Cover Page for CTF Program Approval Request			
1. **Country/Region**	Turkey	2. **CIF Project ID#**	(Trustee will assign ID)
3. **Program Title**	Turkey Residential Energy Efficiency Finance Facility (TuREEFF) Turkey Municipal Sustainable Infrastructure Facility (MunSIFF) Turkey Sustainable Energy Finance Facility II (TurSEFF II)		
4. **Type of CTF Investment**	☐ Public	X Private (Financial Intermediated)	
5. **Terms and Amount Requested in million USD equivalent**	Loan Harder term: USD 60 million minimum[1] Softer term: - Grant: USD10million maximum[2] **Total: USD70 million of which USD 39 million for immediate allocation[3]**		
6. **Implementing MDB**	EBRD		
7. **National Implementing Agency**	n/a		
8. **Contact Information of MDB Focal Point and Project/Program Task Team Leader (TTL)**	Headquarters Focal Point: Andreas Biermann biermana@ebrd.com	Operation Leader: EBRD project enquiries: Tel: +44 20 7338 7168; Fax: +44 20 7338 7380 projectenquiries@ebrd.com	

[1] Up to EUR 10 million to be committed in EURO. It is likely that more than USD60 million will be requested for concessional loan co-finance, and less than USD 10 million for grant for technical assistance.

[2] Including USD 2 million for TurSEFF II

[3] Under the prioritisation exercise of the MDB Committee, USD39 million were allocated to EBRD for this facility, while under Phase II of the Investment Plan for Turkey, the CTF Trust Fund Committee endorsed up to USD 70 million. The absorption capacity of EBRD in the next 12 months is USD70 million. In order to reduce paperwork and streamline approval processes, EBRD is requesting CTF Trust Fund Committee endorsement for the whole amount in the CTF Investment Plan for Turkey Phase II, split into an immediate allocation of USD 39 million (split into USD 37million harder finance and USD 2 million grant) in line with the outcome of the prioritisation exercise, and a future allocation of USD 30,794,758 million (split into USD22,794,758 harder finance and USD 8 million grant) once i) funds become available and ii) the facility is being selected for funding under the prioritisation mechanism.

9. **Brief Description of Project/Program (including objectives and expected outcomes)**
• **Turkey Residential Energy Efficiency Financing Facility** ("TuREEFF") is a pilot framework of USD 160 million, addressing the large sustainable energy opportunities in the private residential sector in Turkey. • The Framework will consist of EBRD's funding of USD 129 million, available to the participating banks, in the form of either i) rated senior bond notes issued under the PFIs' existing diversified payment right (DPR) programmes; or ii) on a senior unsecured loan basis. • EBRD's funding will be complemented by USD 31 million of concessional funding and funding for technical assistance from the Clean Technology Fund, to help overcome the broadly recognised barriers to residential energy efficiency. • EIB will co-finance the Framework with the EUR equivalent of USD 160 million. • Individual transactions under TuREEFF will be approved in accordance with the standard EBRD Board approval delegation rules. • The Framework will be supported by a comprehensive technical assistance programme, as further described in the section on Associated TA (p.6). Sub-projects will cover residential energy efficiency-related sectors, from building envelope insulation to high-efficiency household equipment, and will be selected according to clear eligibility criteria. • **Turkey Municipal Sustainable Infrastructure Finance Facility** ("MunSIFF") is a pilot framework of up to EUR 50 million (USD equivalent USD 65 million)[4], addressing the large sustainable energy opportunities in the municipal sector in Turkey. • The Framework will consist of EBRD's funding of EUR 40 million, available to the participating banks, in the form of either i) rated senior bond notes issued under the PFIs' existing diversified payment right (DPR) programmes; or ii) on a senior unsecured loan basis. • EBRD's funding will be complemented by EUR 15 million of concessional funding and funding for technical assistance from the Clean Technology Fund and the EU IPA Programme, to help overcome the barriers to developing projects in municipalities. • Individual transactions under MunSIFF will be approved in accordance with the standard EBRD Board approval delegation rules. • The Framework will be supported by a comprehensive technical assistance programme, as further described in the section on Associated Technical Assistance (p.7). Sub-projects will cover municipal sustainable energy projects including but not restricted to ESCOs, municipal building refurbishment, municipal services such as waste disposal, transport, district heating, or lighting, and will be selected according to clear eligibility criteria. • **Turkey Sustainable Energy Finance Facility II** ("TurSEFF II") is a continuation of the CTF co-financed TurSEFF, which was available from 2010 to 2012, and has considerably over performed in transforming the market for energy efficiency lending to SMEs in Turkey. • The request includes USD 2 million for technical assistance to support the expansion of the USD 200 million TurSEFF II framework by at least USD 65 million of co-finance from EIB and JBIC[5]. Further technical assistance will be provided by the EU.

[4] USD equivalent based on an exchange rate of EUR 1/USD 1.3.

[5] TurSEFF I had an EBRD/CTF/JBIC investment volume of USD285 million, by comparison

10. **Consistency with CTF Investment Criteria**[6]	
(1) Potential GHG Emissions Savings	Significant, 0.3-0.54mtCO_2/yr
(2) Cost-effectiveness	High, 0.1tCO_2/USD CTF invested
(3) Demonstration Potential at Scale	High, there is a very considerable municipal and residential demand for energy efficiency and sustainable infrastructure
(4) Development Impact	High, see page 8 for details
(5) Implementation Potential	High, based on existing relationships with banks
(6) Additional Costs and Risk Premium	Medium, based on need to provide appropriate incentives for local banks to develop lending in these markets
(7) Financial Sustainability	High/Medium (see page 7)
(8) Effective Utilization of Concessional Finance	High, providing market transformation at reasonable cost
(9) Mitigation of Market Distortions	High, by offering the product to a wide range of local banks (see page 14)
(10) Risks	Low, Turkey is a developed market and the EBRD has considerable experience with this kind of product (see page 14)

11. **Stakeholder Engagement**
Stakeholder engagement will take place in line with EBRD policy. For transactions of this kind, no specific need for stakeholder engagement beyond EBRD requirements is foreseen. EBRD has engaged in depth with the Government of Turkey regarding the development of the Phase II investment plan prior to the November CTF Trust Fund Committee meeting. It is expected that in particular for the municipal facility considerable stakeholder engagement will take place.

12. **Gender Considerations**
An assessment of gender impact of the facilities will be undertaken during due diligence by the relevant team in the EBRD prior to their Final Review by the EBRD investment committee. Any actions suggested as a result of this assessment will be integrated into the final versions of the facilities.

13. **Indicators and Targets (consistent with results framework)**	
Core Indicators	**Targets**[7]
(a) CO2 savings	0.30 Mt CO2e/yr (0.54 Mt CO2e/yr) by the end of the investment period
(b) Investment volume (co-finance)	USD 475 million (USD 795 million)
(c) Number of loans	70,000 (120,000) residential loans issued 6 municipal loans issued

[6] See page 6 onwards for further details

[7] Targets are calculated for the initial allocation of USD 39 million only. Numbers in brackets are pro-rata adjusted upwards for USD 70 million. Excludes TurSEFF II.

(d) Energy Savings	57,670 toe/yr (104,000 toe/yr) of primary energy equivalent saved	
Development Indicator(s)[8]: • Reduction in the use of solid fuels • Modernisation of apartments	• 27,400 (50,000) tons of solid fuels (coal) avoided per year • 70,000 (120,000) apartments brought to modern standards	
14. **Co-financing**[9]		
TuREEFF	Amount (in million USD)[10]	Type of contribution
• Government	n/a	n/a
• MDB	155 (280)	Investment (EBRD)
• Private Sector	40 (70)	Investment (banks and borrowers)
• Bilateral	190 (350)	Investment (EIB)
• Others	10 (15)	EU Technical Assistance Cash Funding
MunSIFF	Amount (in million USD)[11]	Type of contribution
• Government	n/a	n/a
• MDB	52	Investment (EBRD)
• Municipal Service Providers	20	Investment (banks and borrowers)
• Others	8	EU Technical Assistance Cash Funding
Total	475 (795)	
15. **Expected Date of MDB Approval**		
September 2013		

[8] See also page 8.

[9] This excludes any co-financing raised by TurSEFF II, which will be counted under the original CTF TurSEFF RMF.

[10] For USD 39 million CTF share, USD 70 million value in brackets

[11] For USD 39 million share, USD 70 million value in brackets

CTF PRIVATE SECTOR PROPOSAL

(The section below relates only to the immediate request for USD 39 million)

Name of Project or Program	Turkey Residential Energy Efficiency Finance Facility (TuREEFF)	
CTF amount requested[12]	Investment Advisory services component Implementation and supervision budget **Total**	USD 36,794,758 USD 2,000,000 USD 205.242 **USD 39,000,000**
Country targeted	Turkey	
Indicate if proposal is a Project or Program	The request is for two programmes to support energy efficiency improvements and sustainable energy investments through residential refurbishment and municipal investment, and for technical assistance support to TurSEFF II (USD 2 million).	
Transfer of Funds by the Trustee to the Implementing Entity	Express authorization of the CTF Trust Fund Committee is requested to allow for the full up-front transfer of CTF resources required for the Investment Component to EBRD prior to the first commitment by EBRD pursuant to a signed loan agreement with a participating borrower (the Investment Component).	

DETAILED DESCRIPTION OF PROGRAM

Fit with the Investment Plan

The proposed TuREEFF programme is in line with Phase II of the Turkish Country Investment Plan. It is the first request under the allocation of USD 70 million to EBRD for bank-intermediated lending to residential, SME/industrial, and municipal energy efficiency. The application has been broken into two parts:

i) an immediate allocation request of USD 39 million in reflection of the lack of availability of funding for Phase II Country Investment Plans to cover the whole request for USD 70 million, and

ii) an authorisation for allocation of an additional USD 31 million to complete the Phase II investment plan elements from EBRD, to be committed by the Trustee once i) additional funds have become available and ii) the facility has been prioritised under the prioritisation mechanism.

Link to existing CTF Operations

TuREEFF and MunSIFF are closely linked to the previous TurSEFF framework, the highly successful EBRD credit line to five Turkish banks, which has led to an investment of up to USD 500 million in energy efficiency in Turkey since 2010, and which is now being extended by another USD 265 million from EBRD, EIB, and JBIC.

TuREEFF in particular is based on the experience with TurSEFF, where a minute amount of the loan volume went into the residential sector, and the relationships built with Turkish banks in the implementation of TurSEFF.

In order to continue to enable TurSEFF to expand, it is proposed to use USD 2 million of CTF funding from the Phase II programme for technical assistance to support the implementation and expansion of TurSEFF II.

MunSIFF is a pilot to extend local bank sustainable energy lending into the municipal sector, and it is based on policy dialogue with the Turkish government and the increasing experience of EBRD in the Turkish municipal market.

The EBRD SEFF approach has proven in other countries to be a very effective mechanism for financing sustainable energy improvements in a fragmented sector like the residential and municipal sector that are constrained by financial, institutional, legislative, capacity and information barriers.

[12] For investment and grant this refers only to the initial allocation, while for the implementation and supervision budget this refers to the whole of the USD 70 million, i.e. no further request will be made if the additional USD 31 million are being released. Due to the basis of the calculation, there would be no change in the volume of the request if it were split.

Description of the Programme

Investment

TuREEFF

TuREEFF is intended to be a financing vehicle to support the practical implementation of the new Turkish buildings energy efficiency legislation, as well as the transposition of the EU Energy Performance of Buildings Directive ((recast) Directive 2010/31/EC) in Turkey.

TuREEFF will be available to commercial banks in Turkey (to each and jointly "Participating Financial Institutions" or "PFIs") for on-lending to private residential clients, including individual homeowners, groups of homeowners, housing associations, condominiums and cooperatives, as well as private service providers, including but not limited to housing management companies, ESCOs, and vendors of high-efficiency household equipment.

The Facility will follow a well-proven EBRD Sustainable Energy Finance Facility (SEFF) model, which provides an effective financing mechanism for small-sized sustainable energy investments, and has been tested in e.g. Bulgaria, and Slovakia. The model combines technical assistance, long-term funding, leverage of marketing/distribution channels of financial intermediaries and other market players, policy dialogue, and concessional financing into a single structure.

Eligibility requirements will be limited to high performing technologies and measures that are at least 20% beyond the current Turkish regulation requirements.

MunSIFF

MunSIFF will address the municipal sector, especially waste, and public buildings. It will build on EBRD technical assistance in these two areas, and it will aim to integrate finance to the local banking sector with EBRD expertise on project development and industrial resource efficiency. MunSIFF is based on the experience of EBRD with similar facilities in Hungary and Slovakia, and the experience of the Bank in investing directly in the municipal sector.

For instance, Less than 20% of recyclable glass is recovered from the waste, compared with the 67% average in the EU. EBRD is already providing technical assistance to develop a glass recycling scheme. A programme co-led by the EBRD is under way to find out best ways to re-introduce bottle and sheet glass recycling in Turkey, and pilot the concept in selected municipalities. A major commercial partner for this study is Sisecam, the leading Turkish and regional glass producer.

Furhermore, the southern cities of Adana, Tarsus and Mersin are looking a scheme to supply sludge from local wastewater treatment plants local cement producers to utilise as fuel and raw material for cement. Sludge could also be put into biogas digesters, which would anaerobically decompose organic matter, producing natural gas and fertilizer as by-product.

Technical Assistance

Additional technical assistance support for TuREEFF and MunSIFF of EUR 18 million (USD 23 million) is expected from the EU IPA 2013 Programme and other sources.

A Project Consultant procured and managed by the Bank will support EBRD, the PFIs and the Sub-borrowers in the design and successful implementation of the Facility in the following areas:

(i) development of technical operational tools, templates and forms for the Facility

(ii) marketing and general awareness raising

(iii) sub-project pipeline development

(iv) capacity building for PFIs

(v) sub-projects preparation including energy audits, conceptual design of residential building-level projects, legal advice housing regulations for Housing Associations and Condominiums (TuREEFF) and project development support for municipalities (MunSIFF)

(vi) administration and monitoring of the Facility, and

(vii) providing feed-back from the market to policy makers.

In addition, a special focus will be given to the designing and development of an appropriate SEFF product and procedures for other DFIs potentially participating in the Project.

The donor funding for the Facilities is expected to be provided from the Clean Technology Fund (CTF). the EU Instrument for Pre-Accension (EU IPA) fund, and other donors.

Eligible Subprojects

TuREEFF will operate at three separate levels in parallel:

(1) *Dwelling level* - The eligible measures are implemented on family houses and individual apartments.

(2) Building level - The eligible measures are implemented on multi-family apartment buildings and address whole-building improvements of building structures or engineering systems.

(3) Household equipment level – includes high-efficiency equipment related to household heating (including fuel switching), cooling, electrical appliances and household energy generation; any investment under this category must prove significant impact in terms of energy and/or carbon savings.

MunSIFF will be able to finance sustainable energy projects in the municipal sector, including:

(1) Waste management – including solid and liquid waste

(2) Transport – including municipal transport

(3) ESCOs – financing service delivery of energy services for e.g. lighting or municipal buildings

CTF Additionality

CTF finance is critical to enable the operation to be developed. The most important attributes are the lower pricing and longer tenor and grace of CTF funds. This combination of scarce long-term financing with technical expertise and regulatory dialogue financed by grant funds allows the development of a structured financing product to be offered to local banks that will promote targeted investment in rational energy use in Turkey's highly fragmented residential sector. There are no private investors that can combine the Bank's relationship with the leading local banks with the experience in similar energy efficiency facilities and tailored technical assistance services into a structured commercial financing scheme. Even among IFIs, this is the first attempt to use the Financial Intermediation model to support sustainable energy investments in the residential sector in Turkey.

CTF Additionality Dimension	Verification and/or counter factual results	Timing
Terms	Availability of long-term finance	During project preparation
Attributes	Provision of concessional finance Provision of TA support	During project preparation During project implementation
Conditionalities	Financing to be spent in line with facility conditions	During project implementation

Financial Sustainability

CTF has already demonstrated that financial sustainability, i.e. reduced or removed concessionality, can be achieved in Turkey through the TurSEFF facility of EBRD, the second phase of which implemented without concessionality. Similar progress is expected for the residential facility. For the municipal facility, it is likely that the initial pilot will have to be followed by a larger facility with concessional elements prior to achieving sustainability. The role of CTF is critical in giving the local banks an incentive in developing the lending products required for these markets.

Co-benefits[13]

The economic and environmental development co-benefits of the proposed facilities are:

TuREEFF

(i) reduced dependence on imported energy;

(ii) reduced fuel poverty;

(iii) development of a functioning and fully integrated equipment market for energy efficiency technologies complying with EU standards, thereby raising market standards outside the immediate reach of the facility as well;

(iv) increased opportunities for employment and private sector business development relating to building refurbishment, in particular in non-industrialised regions; and

(v) reduced local air pollution due to the replacement of coal and other polluting fuels.

MunSIFF

(i) reduced dependence on imported energy;

(ii) development of the ESCO sector as a new form of delivering public services through the private sector with increased opportunities for employment and private sector business development;

(iii) reduced local air pollution due to the reduction in emissions from waste sites and increased availability of public transport; and

(iv) increased provision and quality of municipal services.

Safeguards and Procurement

Environmental

All sub-projects will be categorised in accordance with the Bank's Environmental and Social Policy 2008 (the "ESP"), and any sub-project classified as an "A" category project will be subject to EBRD Board approval.

Financial

TuREEFF

Detailed financial analysis and assessment will be made for each sub-project under the TuREEFF Framework during the appraisal stage. This analysis will, where applicable, focus on debt capacity of each Sub-Borrower, implementation capacity and macroeconomic risks. A number of stress scenarios will be run to prove viability of proposed investments, so that the decision to provide additional funding to a specific project under the Facility is very well justified.

MunSIFF

Detailed financial analysis and assessment will be made for each sub-project under the MunSIFF Framework during the appraisal stage. This analysis will, where applicable, focus on debt capacity of each Sub-Borrower, available Sponsor/ third party support, required tariff increases and affordability constraints, long-term demand for the service in question, implementation capacity and macroeconomic risks. A number of stress scenarios will be run to prove viability of proposed investments, so that the decision to provide additional funding to a specific project under the Facility is very well justified.

Integrity

In accordance with the integrity due diligence procedures, all sub-projects involving high risk clients, including Politically Exposed Persons would be referred to the EBRD's Office of the Chief Compliance Officer early to determine whether the Bank's engagement is warranted and what safeguards, if any, need to be put in place to mitigate residual risks.

[13] See also: http://www.iea.org/publications/freepublications/publication/low_income_energy_efficiency-1.pdf

Due diligence on integrity and anti-money laundering policy will be conducted on each participating borrower under the Framework in accordance with normal EBRD due diligence process.

Procurement arrangements will be in accordance with the EBRD Procurement Policies and Rules, with public sector borrower being required to comply with the policies and rules for public sector operations.

There are no issues of integrity to report at this stage. All actions required by applicable EBRD procedures relevant to the prevention of money laundering, terrorist financing and other integrity issues will be taken with respect to the Framework, including checks on the relevant national and international blacklists.

Market Transformation

Key Factors

- More than 70% of Turkey's primary energy consumption is imported in the form of oil and gas. This puts pressure on the country's trade balance and greenhouse gas (GHG) emission reduction objectives. The Turkish Government sees Energy Efficiency (EE) as the most effective measure to reduce this fossil fuel dependency, and has set ambitious targets for 2023. It plans to reduce the country's energy intensity by 20% (compared to 2008) and generate30% of its primary energy supply from renewable sources.
- In the **industrial sector**, Turkey has an energy savings potential of around USD 3 billion per year, about 8 million toe per year in industry, or about 25% of 2007-level energy consumption in the sector. Industry is dominated by energy intensive industrial subsectors—energy costs comprise between 20% and 50% of their total production costs.
- The **municipal and commercial service sector** accounts for 9% of Turkey's final energy consumption, and the municipal sector in particular has considerable potential for emissions reductions in municipal service delivery, including buildings, and waste management and treatment.
- The growing Turkish economy produces about 40 million tonnes of waste per year, most of which is currently disposed of in landfills, rather than recycled, and turned into raw material or energy. Applying modern technologies, most of this waste – including sludge from wastewater treatment – could be turned into new indigenous resources or sustainably produced energy, which Turkey needs, in the process removing one of the largest sources of air pollution and greenhouse gas emissions.
- The **residential sector** accounts for 29% of the total final energy consumption (about 21 million tonne of oil equivalent – toe – per year, equivalent to USD 13 billion in oil imports). It is generally recognised that about 30% of that energy consumption could be saved with relatively simple and cost effective measures, including wall, roof and floor insulation, the use of high-energy efficiency appliances and renewable energy sources for electricity, heat and hot water productions.
- There are 8.5 million buildings and 18 million dwellings in Turkey of which 85% are in urban areas. Energy represents 16% of the household budget (more than twice the EU average). About 70% of the overall consumption is associated with heating, which in rural areas is based on highly-polluting inefficient solid fuels like hard coal.
- The strategic goals and related legislation are mostly in place. Therefore, enforcing the building codes (which demands higher energy efficiency for buildings) and providing finance is a priority for increasing EE in buildings and tapping into this sector with high EE potential.

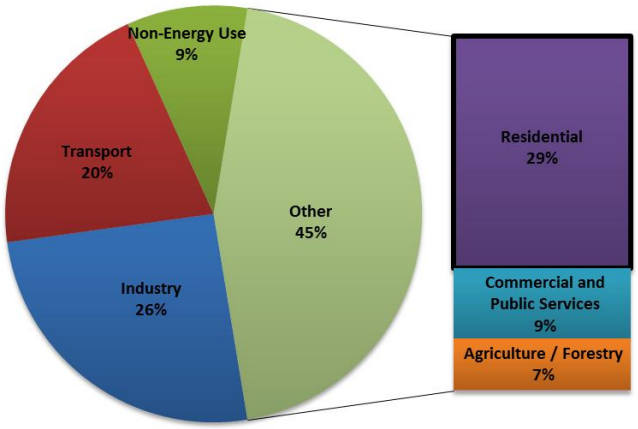
Market Background

Residential and Building Energy Efficiency Outlook

In terms of sectoral breakdown, the residential sector accounts for the largest share (29%) of the overall energy total final consumption (TFC), as presented in the chart below (based on IEA data). Industry and transport trail behind, each taking up 26% and 20% of the TFC.

Studies by various agencies, such as the General Directorate of Electric Affairs and Research (EIE), show that Turkey compares unfavourably with other countries in terms of energy efficiency.

High Energy Savings Potential in the Residential and Building Sectors



In the ***Building Sector***, Turkey has an energy savings potential of about 30%, which is equivalent to over 7.0 million toe per year or 7% of total energy consumption in Turkey, according to an analysis conducted by the World Bank in 2011[14]. Due to the rising living standards linked to economic growth (including increased use of appliances and air conditioning), together with a substantial increase in the national building stocks, residential energy demand has tripled since 1990.

Based on the inventory of residential appartments conducted in 2011, there are over 18,000,000 dwellings[15] in Turkey, and only 14% of these have central heating systems and only 10% have insulation. The main energy consumption issue in buildings is therefore heating/cooling, which accounts for 69% of the total energy consumption. Therefore, most energy saving potential is associated with the increased use of thermal insulation to avoid heat loss and provide heat as efficiently as possible. The second important primary energy demand is hot water, which accounts for 15% of the total consumption.

The main characteristics of the residential EE market in Turkey are:

- Turkish housing stock is new with more than 75% of the dwelling stock less than 30 years old.
- 85% of buildings have individual heating systems and single glazed windows.
- Only 15% of homes have double glazing and thermal insulation.
- About 80% of the urban residential housing stock is connected to natural gas, and there is a strong increase in the number of air conditioning units.
- In rural areas, more than 80% of households are using solid fuels (mainly coal and wood) as their primary heating source.

In terms of CO2 emissions, the building sector in Turkey generated 53.4 Mt of CO2eq emissions in 2009. The sector's energy consumption in the same year was 29.5 million toe and it is estimated to reach 47.5 million toe in 2020[16], meaning that the CO2eq emission figures will double compared to 2009[17]. The projected increase could be curbed by enhanced EE policies, such as transposing EU Directives to Turkey and eliminating hard coal subsidies. These policies would contribute to reducing building EE transaction costs by providing carbon abatement benefits (negative costs) mostly ranging from 100 to 300 EUR/tCO2-eq, as highlighted in the 2011 MACC Study for Turkey prepared by NERA Consulting for EBRD.

The study also highlighted the existing barriers for residential and building EE, arguably facing higher transaction costs than any other core sectors. This sector is characterised by:

i) high market fragmentation;

ii) very low market awareness of its benefits among stakeholders;

iii) limited local implementation capacity;

iv) lack of available financing mechanisms;

v) complex and incomplete regulatory framework.

The proposed Facility will aim at addressing these five points simultaneously by setting enhanced standards and catalysing a market transformation via the proven successful SEFF approach.

[14] Source: World Bank, 2011: http://siteresources.worldbank.org/TURKEYEXTN/Resources/361711-1294661147811/TurkeyEE-en.pdf

15 Source: The Association of Real Estate Investment Companies, Turkey

16 Source: Analysis by Ministry of Energy and Natural Resources, 2010

[17] Source: Ministry of Environment and Urbanization, *National climate change action plan 2011–2023*

Transformation Indicators

1. Transformation Impact Rationale 1	
Transformation impact dimension	**Market Expansion/Demonstration of new replicable behaviour and activities** The Facility will expand commercial financing to market segments which have not been properly addressed, including but not limited to financing housing associations and service providers (such as ESCOs, Housing Management Companies, municipal service companies). Local financial institutions have not financed advanced energy efficiency solutions in these market segments before. The Project will help to develop and demonstrate efficient financing mechanisms through a new business model, designed specifically to overcome barriers of energy efficiency projects that are considered risky.
Benchmarks	Energy savings and carbon reductions generated, investment efficiency (NPV of Sub-projects), the number of PFIs
Due diligence steps	Quantitative benchmarks will be determined at due diligence
TA	TA is envisaged to assist the PFIs with development of an on-lending infrastructure and to monitor the implementation of Sub-projects.
2. Transformation Impact Rationale 2	
Transformation impact dimension	**Transfer of skills to Sub-borrowers and PFIs** The Facility is expected to transfer and build expertise and skills both among the PFIs (risk-management) and the Sub-borrowers (requirements of EE finance). In addition, the Facility is expected to have an impact on the marketing of high performing energy efficiency technologies for buildings and applicable technologies in the municipal sector by: (i) stimulating the demand of advanced EE/RES techniques and products (ii) increasing awareness among residential stakeholders on advanced EE/RES solutions, and (iii) linking local banks and residential and municipal stakeholders with technology suppliers, equipment installers and engineers.
Benchmarks	(i) Number of Sub-projects financed (ii) Number of professional bodies engaged with promotion/marketing of advanced EE (iii) internal capacity built at PFIs for residential and municipal EE/RES investments
Due diligence steps	Selection of Technical Consultants as per the standard EBRD procedures.
TA	TA is envisaged to assist the PFIs during on-lending with capacity building and development of marketing tools. The TC will provide advisory services to residential/municipal stakeholders with regard to technical, legal and financing aspects.

2. Transformation Impact Rationale 3	
Transformation impact dimension	**Strengthening the structure and extent of markets by promoting policies that support energy efficiency market development** The Facility will be introduced shortly after the introduction of a new set of building regulations in Turkey, partly transposing provisions of the EU Directive on Energy Performance of Buildings (EPBD)[18]. In addition Turkey has prepared a national program on earthquake risk mitigation[19], which will address a substantial portion of the Turkish housing stock. Many of the residential properties affected have been constructed without the necessary permits and cannot be accepted as collateral by the banks. The program aims to address the earthquake stability problems and help enable legalisation of these housing assets by bringing them into compliance with the Turkish legislation. This situation provides an opportunity for the Facility to combine earthquake reinforcement of existing housing stock under the national risk mitigation program with energy efficiency up-grades in a cost-effective and integrated manner. By providing structured financing for advanced EE solutions, the Facility will encourage local banks to invest in the sector and a successful performance will enable Turkish authorities to implement further provisions under the EPBD in compliance with the best practices of the EU.

Investment Component

Loan Terms

A loan to a Borrower for an approved sub-project will be comprised of an EBRD-financed tranche and a CTF-financed tranche. The CTF resources are made available through the CTF sub-account of the EBRD CIF Special Fund.

Loan tranches financed with EBRD's ordinary capital resources will have maturities and pricing and fees to be determined based on internal analysis of borrower credit worthiness on a case by case basis for each borrower.

Loan tranches financed with CTF resources are expected to have a longer maturity of up to 20 years with grace up to 10 years, to be determined on a case by case basis. Pricing for CTF loans will be agreed on a case by case basis for each borrower, and the principle of not improving on the CTF terms extended to EBRD. Loan terms will be no more concessional than 75 bps fixed, with no fees, but are expected to be less concessional than that.

Each sub-project will have to individually justify concessional loan terms in the project approval cycle. Pricing and terms will be in line with the principles laid down in the EBRD document *Multilateral Climate Investment Funds (CIF) – Rules of the CIF Special Fund* (BDS09-201).

[18] Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (recast)

[19] Urban Transformation Project as defined in the 2012 Law No 6306: Transformation of Areas Under Disaster Risk, and the related subsequent governing regulations.

Summary CTF Terms for TuREEFF/MunSIFF	
Instrument:	Senior Loan Financing – pari-passu with EBRD Finance and/or Bond purchase under Diversified Payment Rights – pari-passu with EBRD finance
Amount:	Up to USD 70,000,000 equivalent of which up to USD 39 million for immediate allocation
Tenor:	Up to 20 years; with up to 10 years grace period followed by semi-annual repayments
Pricing:	Minimum interest rate of 75 basis points
Fees	No fees
Expected Commitment Date:	January 2014 to end of calendar year 2015
Expected Disbursement Date:	June 2014 to June 2016

Technical Assistance Component

Technical assistance will be contracted and managed by EBRD based on its procurement guidelines.

Results Measurement Framework

General

The programme will comply with the CTF Results Measurement Framework and will measure direct and co-benefits where this is possible.[20]

Numerical Indicators

Indicator	Baseline	Anticipated Results by January 2019 (5 years)[21]
Program		
GHG emissions directly avoided by the Program	200 $mtCO_2/yr$	0.3 $MtCO_{2e}$/year by 2019
Avoided energy use	265 TWh	0.7 TWh/yr by 2019
CTF financial leverage for the Program	N/A	1:4 (CTF:EBRD) 1:11 (CTF:(EBRD, EIB, donors, and project sponsors))
CTF lifetime cost effectiveness for the Programme[22]	N/A	0.1t CO_{2e} /1USD invested from CTF by 2019

[20] The relevant version of the CTF Results Measurement Framework is the document dated 6 Dec 2012: https://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/Revised_CTF_Results_Framework.pdf

[21] Based on USD 39 million of CTF investment

Transformation Indicators

Transformation impact objectives of framework	Monitoring benchmarks	Implementation timing
Market Expansion and/or Demonstration of new replicable behaviour and activities	Analysis of availability of advanced EE technologies in the market at the beginning of the facilities and in 2015. Continued availability of household EE loans after the end of TuREEFF Expansion of MunSIFF pilot into larger framework	Through implementation
Transfer of skills to PFIs	PFIs develop residential/municipal EE/RES lending as a new type of activity	At the end of the investment period
Strengthening the structure and extent of markets by promoting policies that support energy efficiency market development	Uptake of loans, in particular: 70,000 household loans issued 6 municipal loans issued	At the end of the investment period

Risks

Implementation Risks

Risks in TuREEFF relate to whether there will be an uptake of loans by borrowers and whether the performance of the underlying investments will succeed in improving energy efficiency. These risks will be mitigated by CTF resources which offer an attractive incentive to borrowers to participate in the Project and the planned technical assistance, including comprehensive marketing and awareness raising will ensure the development of a strong portfolio of demonstration projects. Introducing a number of borrowers will ensure demonstration and transformation effects and will enhance the ability of future prospective investors to access funding and technical support.

Risks in MunSIFF relate to whether the municipalities will be able to service the loans in the long term, and whether they have the capacity to adequately implement the projects. These will be mitigated by relying on the commercial bank assessment of municipal debt servicing capability, and the provision of technical assistance to municipalities to develop implementation capacity.

Market Mitigation Risks

The use of CTF resources, however, creates its own set of transformation risks, such as the risk of subsidy dependence, and distortions to the loan market, thereby delaying transition to commercial viability of the market. These risks will be mitigated through working with a range of banks, thereby introducing them to the potential of this sector for future business. The provision of technical assistance focusing on the sound policy development and regulation will also mitigate these risks.

Sector Background

Policy Background

Turkey compares negatively to other OECD countries in terms of energy intensity (0.27 toe/1,000 USD vs. 0.18 toe/1,000 USD for the OECD average) and carbon intensity (0.72 kg CO2/USD output vs. 0.41 kg CO2/USD or the OECD average)[23]. To address this, the Government's updated energy strategy and Turkey's Ninth Development Plan (2007-13) both aim at ensuring security of energy supply and the efficient use of resources, while keeping

[22] Assumed lifetime of measures = 20 years.

[23] International Energy Agency, 2009: http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=TR

environmental damage at a minimum. The Government is particularly focused on scaling up energy efficiency investments in the residential and building sectors (jointly accounting for about 40% of total energy consumption). The focus on EE is driven by the imperative to address three key energy-related challenges:

(i) **Security of energy supply, especially electricity** - Electricity demand in Turkey has been growing in the past eight years with an average annual growth rate of about 7%, a four-fold increase in the last 20 years. Electricity consumption is forecasted to nearly double by 2017 compared to 2008.

(ii) **Energy import cost - Turkey is a major energy importer**. More than 70% of the country's energy is imported in the form of fossil fuels, which are 90% of the total primary energy supply. In 2011, Turkey spent USD 54 billion on energy imports, which represents a 40% increase over 2010. The country's total final energy consumption (TFC) amounted to 73.2 million toe in 2009, with the annual per capita primary energy consumption being approximately 1 toe and 2.3 MWh for electricity. These numbers contrast with the OECD averages of 2.9 toe/capita/year and 8 MWh/capita/year respectively, and lead to an expected 7-9% annual demand growth forecast over the next decade while this gap is closed in line with increasing prosperity in Turkey.

(iii) **The level of CO2 emissions in Turkey is growing rapidly, as a consequence to the above –** Since 1990, the country's total GHG emissions rose by 115% (the largest rise in the OECD) to about 400 million tons of carbon dioxide equivalent (CO2eq) in 2010. This increase is projected to continue and total emissions are expected to exceed 600 mt CO2 per year by 2020. Enhanced policies supporting cost-efficient technologies for carbon abatement are necessary to curb the current trend, as demonstrated by the EBRD's Marginal Abatement Cost Curve ('MACC study for Turkey') commissioned by EBRD in 2011.

Energy Market Review

In order to address these issues, the Turkish Government has been taking numerous measures to promote energy efficiency and the use of indigenous energy resources. The unbundling and liberalization of the electricity market has had a significant impact in attracting private sector investors to achieve those strategic goals on the supply side.

In ***2009 the Turkish Government drafted its Electricity Market and Security Supply Strategy***, setting ambitious EE and RE objectives to be achieved by 2023, a centenary plan to generate 30% of its total energy supply from renewable energy sources, including having 20 GW of wind capacity and 600 MW of geothermal power. The government also aims at reducing the country's primary energy intensity by 20% compared to 2008.

Electricity prices have more than doubled for end-users in the last decade, particularly since 2007 when, within a year, these increased 50% to 15 USD-cents/kWh. Besides the price increase, the market liberalization also brought in significant end-user price volatility, affecting both industries and households (already in 2009 energy consumption represented between 11.4 and 29.3% of household budgets (top/bottom income quintile), which is very considerably beyond the EU average[24]).

Similarly, end-user natural gas prices have also more than doubled in the last ten years, increasing from 6 USD/GJ in 2001 to 12 – 14 USD/GJ in 2012. Soaring gas prices negatively impact the disposable income of families relying on gas for residential heating. For this reason, the Turkish government still subsidizes the use of hard coal for household heating in less developed regions of the country, with negative environmental and health consequences. Against this background, residential EE has become particularly relevant to transform the traditional use of more polluting energy sources into cleaner household energy sources.

MARKET / REGULATORY SNAPSHOT:

Market (Banking Sector):

- As of H1 2012, 48 banks operate in Turkey of which the top seven (four private banks: Isbank, Garanti, Akbank, Yapi Kredi and three large state or semi/state-owned banks: Ziraatbank, Halkbank, Vakifbank) account for 73%

[24] Data from Turkstat (http://www.turkstat.gov.tr/Kitap.do?metod=KitapDetay&KT_ID=7&KITAP_ID=33). There are substantial income variations between urban and rural households – the geographic focus of the facility lets us expect that a large part of it may be disbursed in rural regions where fuel poverty (in England/Wales this is defined as a household spending more than 10% of its income on energy) is a very serious concern.

of the total assets of Turkey's banking sector.

- Portfolio quality is sound with an average non-performing loan ratio of 2.9%. Capitalisation is strong with an average capital adequacy ratio of 16.2% at Q3 2012[25].
- Lending volumes have strongly increased since 2010, causing the regulator to increase the requirements of provisioning, capital adequacy and minimum reserve, in order to decelerate credit growth.

Regulatory Environment (Banking Sector):

- Since 2010, Turkish banks have increasingly diversified their long-term funding sources in both foreign (maturities of 5-10 years) and local currency (maturities of 6 to 36 months). However, managing maturity matching remains a key challenge for the banking sector as the institutional investor base is still limited in providing long term local currency.
- The banking regulations are largely harmonised with the EU laws, and on 1 July 2012 Basel II was fully adopted. A new regulation on the calculation of Tier II capital is currently being drafted, and itis expected to be largely in line with the Basel III standards.

[25] Latest figures available

Annex A

Indicative Budget for Technical Assistance Program

CTF Advisory Services Component

INDICATIVE SUMMARY TABLE			
Activity Overview	**Years 2013-2015**	**CTF Contribution**	**Other Donor Contributions[26]**
	USD		
Policy Dialogue	2,000,000		*2,000,000*
Marketing	2,000,000	*500,000*	*1,500,000*
Capacity Building	3,800,000	*1,300,000*	*2,500,000*
CTF/CIF Knowledge Management	150,000	*150,000*	
Gender Component	50,000	*50,000*	
Total	8,000,000	*2,000,000*	*6,000,000*

[26] Includes EBRD own TA resources.

Annex B

Administrative Budget

SUMMARY TABLE				
Category	**Total**	**CTF 20% Year 0-10**	**CTF 100% Year 11-15**	**Sub-Total**
Currency	**USD**			
1. Project Implementation (pre-signing)				
Due diligence; legal review; contractual and site visits	103,920	20,784	n/a	20,784
Staff costs - fund management; project programme management	103,920	20,784	n/a	20,784
2. Project Supervision (post signing)				
Contractual and site visits	279,285	49,362	32,475	81,837
Fund's and Financial Controls; monitoring & reporting; site visits; restructuring; evaluation	279,285	49,362	32,475	81,837
Total Project Cost	**766,410**	**140,292**	**64,950**	**205,242**
Total Project Fee to CTF				**205,242**