

# INVESTING IN SUSTAINABILITY

THE FUND'S MISSION IS TO CONTRIBUTE, IN
THE FORM OF A PUBLIC PRIVATE PARTNERSHIP
WITH A LAYERED RISK/RETURN STRUCTURE,
TO ENHANCING ENERGY EFFICIENCY AND FOSTERING RENEWABLE ENERGIES IN THE SOUTHEAST EUROPE REGION, INCLUDING TURKEY,
PREDOMINANTLY THROUGH THE PROVISION OF
DEDICATED FINANCING TO BUSINESSES AND
HOUSEHOLDS VIA PARTNERING WITH FINANCIAL
INSTITUTIONS AND DIRECT FINANCING.



www.ggf.lu ANNUAL REPORT 2010

## **CONTENTS**

KEY FIGURES 2010	2
LETTER FROM THE CHAIR	3
FUND STORY Objectives of the Fund Greetings Geographic reach Governance Operating structure Letter from Investment Management	4 5 6 8 10 11 12
RATIONALE FOR THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE Energizing green finance	14 15
HIGHLIGHTS Technical Assistance Facility Investment highlights Technical Assistance highlights	16 17 18 19
DEVELOPMENT POTENTIAL  Potential for greening development  Energy efficiency finance:  So that energy efficiency becomes second nature  Renewable energy finance:	20 21 22
Maximizing the use of renewable energy sources  Environmental impact	23
CONTACT INFORMATION	26
IMPRINT/DISCLAIMER	26

EUR 128 million

**KEY FIGURES 2010** 

Total commitments (as of 31 December 2010)



Total portfolio outstanding; all investments, are senior loan facilities with financial institutions

10

The number of projects undertaken by the Technical Assistance Facility of the Green for Growth Fund, Southeast Europe in 2010 to support partner institutions and promote energy efficiency and renewable energy finance.

The number of investors and donors to date who have committed funds to the Green for Growth Fund, South-

3

The number of partner institutions the Green for Growth Fund, Southeast Europe has invested in to date: Şekerbank and Yapi Kredi Leasing in Turkey, IK Banka in the former Yugoslav Republic of Macedonia.

6,500 t

Annualized CO<sub>2</sub> savings through energy efficiency and renewable energy investments in the Fund's first year of operations.

29,700 MWh

Average annualized amount of energy saved through energy efficiency and renewable energy investments to date

8

The number of target partners of the Green for Growth Fund, Southeast Europe: Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, Serbia, as well as Kosovo under UN-SCR 1244/1999, and Turkey.

#### **FUND PROFILE**

east Europe.

INCEPTION	December 2009				
TOTAL COMMITMENTS AS AT 31 DECEMBER 2010	EUR 128 million				
TERM	Open-ended				
DOMICILE	Luxembourg				
LEGAL FORM	Société d'investissement à capital variable – specialized investment fund (SICAV-SIF)				
STRUCTURE	Public-private partnership involving donor agencies, international finance institutions and private institutional investors.				
OBJECTIVE	Broaden the financing base of energy efficiency (EE) and renewable energy (RE) investments Southeast Europe and Turkey, increase awareness of EE/RE; contribute towards deepening to financial sector aimed at these activities, harmonize and coordinate donor initiatives.				
TARGET PARTNERS	Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenego Serbia, as well as Kosovo under UNSCR 1244/1999, and Turkey.				
PARTNER INSTITUTIONS	Financial institutions (commercial banks and non-bank financial institutions, such as leasing companies) who on-lend to households as well as micro, small and medium enterprises, larger corporate and municipality clients for direct financing of small EE/RE projects, energy utility companies, and EE/RE service & supply companies.				
FINANCIAL INSTRUMENTS	Medium to long-term senior loans, subordinated loans, syndicated loans, letters of credit, guarantees, mezzanine debt instruments, local debt securities.				
NON-FINANCIAL SERVICES	Provision, via a dedicated Technical Assistance Facility, of tailored support to partner institutions for capacity building to establish and enhance EE/RE lending operations as well as support RE project implementation.				

## LETTER FROM THE CHAIR

#### **DEAR INVESTORS AND PARTNERS.**

On behalf of the Board of Directors it is my great pleasure to present this inaugural Annual Report for the Green for Growth Fund, Southeast Europe.

The GGF is groundbreaking in many ways – it is the first public private partnership with an innovative capital structure dedicated to promoting sustainable energy efficiency and renewable energy finance, and the first to specialize exclusively in this type of investment in Southeast Europe and Turkey. While it is always challenging to chart a new course, we have chosen to meet the enormous economic, environmental and societal needs ahead, as they relate to energy, in a way that is complementary to existing initiatives. Already, the GGF's holistic



approach to addressing the gaps in funding, awareness and know-how has earned it a position as an important contributor to EE and RE finance in the region.

The shareholders and the Board of Directors understand the need for innovations that require deep insights and regional as well as local expertise. Accordingly, the GGF is professionally managed by a private manager with a network of offices in the region linked to the stakeholders through central coordination. Our streamlined organization enables us to stay close to the smaller projects in the region, and respond very quickly to client needs. At the same time, strong relationships with local financial institutions enable us to broaden and deepen the financial sector as well as reach scale and maximize impact.

"MEETING THE GOAL OF THE EUROPE 2020 INITIATIVE TO ACHIEVE A SHARE OF RENEWABLE ENERGY OF 20% ALONG WITH A 20% INCREASE IN ENERGY EFFICIENCY AND A 20% REDUCTION IN CO<sub>2</sub> EMISSIONS BY 2020 ONLY MAKES SENSE IF WE ATTACH THE SAME IMPORTANCE AND URGENCY TO GREENING THE ECONOMIES IN THE NEIGHBORING REGION OF SOUTHEAST EUROPE AND TURKEY."

While the GGF also works with large corporate borrowers and public sector entities, its focus is on making households and small and medium enterprises more energy-efficient through dedicated partnerships with financial institutions, and on promoting small-scale renewable energy projects. This requires long-term, stable funding. Equally important, it requires expertise, which we provide through tailored technical assistance. We believe that building capacities in financial institutions and nurturing a sustainable EE/RE sector go hand in hand with providing long-term refinancing on attractive, commercial terms. This mix of end-borrowers, products (both EE and RE), and technical assistance makes the GGF unique – and a true added value in the region.

The GGF would not exist were it not for its shareholders. In particular, the funding provided by the EU and the BMZ was the catalyst for creating the GGF and getting international financial institutions on board. EIB, EBRD and KfW have a leading position in EE/RE financing in the region, and support the GGF with funding and know-how. Going forward, the GGF is ideally positioned to leverage these funds and know-how to increasingly attract private investors as well.

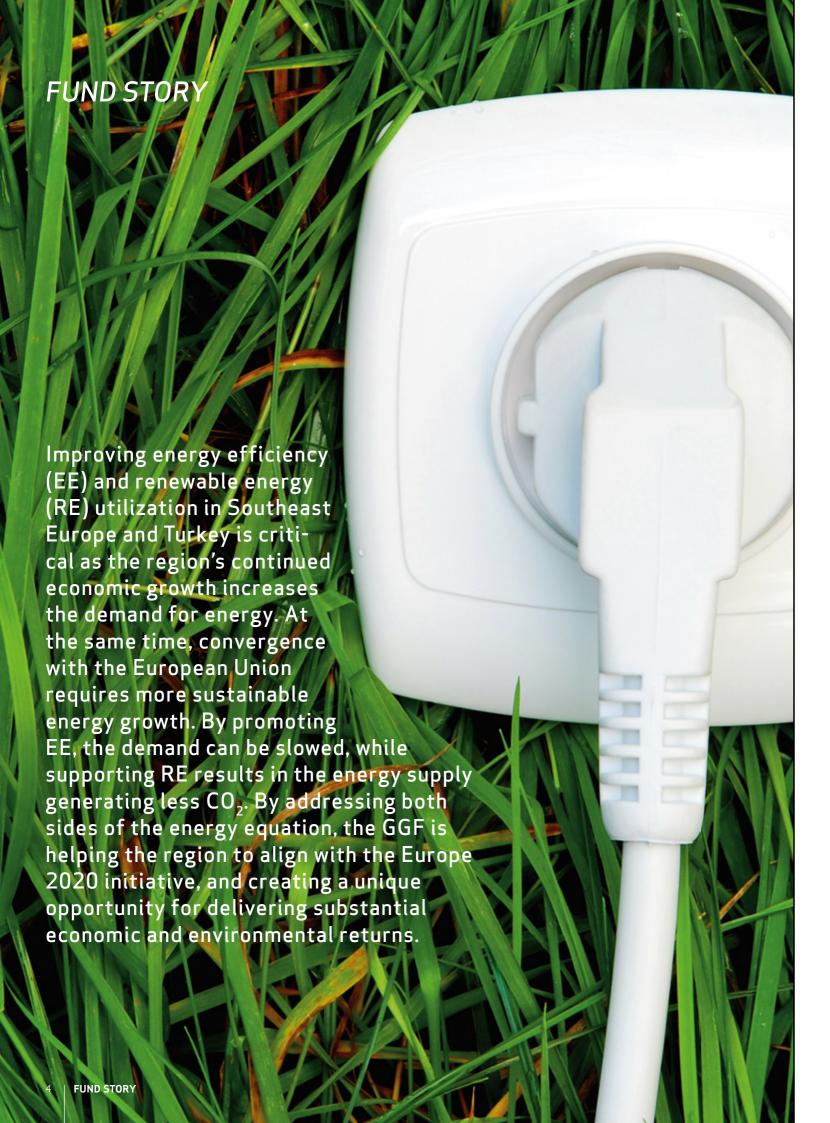
The GGF has come a long way in a very short time, and keeping up the pace will be just one of the many challenges we face. Our first year results indicate that we are on the right track towards realizing the opportunities ahead in greening Southeast Europe and Turkey.

Sincerely,

Horiha Rick

Monika Beck

2 | KEY FIGURES 2010



## **OBJECTIVES OF THE FUND**

THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE (GGF) WAS CREATED AS A DEDICATED STRUCTURE TO BUILD A SUSTAINABLE ENERGY FINANCE SECTOR ADVANCING ENERGY EFFICIENCY (EE) AND RENEWABLE ENERGY (RE).

## MEETING THE REGION'S ENERGY CHALLENGES

The GGF's stakeholders recognize the increasing pressure the Southeast Europe region is facing in terms of demand for more and cleaner energy to fuel growth. Most of the region's economies are net importers of energy, and rising costs are stretching national budgets while supply constraints are creating intermittent shortages. At the same time, improving EE and reducing carbon emissions remain important preconditions for acceding to the European Union. While the challenges are great, so are the opportunities: the potential for lowering energy consumption by improving EE in the residential and industrial sectors is significant; and the region is rich in hydro, solar, biomass and wind energy reserves that are waiting to be tapped.

The GGF is especially well-equipped to meet the challenge and leverage its opportunities for a number of key reasons:

- Specialization in developing the financial sector as a multiplier and catalyst in EE and RE finance
- Strong regional presence embedded in local markets
- Streamlined organization for maximum responsiveness to evolving demands
- Focus on capacity building through tailored technical assistance to enable the market and promote the

- mainstreaming of green finance in the financial sector
- Commitment to commercial viability and sustainability to attract private investors
- Platform for coordinating and harmonizing stakeholder initiatives in EE/RE

The GGF's three-pronged approach:

- Investments in financial institutions
  The GGF provides funding to partner financial institutions for on-lending to households and businesses, mainly for EE investments to reduce energy demand growth in the region. The GGF supports these investments with tailor-made technical assistance for financial institutions targeted at overcoming obstacles to adopting EE (and RE) finance as a sustainable new business segment in the financial sector.
- Investments in EE/RE projects

  Small wind farms, solar parks, biomass and hydropower plants not only effectively meet growing energy demand; by substituting green technologies for CO₂-intensive sources, they also move the region closer to the European Union's environmental targets. As these projects are rarely off-the-shelf bankable, the GGF provides technical assistance to ready the projects for financing by the Fund as well as local and international financial institutions.

• Investments in other partner institutions – the GGF invests directly in energy service companies as well as suppliers of EE/RE equipment and services to establish the local infrastructure required to create a sustainable EE/RE market.

## A PROVEN PUBLIC-PRIVATE PARTNERSHIP

The GGF is set up as a public-private partnership, which leverages investments from donor agencies in the junior tranche of the Fund (C shares) providing a risk cushion for more senior investors. At the same time, scarce public funds are not "spent", but used in a revolving manner, thus continuously serving the development mission of the Fund over its lifetime. International financial institutions supported by the public sector but seeking market returns on their investments take up the mezzanine tranche (B shares), which would absorb losses exceeding the amount of C shares available in the structure. These two layers – public C shares, and B shares - allow the GGF to issue senior securities (A shares) and notes to private investors with substantial risk protection. The GGF's tiered risk-sharing structure makes the involvement of institutional investors with commercial capital possible.

#### INVESTOR

The GGF is supported by leading donors, international financial institutions, and private investors:

















## **GREETINGS**

PROMOTING ENERGY EFFICIENCY AND RENEWABLE ENERGY UTILIZATION IN THE SOUTHEAST EUROPE REGION IS KEY TO SUSTAINABLE DEVELOP-MENT FOR THE WHOLE OF A GROWING EUROPE. IT IS A CONCERTED EFFORT IN WHICH SHARING KNOWLEDGE AND EXPERTISE GOES HAND IN HAND WITH PROVIDING FINANCIAL SUPPORT.

Promoting energy efficiency and increasing the use of renewable energy are crucial elements in the fight against climate change. The Green for Growth Fund operating in Southeast Europe is one of the EU's initiatives to support the candidates and potential candidates in their efforts to implement these policies.

The European Union is leading the way in promoting sustainable development worldwide, and even more can be achieved on our doorstep. Pollution knows no frontiers, which is why it is particularly important for candidates and



potential candidates to build their capacity to adopt and implement European standards. Their efforts benefit the environment across the Union and beyond.

The Fund has made a good start in 2010 and promises to be an ever greater success in the years to come. The European Commission is proud to be part of this partnership. Through the Instrument for Pre-accession Assistance, DG Enlargement provided nearly EUR 20 million of the initial capital. We are now adding another EUR 19 million from other sources, bringing our total contribution to over EUR 38 million.

Gerhard Schumann-Hitzler, Director - Financial Instruments & Regional Programmes, European Commission Enlargement Directorate General



The German Federal Ministry for Cooperation (BMZ) congratulates the Green for Growth Fund, Southeast Europe (GGF) on its first full year of operations. The integration of Southeast Europe into the EU framework is an important task for the years to come, requiring in particular a focus on sustainable energy production and use. The Fund actively supports this process by facilitating investments in the Energy Efficiency and Renewable Energy sectors, a mission that complements Germany's role as a global leader in renewable energy and energy efficiency technologies.



However, tackling these topics successfully is only possible within a framework of international cooperation. It is for this reason that the BMZ strongly supports the public-private partnership model as a platform for cooperation among donors, international financial institutions, and the private sector.

The GGF is proof of the capacity for cooperation among stakeholders, ensuring that the unique strengths of each partner are brought to bear on advancing the Fund's agenda in a complementary manner. Higher energy efficiency along with a greater share of clean, renewable energy sources is key to keeping Southeast Europe on a sustainable path to growth.

Dr. Leo Kreuz, Head of the Eastern and Southeastern Europe Division; South Caucasus, German Federal Ministry for Economic Cooperation and Development



#### MEETING THE CHALLENGE IN SERBIA

Though still more than twice as energy and carbon intensive as the EU average, Serbia is making real progress in curbing CO<sub>2</sub> emissions and 2011 is Energy Efficiency Year

Austria Hungary Slovenia Croatia Bosnia and Herzegovina Serbia Italy Montenegro Kosovo\* **GEOGRAPHIC REACH** FYR Macedonia COMMITTED TO GREEN DEVELOPMENT IN A KEY REGION The Green for Growth Fund, Southeast Europe (GGF) currently operates in Albania, Bosnia and Herzegovina, Croatia, Albania the former Yugoslav Republic of Macedonia, Montenegro, Serbia, as well as Kosovo under UNSCR 1244/1999, and Turkey. By the end of 2010, the GGF had invested in three partner institutions in the former Yugoslav Republic of Macedonia and Turkey. Activities in the other target partners range from building energy efficiency awareness among Greece small and medium enterprises in Serbia to ensuring environmentally responsible implementation of renewable energy projects in Croatia.



### **GOVERNANCE**



Board of Directors (from left to right): Hubert Cottogni, Dominique Courbin, Constanze Kreiss, Monika Beck (Chairwoman of the Board of Directors). Michael Neumayr, Christopher Knowles.

#### **BOARD OF DIRECTORS**

The Board of Directors of the Green for Growth Fund, Southeast Europe is comprised of experts in various fields related to development finance and green energy. The Fund's Investment

Committee, which also ensures the Investment Guidelines for good governance are properly implemented, vets and approves proposed investment projects. Also, a dedicated Technical Assistance (TA) Facility Committee

oversees the activities of the TA Facility, which is critical to maximizing the impact of the Fund's investments at the institutional and sectoral levels.

#### **INVESTMENT COMMITTEE**

Peter Coveliers. Chair Constanze Kreiss Michael Neumayr

#### TECHNICAL ASSISTANCE FACILITY COMMITTEE

Constanze Kreiss. Chair Dirk Roos Ioannis Tsakiris (joined in 2011)

## **OPERATING STRUCTURE**

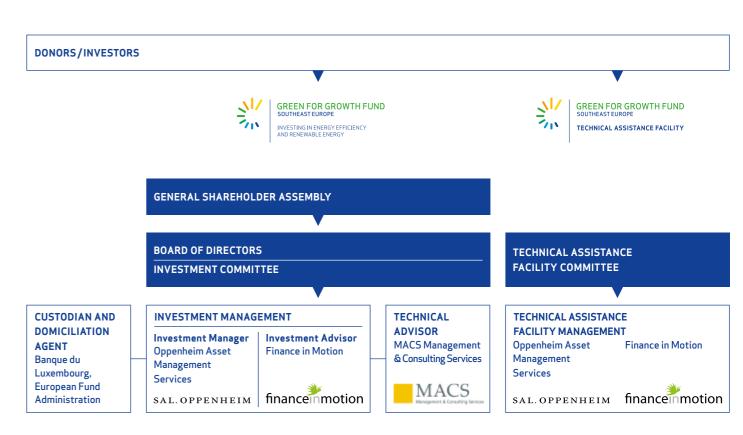
THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE (GGF) COMBINES STREAMLINED MANAGEMENT WITH STRATEGIC PARTNERSHIPS AND A STRONG LOCAL PRESENCE TO MINIMIZE LEAD TIMES, MAXIMIZE INVEST-MENT IMPACT, AND MAINTAIN THE HIGHEST STANDARDS OF TRANSPAR-**ENCY AND CORPORATE GOVERNANCE.** 

#### **LEAN AND EFFICIENT OVERSIGHT**

Ultimate oversight authority rests with GGF shareholders and the Technical Assistance Facility (TA Facility) donors, respectively. Responsibility for the Fund's strategic direction and management is vested in the Board of Directors, which is elected from a slate of candidates nominated by the shareholders. The Board of Directors in turn appoints the Investment Committee, which is in charge of the investment approval process. Review and approval of technical assistance projects is the responsibility of the TA Facility Committee elected by the TA Facility's donors.

Oppenheim Asset Management Services, the Investment Manager, together with Finance in Motion, the Investment Advisor, handle the GGF's day-to-day operations and are supported by the Technical Advisor, MACS Management and Consulting Services. Oppenheim Asset Management Services and Finance in Motion jointly manage the TA Facility's activities. The GGF benefits from an extensive local presence in all of the countries in which it operates.

#### **INSTITUTIONAL STRUCTURE**



## LETTER FROM INVESTMENT MANAGEMENT - BUILDING A GREEN ENERGY FINANCE SECTOR

2010 - THE FIRST YEAR OF OPERATIONS OF THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE (GGF) - WAS AN EVENTFUL ONE. IN ADDITION TO SETTING UP THE FOUNDATIONS FOR THE FUND'S OPERATIONS, WE HAVE BUILT A EUR 50 MILLION PORTFOLIO IN TWO COUNTRIES AND REPORTED AN OPERATING PROFIT BY THE FOURTH QUARTER. SENSITIZING BORROWERS, FINANCIAL INSTITUTIONS AND PROJECT DEVELOPERS IN OUR TARGET PART-NERS THROUGHOUT SOUTHEAST EUROPE TO THE POTENTIAL OF ENERGY EFFICIENCY (EE) AND RENEWABLE ENERGY (RE) FINANCE, HOWEVER, REMAINS A MAJOR UNDERTAKING.

> At the same time, donors and international financial institutions, together with local governments and partners, have already invested significantly in enabling the market: EE codes for residential as well as industrial construction and attractive feed-in tariffs for RE are just two examples of public policy creating a favorable investment climate. The GGF is successfully leveraging these and other measures to deepen as well as broaden investment impact – and catalyze new sources of funding for EE/RE projects. As a comprehensive fund designed to realize the potential for green energy finance at the individual household, small and medium enterprise, large business as well as public sector levels, the GGF is already proving successful in supporting its partner institutions in developing a portfolio of financial products that fill niches not currently addressed in the market.

In contrast to grants or subsidies, GGF funding is reinvested over the life of the Fund. This compounding effect of EE and RE finance further increases the efficiency with which donor and investor funds are used. There is an additional major benefit: the EE gains and emissions reductions will continue delivering environmental dividends long after the GGF's investments are repaid.

GGF's Technical Assistance Facility (TA Facility), which is also under our management, became operational in record time. In its first year, the TA Facility completed a broad array of projects in close cooperation with local partners - from awareness-raising to promote EE and RE utilization to helping partner institutions develop and fine-tune financial products for green energy solutions. Here, customized workshops for bank staff to develop both knowledge and buy-in of green finance throughout

Florian Meister, Holger Roentgen, Thomas Schiller.

Investment Management (from left to right): Johann Will, Elvira Lefting, Max von Frantzius, Claudia Ploß-Dambax, Lloyd Stevens, Sylvia Wisniwski,

the organization are just one example of the hands-on support provided by the TA Facility.

At this stage, the Fund sees itself as both a funder and a market developer for green finance. We support and implement the GGF's vision by providing a combination of enabling measures and long-term credit facilities. These are channeled through local financial institutions and, to a lesser extent, directly to developers of EE and smallscale RE projects. Our focus on the local financial sector and support structure, which includes working with energy auditors and consultants, strengthens the impetus for growing a green finance industry at the local level - to broaden and deepen the market as a whole.

The challenge is as great as the opportunity, and ensuring the GGF's continued success is going to be a long-term effort. With an established track record and a strong pipeline, the GGF is on course to gain momentum in 2011 and beyond.

Max von Frantzius, Managing Director, Oppenheim Asset Management Services Sylvia Wisniwski, Managing Director, Finance in Motion

1. Wisein C

Florian Meister, Managing Director, Finance in Motion

Elvira Lefting, Managing Director, Finance in Motion

Dr. Thomas Schiller, Managing Director MACS Management and Consulting Services (Technical Advisor)

## RATIONALE FOR THE GREEN FOR GROWTH FUND, **SOUTHEAST EUROPE**

In Albania, electric boilers meet more than 70% of hot water needs in private households and the service sector. With over 250 days of sunshine per year, the country can significantly reduce its energy consumption by shifting to solar water heating, reducing demand on the country's energy infrastructure and supply, while saving substantial sums for consumers.

## **ENERGIZING GREEN FINANCE**

THE ENERGY NEEDS AND CARBON FOOTPRINT OF THE ECONOMIES IN THE SOUTHEAST EUROPE REGION ARE CONSIDERABLE. INCREASING ENERGY EFFICIENCY (EE) AND RENEWABLE ENERGY (RE) UTILIZATION IS KEY TO SUSTAINABLE PROSPERITY AND SUCCESFUL EU INTEGRATION.

In the target region of the Green for Growth Fund, Southeast Europe (GGF), Serbia and the former Yugoslav Republic of Macedonia require more than twice the amount of energy per unit of GDP compared to the Western European average – and in the process generate as much as five times more CO<sub>2</sub>. This is only one example of the challenge facing Southeast Europe and Turkey in meeting growing energy demand and at the same time reducing its environmental impact.

The GGF was created to help meet this challenge from both the demand and the supply side. Curbing energy demand, for example by supporting the financial sector to finance loans for improving insulation in residential and commercial buildings, translates into lower energy consumption over time. Greening the supply, through projects

to increase the utilization of hydro, wind, solar, biomass and other renewable resources, will ensure that the energy consumed generates less CO<sub>2</sub>.

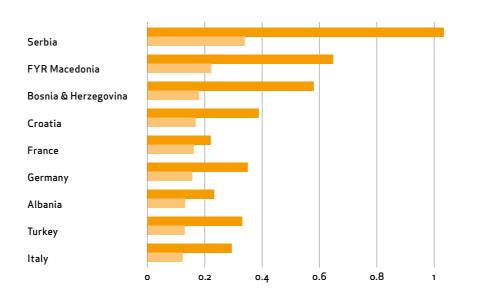
Advancing the green agenda in Southeast Europe and Turkey is also part of a broader European undertaking: the Europe 2020 initiative calls for a 20% share of RE along with a 20% increase in EE and a 20% reduction in CO<sub>2</sub> emissions from 2005 levels by 2020. In preparing for EU accession, the GGF's target partners must align themselves with these goals.

The lessons learned from existing initiatives and funding sources, combined with a highly specialized development mission, robust technical assistance, and a blend of public and private sector resources, result in a unique positioning for the GGF to address the challenges in the Southeast Europe region, namely:

- Limited awareness of EE possibilities among households, small and medium enterprises (SMEs) and financial institutions
- Market distortions due to continued energy price subsidies
- Lacking or inadequate legal and regulatory frameworks
- Lack of appropriate funding

Due to these challenges, many economically sensible investments in EE and RE are not identified or do not obtain financing. The GGF is designed to overcome those challenges and thus unleash the substantial opportunities for EE and RE finance - through the financial sector, which is best positioned to reach households and SMEs, and by directly investing in green projects.

#### **ENERGY INTENSITY**



EUR 1.65 billion

#### **ANNUAL SAVINGS POTENTIAL THROUGH** THERMAL INSULATION

In Turkey, the energy savings potential from upgrading the residential building stock with thermal insulation materials and double glazing reaches 30%, i.e. just over 60,000 GWh/a or close to EUR 1.65 billion per year.

kg CO<sub>2</sub> per USD of GDP toe\* per thousand USD of GDP



### TECHNICAL ASSISTANCE FACILITY

THE TECHNICAL ASSISTANCE FACILITY (TA FACILITY) SEEKS TO SUPPORT THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE (GGF) IN FULFILLING ITS ROLE AS A MARKET ENABLER AND TO BRIDGE KNOWLEDGE AND SKILLS GAPS IN THE FUND'S TARGET PARTNERS.

#### **GENERAL ACTIVITY**

The TA Facility was created to provide hands-on support to the GGF's partners - financial institutions, project developers, and energy service and supply companies - to actively develop the energy finance market and stimulate demand. As it is embedded locally, the TA Facility is able to track investment impact and provide the GGF with valuable insights for calibrating its strategies and priorities. The TA Facility covers a broad range of activities and is able to quickly and flexibly respond to market needs with tailored assistance in

- Capacity building, e.g. assisting partner financial institutions with developing the products and processes necessary to tap the lending potential for residential and commercial energy efficiency (EE), and readying them for larger renewable energy (RE) project financing,
- Raising support and awareness for EE and RE finance, directly and through partnerships with local actors, to encourage the mainstreaming of green development finance,
- Engaging in market-enabling research, such as country and sectoral studies.
- Providing critical support to renewable energy projects to attract funding from both the GGF and local financial institutions, and
- Monitoring the environmental and social impact of its investments through a combination of standardized tools and in-depth studies.

#### **FUNDING**

Donors - development finance institutions and international financial institutions - have not only invested in the Fund but also given grants to the TA Facility, showing their commitment and support to the development of sustainable EE/RE financing in the region.

In 2010 the TA Facility could draw on funds of the Oesterreichische Entwicklungsbank (OeEB, the Development Bank of Austria - EUR 0.5 million) and the German Federal Ministry for Economic Cooperation and Development (BMZ - EUR 1 million). Furthermore, an important contribution of EUR 5 million was secured from the European Commission under the Instrument of Pre-Accession (IPA), and credited to the TA Facility's account in March 2011. Thus, a total of EUR 6.5 million has been made available to support the market development of EE/RE in the Fund's target region.

#### **INNOVATIVE CONCEPTS**

The TA Facility will continue to support the Fund's partner institutions by developing innovative technical assistance concepts and identifying EE/RE financing opportunities. While research projects, such as a study on EE potential in the agricultural sector, will help to identify unaddressed areas, "eyeopener" projects, such as the highly successful EE Showcase in Serbia, will be further expanded to replicate the success story in other target partners. Activities with a sectoral scope will increase as the GGF gathers momentum.

#### **OUTLOOK**

In addition, and as a main focus, the TA Facility will continue broadening the financial sector by working with financial institutions to

- tailor financial products and services for EE and RE loan customers,
- train and coach their staff.
- develop and implement effective monitoring and reporting systems,
- conduct energy audits.

The long-term goal is to enable local financial institutions to grow on their own merits and realize the potential for green energy finance as a mainstream lending activity.

The TA Facility will also support renewable energy projects through

- technical studies, e.g. wind assessments,
- environmental assessments to ensure that projects are executed in accordance with international best practices, and
- structuring advice.

With its instruments and innovative concepts, the TA Facility will contribute significantly towards developing demand for EE/RE financing, supporting the implementation of financing products, and thus facilitating the longterm goal of mainstreaming sustainable energy finance in the markets of Southeast Europe and Turkey.

# 120%

#### WIND ENERGY GAINS MOMENTUM IN THE FORMER YUGOSLAV REPUBLIC **OF MACEDONIA**

The country more than doubled its wind power generation capacity in less than 5 years - from 74 GWe in 2006 to more than 160 GWe by year-end 2010.

## INVESTMENT HIGHLIGHTS

WHILE SOUTHEAST EUROPE IS A RELATIVELY NEW AND THEREFORE CHALLENGING MARKET FOR ENERGY EFFICIENCY (EE) AND RENEWABLE ENERGY (RE), THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE (GGF) IS ALREADY ESTABLISHING A SOLID TRACK RECORD IN ADVANCING THE GREEN DEVELOPMENT AGENDA IN THIS KEY REGION.



eSave training, IK Banka, former Yugoslav Republic of Macedonia

By year-end 2010, the GGF's outstanding investment portfolio totaled EUR 50 million with two PIs in Turkey and one in the former Yugoslav Republic of Macedonia. The strategic decision to initially ramp up the portfolio in a key market paid off: by the fourth quarter, the GGF had generated sufficient interest revenue to lay a solid foundation while covering operating expenses.

As it expands the roster of partner institutions (PIs) across the 8 target partners that make up its geographic scope, the GGF takes special care in achieving the optimum mix in terms of partners it works with, be they financial institutions, banks, project developers, EE and RE service & supply companies, energy service companies (ESCOs) or larger companies and municipalities intending to implement EE/RE projects. The other parameter to impact the approval process is that investments funded by the GGF must, at a minimum, generate a 20% savings in energy and/or CO<sub>2</sub> emissions.

By 2011, the GGF expects to be invested in as many as six of its eight target partners. The GGF is already working with several financial institutions that have not previously been active in EE/RE lending, providing them not only with financial support but also comprehensive technical assistance in areas ranging from market assessment to product development to implementation and monitoring. In addition, the GGF also expects to close two direct investments in EE/RE projects by year-



#### **ENERGY SAVINGS THROUGH** BETTER INSULATION IN KOSOVO

In just three years, Kosovo's program to optimize heat insulation in schools and public buildings reduced heating bills by an average of 50% - in some cases almost 60%.

### TECHNICAL ASSISTANCE HIGHLIGHTS

IN 2010 THE TECHNICAL ASSISTANCE FACILITY (TA FACILITY) IMPLEMENTED SEVEN PROJECTS AT THE INSTITUTIONAL AND SECTORAL LEVELS TOTALING EUR 415,000. ON TOP OF EUR 1.5 MILLION FROM THE OESTERREICHISCHE ENTWICKLUNGSBANK (OeEB. THE DEVELOPMENT BANK OF AUSTRIA) AND THE GERMAN FEDERAL MINISTRY FOR ECONOMIC COOPERATION AND DEVELOPMENT (BMZ), AN ADDITIONAL EUR 5 MILLION GRANT FROM THE EUROPEAN UNION CONFIRMS THE TA FACILITY'S KEY ROLE IN THE SUCCESS OF THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE (GGF).

From capacity building at partner institutions (PIs) to conducting environmental and social impact studies, from monitoring investment impact to raising awareness for energy efficiency (EE) and renewables utilization - the TA Facility is in direct, local contact with the GGF's partners to maximize investment impact and further the Fund's mission to develop a sustainable green energy finance sector.

#### **MEASURING PROGRESS WITH ESAVE**

Increasing energy efficiency and promoting the use of renewable energy sources remains a vague promise until you set goals and track your progress towards them. Developed by the Fund's Technical Advisor, MACS Management & Consulting Services, eSave fulfils a dual purpose: it enables our partner institutions to remain focused on maximizing



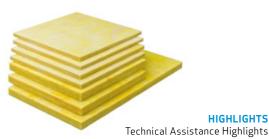
eSave delivers all key metrics on environmental dividends from GGF-funded investments.

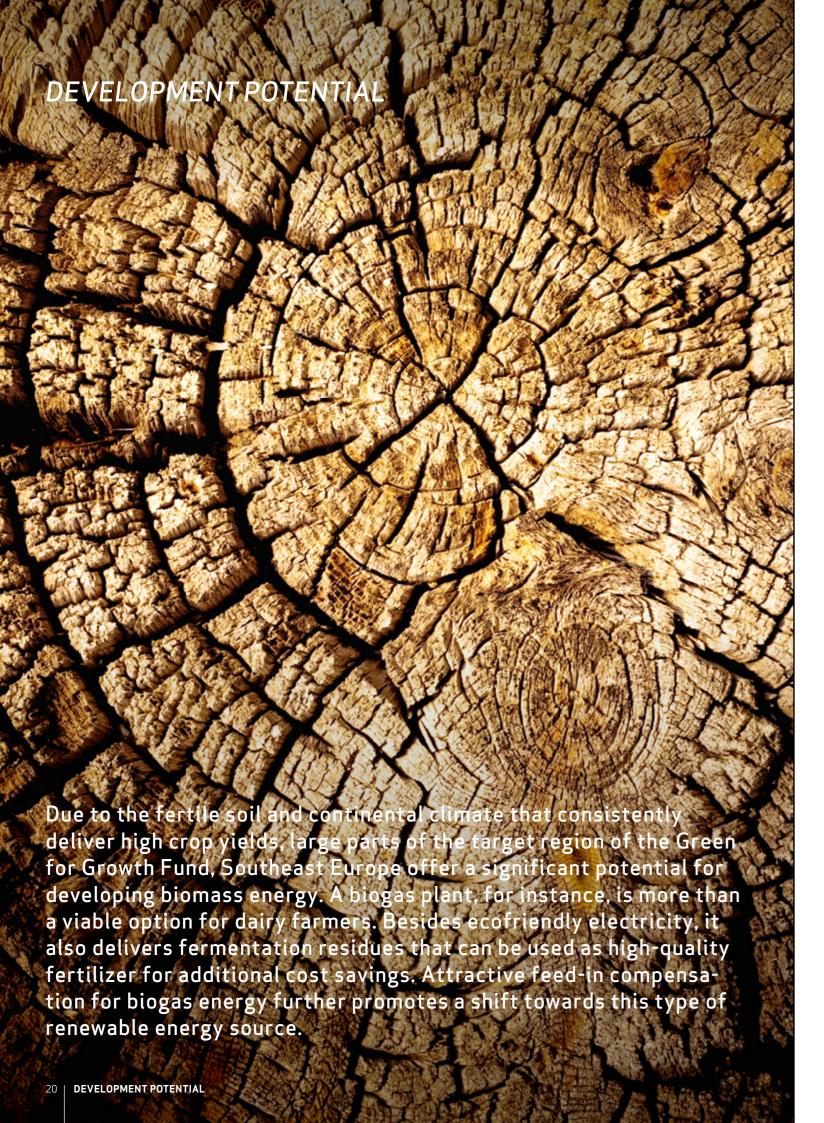
environmental returns from their investments; and it provides the GGF with a measure of accountability as well as a means to calibrate its investment activities throughout the target region.

#### **HIGHLIGHTS 2010**

- In the former Yugoslav Republic of Macedonia, the TA Facility assisted IK Banka in launching the first dedicated EE products for households and small and medium enterprises (SMEs) in this high-potential market. The project covered all aspects of the implementation cycle: from identifying an internal champion, training key staff and raising internal awareness, to product development, supply chain partnering, marketing and monitoring.
- In Serbia and the former Yugoslav Republic of Macedonia, the EE Showcase raised awareness through energy audits at our partner institutions' SME customers. Participating banks were Čačanska banka in Serbia and Sparkasse in the former Yugoslav Republic of Macedonia.
- With the TA Facility's support, Şekerbank and Yapi Kredi Leasing in Turkey implemented a monitoring and reporting system (eSave) for measuring the energy savings and CO<sub>2</sub> emission reductions achieved through green investments. The system is being rolled out throughout the GGF's target region.
- The TA Facility's Environmental & Social Impact Assessments were developed and implemented in Albania and Croatia as an effective tool for calibrating the GGF's investments for optimum environmental impact.
- With the Energy Auditor Training Workshop in the former Yugoslav Republic of Macedonia, the TA Facility took the first step in establishing a core team of experts for conducting energy audits.

While the TA Facility's efforts in 2010 were focused on establishing its capabilities and the areas in which it can effectively advance the GGF's green energy finance agenda, initial success is proving the TA Facility's value in maximizing the Fund's impact - and its integral role in helping PIs incorporate EE and renewable energy finance as a core business.





### POTENTIAL FOR GREENING DEVELOPMENT

THE TARGET REGION OF THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE (GGF), PRESENTS A SUBSTANTIAL INVESTMENT OPPORTUNITY NOT ONLY IN TERMS OF THE NEED TO MODERNIZE ITS ENERGY PRODUCTION INFRASTRUCTURE, BUT ALSO IN TERMS OF THE SHEER POTENTIAL OF RENEWABLES - SOLAR, BIOMASS, HYDRO AND WIND - THAT CAN BE TAPPED.

#### **EE DEVELOPMENT POTENTIAL**

Increasing energy efficiency (EE) is the most cost-effective way to significantly reduce harmful greenhouse gas emissions, and it is the only solution for achieving climate protection goals until adequate renewable energy (RE) capacities are available. Efficiency is not about sacrifice - it is about accomplishing the same goals with less.

An important part of the GGF's mission is to support EE projects through financial institutions and via direct investments. The Fund's target region offers a significant potential for energy savings across all sectors of activity. While the residential and public sectors present a savings potential of up to 30%, manufacturing businesses have the highest incentive to make use of their savings potential due to the direct impact on operational costs.

Developing EE is a win-win proposition, both short and long-term. In the manufacturing sector, for instance, investing in EE also increases the lifetime

of plant and equipment. In residential housing, upgrading insulation not only lowers the energy bill, but also dramatically improves living comfort.

#### THE SHIFT TOWARDS RENEWABLES

As EE efforts in Southeast Europe take hold, the region's energy intensity will gradually drop to sustainable levels. However, in order to be truly effective in bringing down carbon emissions while meeting growing energy needs, this process must be accompanied by an equally significant thrust towards RE usage. That is why the GGF is also actively supporting market development in clean technologies.

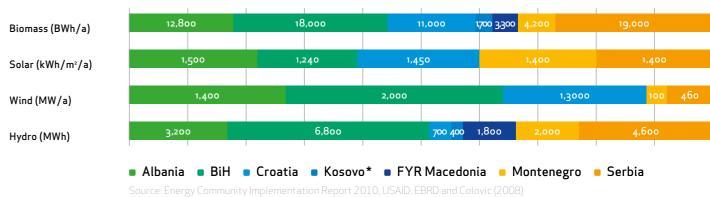
The potential for RE in Southeast Europe is huge as exposure to sunlight in the region is among the highest and most consistent in the world. As an indication of the opportunity: Germany currently leads the world in terms of installed solar energy capacity, yet Southeast Europe actually receives 30 to 50 percent more sunlight than the sunniest portions of Germany.\*

#### **ENERGY SAVINGS POTENTIAL IN SOUTHEAST EUROPE BY 2020**

SECTOR	ENERGY SAVINGS POTENTIAL %
Residential	10-35
Public	35-40
Service	10-30
Industry	5-25

In addition, the actual potential for solar energy is distributed relatively equally throughout Southeast Europe. Some target partners offer significant opportunities for tapping other natural sources as well. Both Bosnia and Herzegovina and Albania, for example, offer substantial opportunities for harnessing hydropower. Croatia and Serbia, on the other hand, have forest and agricultural resources that lend themselves ideally to biomass power generation.

#### RENEWABLE ENERGY DEVELOPMENT POTENTIAL





## **ENERGY EFFICIENCY (EE) FINANCE:** SO THAT EE BECOMES SECOND **NATURE**

# 100 GWh/a

#### SERBIA'S HIGH BIOMASS ENERGY POTENTIAL

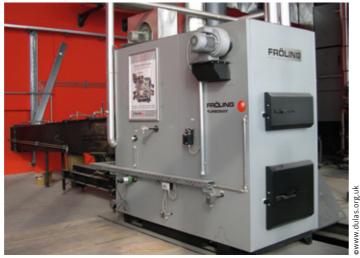
28,500 households could be powered annually with the 800,000 m<sup>3</sup> of forest waste available in Serbia.

The potential of EE finance in terms of reducing carbon emissions is particularly significant in countries with a national energy mix that relies heavily on carbon-intensive fossil fuels, e.g. coal, lignite or heavy fuel oil. This is still the case in many parts of the target region of the Green for Growth Fund, Southeast Europe (GGF). The graph on the facing page shows the significant opportunity presented by efficiency measures when comparing carbon intensity to the average of the European Union. Of the GGF's target partners, Serbia, for instance, has the highest carbon intensity per GDP. This is due to a combination of coal as the main fuel source, inefficient power generation units, and inefficient usage of energy in industrial production processes.

As part of the EE Showcase in Serbia, the GGF audited a medium enterprise specialized in metal processing to identify cost-effective energy saving measures that could be easily implemented by the company and financed by a GGF partner bank. The findings were impressive: by investing EUR 227,000 in a wood pellet heating system to replace the existing electric system, and by recycling hot water produced in the production process for sanitary purposes, the company could save EUR 67,000 per year - and pay off the cost of the investment in under four years. This example is representative of the situation and opportunities in many small and medium enterprises in Serbia, where small to medium investments yield high savings. The fact that this investment would pay off so quickly, despite Serbia's relatively low energy prices compared to the rest of the region, underscores the considerable potential for green finance in the region.

Upgrading obsolete stock, such as the electrical boiler (left), with modern and significantly more efficient equipment, like the biomass boiler (right), is key.





## RENEWABLE ENERGY (RE) FINANCE: MAXIMIZING THE USE OF RE SOURCES

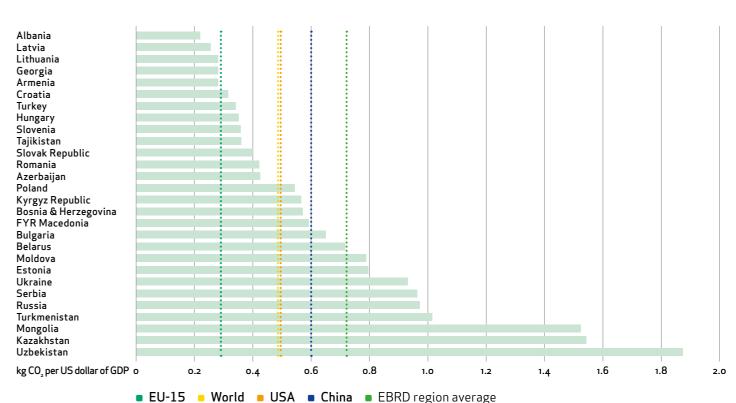
Despite the obvious potential for RE, initiating and, more important, developing new projects in this area is a process fraught by a wide variety of issues. On the local level, for instance, regulatory frameworks are still in flux. The fact that high subsidies are not accurately reflected in end-user prices only compounds the problem. At the regional level, the fragmented infrastructure makes it difficult to achieve economies of scale, and the general lack of transparency makes reliable planning

difficult. The Green for Growth Fund, Southeast Europe (GGF) is addressing these challenges head-on to grow RE finance from both an institutional and a sectoral perspective.

When working directly with RE project developers, for instance, a broader approach to advancing the project is key to meeting international best practices. This includes conducting environmental and social research, and taking a hands-on approach to finding the

appropriate financing structure. Where possible, the GGF also actively seeks to bring local financial institutions into the loop to stimulate the creation of finance know-how in the local market. At the sectoral level, the GGF engages in regional conferences and industry forums to promote dialogue. Here, the Fund's unique public-private partnership model adds a valuable dimension to the RE policy debate.

#### **CARBON INTENSITY OF GDP IN 2008**



# 15,000<sub>t</sub>

#### **CLEAR ENVIRONMENTAL DIVIDENDS**

One small hydroelectric power plant with an annual output of approximately 4.5 megawatts will, on average, save up to 15,000 metric tons of CO<sub>2</sub> per year.



PERFORMANCE IS NOTHING WITHOUT THE ABILITY TO MEASURE PRO-GRESS. AS PART OF ITS COMMITMENT TO BEST PRACTICES AND STRONG GOVERNANCE, THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE (GGF) HAS IMPLEMENTED REPORTING TOOLS TO HELP PARTNER INSTITU-TIONS TO TRACK THE ENVIRONMENTAL IMPACT OF ITS INVESTMENTS.



In 2010, the GGF's partner institutions (PIs) put in place dedicated reporting procedures for on-lent funds. This monitoring system will begin providing meaningful impact data as PIs ramp up their portfolios of household and small and medium enterprise (SME) loans in 2011. One PI, which had its reporting in place in 2010 and on-lent 22% of the GGF's loan to 215 endborrowers, reported energy savings of nearly 30,000 megawatt hours for the year, along with an annualized reduction in CO<sub>2</sub> emissions of 6,500 metric tons - all as a direct result of the GGF's investment. These savings are well in excess of 20% in terms of

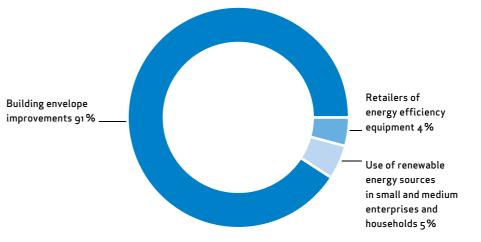
both energy usage and carbon dioxide emissions, and in line with the European Union's own Europe 2020 initiative, i.e. to achieve a 20% increase in energy efficiency, a 20% reduction in CO<sub>2</sub> emissions, and a 20% share of renewable energy by 2020. Extrapolating the data obtained from the reporting PI to the GGF's current portfolio of EUR 50 million translates into aggregate annual savings of over 125,000 megawatt/hours in energy and 31,250 metric tons in CO<sub>2</sub> emissions. The leveraging effect of repaid and relent loans further significantly amplifies the positive environmental impact.

#### CO, REDUCTION AND ENERGY SAVINGS BY TYPE OF PARTNER INSTITUTION AS AT 31 DECEMBER 2010

MEASURE	PI TYPE	LOAN VOLUME (EUR)	CO <sub>2</sub> REDUCTION (TCO <sub>2</sub> )	CO <sub>2</sub> REDUCTION (%)	ENERGY SAVINGS (MWH/YR)	ENERGY SAVINGS (%)
Renewables usage (SMEs & households)	FI*	359,743	213	100%	680	100%
Building envelope improvements	FI*	6,229,701	6,276	60%	29,029	60%
Subtotal		6,589,444	6,489	61%	29,709	61%
Energy efficiency equipment retailers**		243,300		0%	-	0%
Total		6,832,744	6,489	61%	29,709	61%

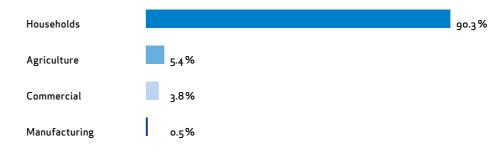
Energy savings and CO<sub>2</sub> reductions to date exceeded the GGF's minimum target of 20%, the EU benchmark. The 215 loans (EUR 6.8 million) disbursed translated into estimated energy savings of 29,709 mWh/yr, the equivalent of 6,489 metric tons of CO<sub>2</sub> per year.

#### MEASURES FINANCED SINCE INCEPTION (IN % BASED ON LOAN AMOUNT DISBURSED)



Most of the total subloan volume (91%) disbursed since subloan monitoring began was targeted to building envelope improvements. This reflect's Şekerbank's partnership with the Turkish insulation association. Subloan volume allocation is expected to evolve as more partner institutions implement subloan reporting procedures.

#### SECTORS FINANCED SINCE INCEPTION (IN % BASED ON LOAN AMOUNT DISBURSED)



90.3% By year-end, 90.3% of subloans disbursed (in terms of volume) had been onlent to households. The remaining 9.7% went to businesses in the agricultural, trade and manufacturing sectors.

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