the World Bank will request the borrower to screen, through a checklist, each building to justify that there are no prevailing conditions to trigger OP 4.12, and that all buildings concerned by the reconstruction works are publically owned and allocated for municipalities. Any municipal building that would require land acquisition and thus trigger OP 4.12 will not be eligible for energy efficiency retrofits. Consequently, OP 4.12 has not been triggered.
Safety of Dams OP/BP 4.37	No	The Project will not finance construction or rehabilitation of any dam. The project is also not dependent on any existing dam or dam under construction.
Projects on International Waterways OP/BP 7.50	No	Project does not have any activity which will have impact on international waterways.
Projects in Disputed Areas OP/BP 7.60	No	N/A.



KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

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:

Within the scope of the WB OP requirements, simple construction works triggers OP 4.01 due to anticipated limited environmental and social impacts which will occur within close project boundaries on existing footprints and will be mostly of a temporary nature. The triggering of OP 4.01 necessitates the preparation of general E&S management and “good housekeeping” instruments, an Environmental and Social Management Framework (ESMF) has been prepared accordingly. The proposed Project is classified as ‘Category B’ by considering its potential temporary, anticipated and limited environmental impacts. The projects which have potential of falling into Category A due to their significant impacts (i.e. projects with wide footprint areas, close to sensitive areas) will not be eligible. Besides, the green field activities which are on critical habitats or which may have significant impact on natural habitats will also be ineligible. Therefore, projects which will be conducted in the areas that are already in use, and/or impacted by anthropogenic activities and which are allocated/designated to MoEU for governmental facilities will be considered eligible.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:
No indirect or long term environmental and/or social impacts are foreseen for the proposed project.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.
Not relevant.

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 Project will be implemented by the General Directorate of Construction Affairs (GDCA) of the Ministry of Environment and Urbanization (MoEU) that has extensive technical capacity for outsourcing and managing design and construction of public buildings. The Project Implementation Unit (PIU) of the GDCA, which will be established for the project and will be responsible for overall implementation, management and coordination of the proposed Project. Within the scope of the project, the design and supervision consultants to be hired by MoEU will prepare Environmental and Social Management Plans (ESMPs) for each public building project they will be implementing. The ESMPs will include an ESMP checklist which is explained in the ESMF. This ESMPs will be an integral part of the works contract for each of the public buildings. MoEU prepared the ESMF to provide guidance to the contractors for fulfilling the requirements of the national environmental law and WB Operational Policies on Environmental Assessment (OP 4.01) and Physical Cultural Resources (OP 4.11).

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

MoEU conducted a stakeholder meeting to share the ESMF with relevant interested and affected parties on May 3, 2019. The final ESMF incorporates the minutes of the stakeholder meeting and will be disclosed as final version to the public via MoEU’s and WB’s websites. Besides, each of the ESMPs will be made publicly available on MoEU’s website and the physical copies will be accessible to the public at the offices in the construction yard during the construction activities. In this manner, all stakeholders will have full access to the ESMPs which provides information regarding the potential environmental and social impact and the details of the mitigation measures to be taken. During the life of the project different level of stakeholder engagement activities with different scopes will be applied by means of



varied visual and event-oriented stakeholder engagement tools: meetings organized with the Provincial Directorates of MoEU, brochures, social media, videography, etc. Within the scope of the engagement activities the government staff and citizens will be informed about the project objectives, characteristics of the public buildings to be renovated and the targeted social impacts of the project.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank	Date of submission for disclosure	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
20-Jun-2019	26-Jun-2019	

"In country" Disclosure

Turkey

26-Jun-2019

Comments

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 4.11 - 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

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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Approved By

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Country Director:	Eavan O'Halloran	18-Jul-2019