



**GREEN FOR GROWTH FUND**  
SOUTHEAST EUROPE

INVESTING IN ENERGY EFFICIENCY  
AND RENEWABLE ENERGY

ANNUAL  
REPORT  
2012

# MISSION

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

# INVESTORS

THE GGF IS SUPPORTED BY LEADING DONORS, INTERNATIONAL FINANCIAL INSTITUTIONS AND PRIVATE INVESTORS.

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## KEY FIGURES 2012

10

Investors and donors to date who have committed funds to the Green for Growth Fund, Southeast Europe.

13

Target partners of the Green for Growth Fund, Southeast Europe: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Croatia, Georgia, the former Yugoslav Republic of Macedonia (FYR Macedonia), Moldova, Montenegro, Serbia, Kosovo\*, Turkey, Ukraine.

14

Partner institutions the Green for Growth Fund, Southeast Europe has invested in to date.

22

Partner institutions the Fund has lent to and/or provided technical assistance to.

28

Renewable energy projects the Fund reviewed in 2012 for potential financing.

61

Technical Assistance Facility projects to date to support partner institutions and promote energy efficiency and renewable energy finance.

101,160

Tons of CO<sub>2</sub> saved annually through energy efficiency and renewable energy investments financed by the GGF.

405,769

MWh saved on average through energy efficiency and renewable energy investments financed by the GGF.

130,890,511

Total portfolio outstanding (in EUR).

194,156,261

Total investor commitments (in EUR).

\* This designation is without prejudice to positions on status, and is in line with UNSC 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

# LETTER FROM THE CHAIR

## DEAR INVESTORS AND PARTNERS,

Welcome to the 2012 Annual Report, marking the third year of successful operations for the Green for Growth Fund, Southeast Europe. To reflect the Fund's 2012 milestones, the report is structured around the themes of Expansion, Excellence, Partnership, and Growth. These keywords describe what makes the GGF a unique initiative in its regions and in its sector. As an innovative public-private partnership model, dedicated to financing sustainable energy systems, the GGF is a pioneer in the mainstreaming of energy efficiency in the financial sector and the commercialization of small-scale renewable energy projects – first in the Southeast Europe region, including Turkey, and now in the European Neighbourhood Region as well.



With this latest **expansion** into Armenia, Azerbaijan, Georgia, Moldova and Ukraine, the GGF now operates in 13 markets, and has active investments in 8. With a portfolio of nearly EUR 131 million, over 4,500 sub-loans financed to date, and 14 partner institutions, the GGF is making a real difference in conserving energy and reducing emissions. Importantly, expansion in the GGF context not only means new markets, but also reaching underserved clients who might otherwise not be aware of the compelling case for energy efficiency and renewable energy. These clients, some of whom are featured in this report, range from households in Armenia to SMEs in Ukraine to large corporate borrowers in Serbia.

The Fund has achieved this by leveraging **excellence** – that of the governing bodies of the Board, the Investment and Technical Assistance Committees, the Fund's active and supportive shareholders, and the professionalism of the fund manager and advisors who contribute regional knowledge and deep industry expertise. Here, I would like to acknowledge the leadership demonstrated by our outgoing Fund Chairperson, Monika Beck, who was instrumental in the establishment of the Fund and has guided it so ably through its early years.

Key to the GGF's success is the **partnership** approach it takes towards local financial institutions, building capacity through tailored technical support. Before funding comes an interactive energy assessment workshop to identify areas where the GGF can enable the institution to best serve its market. As a dedicated, well-capitalized Fund with both internal expertise and access to top international and local consultants, the GGF is able to take on projects and initiatives – as well as risks – that others cannot.

This combination of expansion, excellence and partnership has resulted in a financially sustainable Fund with a growing environmental and developmental impact. The Fund's **growth** is also the direct consequence of the continued support and funding provided by our lead investors, the European Commission and the German Federal Ministry for Economic Development, along with the European Investment Bank, KfW, the European Bank for Reconstruction and Development, the International Finance Corporation, and our newest investor, the Netherlands Development Finance Company (FMO). These stakeholders have enabled the Fund to reach nearly EUR 200 million in committed capital, and positioned it for the next stage of expansion as private investors come on board.

Trusting you will find the reading both informative and enjoyable, I thank you for your interest in the Fund.

A stylized, handwritten signature in black ink, appearing to read 'Chris Knowles'.

CHRISTOPHER KNOWLES



# GREETINGS

## BUILDING ON EXCELLENCE

The promotion of energy efficiency and renewable energy is a critical element of EU support to its partners, both in the enlargement region and in the European Neighbourhood Region. It underpins the Europe 2020 Strategy, and it is crucial to ensuring that future EU member states, as well as our regional partners, develop in a sustainable manner. Without increased energy efficiency and a lower-carbon energy supply, the EU, and indeed the global community, will not be able to achieve their goals in limiting human-caused climate change.



Against this background, we are very pleased with the progress made by the Green for Growth Fund, Southeast Europe in 2012. The European Commission has supported the Fund since its inception, and continues to be its single largest source of capital. With its expansion into the European Neighbourhood Region countries of Armenia, Azerbaijan, Georgia, Moldova, and Ukraine, the Fund is building on the reputation for excellence it has established in its original region, Southeast Europe. In just three short years, the Fund has become a key source of financing and expertise for financial institutions serving households, businesses and municipalities in the area of green energy investments, and for small-scale renewable energy projects. Bringing this unique combination of funding and know-how to the European Neighbourhood Region is an initiative welcomed by the Commission.

In 2013, the Commission plans to invest additional funds dedicated to broadening the GGF's scope in its eastern neighbouring countries. We are confident the Fund will deliver strong results, and look forward to our continued partnership.

## GERHARD SCHUMANN-HITZLER,

Director – Financial Instruments & Regional Programs,  
European Commission Enlargement Directorate General



## GROWING SUCCESSFUL PARTNERSHIPS

The Green for Growth Fund, Southeast Europe was founded in December 2009 to contribute to the reduction of greenhouse gas emissions in the partner countries by facilitating investments in renewable energy projects as well as in energy efficiency on the part of private households, businesses and municipalities. Germany knows from its own experience that supporting these groups is of the highest importance for the sound, sustained and dynamic development of any country, and of society as a whole.



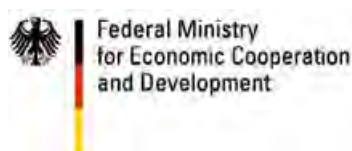
We are very proud the GGF has succeeded in more than doubling its investments in the course of 2012. Equally rewarding is the fact that energy efficiency and renewable energy projects financed by GGF investments are reducing energy consumption and/or greenhouse gas emissions by an average of above 20%. This also proves that the Fund contributes to increasing awareness of the need to conserve energy and lower emissions among the populations of our partner countries.

After three very successful years of operations in the Western Balkan countries and Turkey, the Fund's expansion into the European Neighbourhood Region is an impressive achievement. Together with the German government, KfW, the European Commission and the European Investment Bank, we remain committed to contributing towards continued and sustainable development in the enlarged area of operations. As of 2012, projects in the Western Balkans as well as Armenia, Azerbaijan, Georgia, Moldova, and Ukraine are thus also eligible for investment and hence supported with capital and Technical Assistance by the BMZ.

The GGF's very dynamic growth and successful expansion is also an example of a sustainable business case and reliable cooperation with sound partners on both the international and local levels.

### DR. LEO KREUZ,

Federal Ministry for Economic Cooperation and Development (BMZ)





EXPANSION

"NOTHING LIMITS ACHIEVEMENT  
LIKE SMALL THINKING;  
NOTHING EXPANDS POSSIBILITIES  
LIKE UNLEASHED IMAGINATION."

William Arthur Ward

EXPANSION



# MEETING THE FUND'S OBJECTIVES

EXPANDING INTO THE EUROPEAN NEIGHBOURHOOD REGION TAKES THE FUND'S PROVEN INVESTMENT MODEL INTO FIVE ADDITIONAL COUNTRIES. BESIDES THE OBVIOUS ADVANTAGES OF REDUCING ENERGY CONSUMPTION AND CO<sub>2</sub> EMISSIONS ACROSS A GREATER TERRITORY, THIS STRATEGY ALSO SUPPORTS THE GGF'S COMMITMENT TO SHARING KNOWLEDGE AND EXPERTISE THROUGHOUT THE TARGET REGIONS.

With the portfolio in the initial target region of Southeast Europe and Turkey doubling from EUR 57.5 million to EUR 114 million, the foundations laid in 2010 and 2011 have borne fruit. The GGF's expansion into the European Neighbourhood Region (ENR) in late 2012 further added EUR 17 million to the portfolio during the final months of the year. This combined portfolio funded over 4,500 sub-loans for a wide range of investments across the Fund's regions, translating into annual energy savings of over 400,000 MW/h and 100,000 tons of CO<sub>2</sub> emissions. The GGF also continues to invest in developing the renewable energy (RE) project market. In 2012 alone, the Investment Management team reviewed 28 potential investments in RE, and the GGF's Technical Assistance Facility (TAF) provided support to 4 projects and to 7 banks in the region to enhance the market potential.

The strategy of broadening the geographic reach naturally follows through on the GGF's proven development finance model. It builds on the ability to leverage the steadfast support from its investors, the

hands-on leadership by the Board and Investment Committee, and the competence and market knowledge of its professional investment manager as well as of its advisors on the ground. With this unique combination of stakeholders, the Fund's specific public-private partnership structure facilitates the positive leveraging of patient capital from seven international finance and development finance institutions to effectively impact the environmental sustainability of our target partners – and in the process fulfill the Fund's objectives. The close cooperation between the GGF and its stakeholders ensures that the Fund's strategy is executed to maximize complementarity with other initiatives in the market.

Funded by the European Union, Germany and Austria, the TAF plays a key role in ensuring the GGF's objectives are met on the ground. Working closely together with existing and prospective partner institutions, and delivering 61 projects through 2012 to build institutional expertise and develop appropriate products, the

TAF ensured funding actually translated into increased energy efficiency and lower emissions. Partner institutions that avail themselves of the TAF's services also benefit from approaches and solutions that have been tried and tested in other markets. The TAF is set up to sustainably serve the Fund's environmental and energy efficiency (EE) goals in alignment with its overall commercial orientation. In addition, the GGF's long-term strategy means that technical assistance is not limited to quick fixes, but rather follows an iterative process towards mainstreaming green energy finance. This in turn ensures that EE and RE projects, which would otherwise be incompatible with the short-term orientation of local financial markets, can be initiated more effectively, and with greater chances of success.

As the GGF builds momentum, the Fund is becoming increasingly attractive to private investors. The Fund offers a solid track record with strong prospects for further diversification and a proven environmental impact.



A view of Mount Ararat from Yerevan. The GGF already closed two deals in Armenia in 2012.

## LEVERAGING THE GGF'S TRACK RECORD IN AN EXPANDED TARGET REGION

**THE EXPANSION OF THE GGF'S INVESTMENT ACTIVITIES INTO THE EUROPEAN NEIGHBOURHOOD REGION WAS A MAJOR STEP FORWARD IN 2012. HAVING ESTABLISHED A STRONG FOUNDATION IN SOUTHEAST EUROPE IN ITS FIRST THREE YEARS, THE FUND IS NOW POSITIONED TO LEVERAGE ITS EXPERIENCE AND KNOWLEDGE ACROSS A SIGNIFICANTLY LARGER AREA.**

With investment activities delivering consistently positive results in terms of outreach and impact throughout Southeast Europe and Turkey, expanding into nearby countries with a similarly high potential for greening their economies was the logical next step for the GGF. Among the countries known collectively as the European Neighbourhood Region (ENR), Armenia, Azerbaijan, Georgia, Moldova and Ukraine are strengthening their ties to the European Union, which naturally makes them relevant to the GGF's mission.

Although quite diverse in size and political structure, these countries are all characterized by highly energy-intensive economies. Dynamic growth requires fuel, and outdated manufacturing infrastructures are consuming too much energy with too little efficiency. Compounding this problem is the fact that, with the exception of Azerbaijan and Georgia, the ENR countries are largely dependent on foreign energy imports – and suffer from rising prices.

In a region where rough winters are common, demand for energy efficiency

(EE) home improvement loans is creating an important new market for local financial institutions. In addition, SMEs and larger industrial and corporate clients are increasingly aware of their mounting energy costs. The ENR's agricultural sector presents new opportunities as well. Countries like Ukraine, Moldova and Georgia have a strong base of large and medium-sized agricultural producers that are especially vulnerable to rising energy-related costs. In 2012, the Fund commissioned an in-depth study on the agricul-

tural sector, which covered the ENR as well as Southeast Europe and Turkey, to identify the sector's energy and emission savings potential.

The ENR therefore offers a unique opportunity to leverage the extensive experience and expertise, which the Fund has gained in the area of housing and SME/corporate EE finance with the GGF's other target partners.

Renewable Energy (RE) is seen by many as an additional way to reduce dependency on energy imports. Ukraine already offers tariffs for green energy with a focus on wind and solar energy. Georgia is also very active and developing mainly hydropower projects, both for meeting national demand and exporting to Turkey, which is expressing high demand and offering attractive energy purchase terms. While Azerbaijan has not yet fully embraced RE, Moldova and Armenia are also starting to realize the potential with several successful project launches.

The GGF made so much headway in the ENR in so little time because, from the beginning, the Technical Assistance Facility (TAF) was able to deliver targeted, effective hands-on support to the GGF's new partner institutions in the region. They directly benefit from the TAF's experience in providing capacity building and other forms of technical assistance in Southeast Europe and Turkey. The Fund also benefits from the Investment Advisor's network of regional offices in the ENR, located in Georgia, Moldova and Ukraine, with an additional office in Armenia in the advanced planning stage. This local presence provides up-to-the minute, in-depth knowledge of market developments and conditions.

Although active in the ENR only since September 2012, the GGF has already closed three investments, one in Ukraine and two in Armenia. At the same time, strong growth in Southeast Europe and Turkey continues, benefiting in turn from new expertise acquired in the ENR. This cross-pollination of ideas and know-

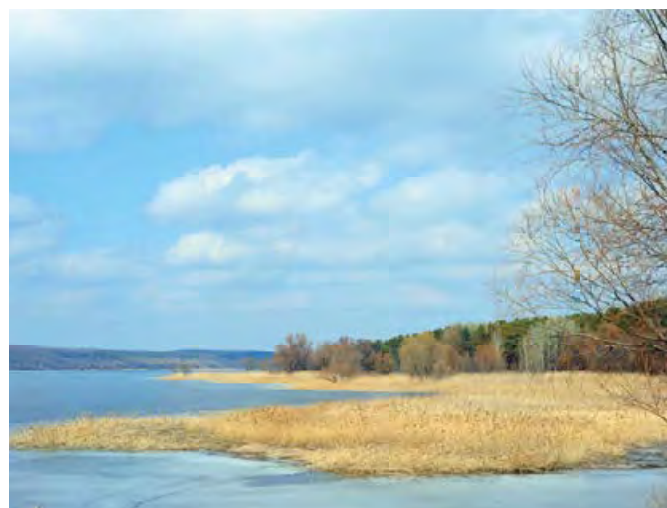


GGF investments have resulted in emissions reductions equal to Moldova's CO<sub>2</sub> output from producing heat and electricity for half a year.

ledge across a wider region, coupled with the increased sustainability that comes from diversifying the Fund's portfolio across 13 countries, validates the decision by the GGF's Board and shareholders to broaden the scope of activities and expand the Fund's proven model and investment strategy.



On the outskirts of Tiflis. Georgia is very active in developing hydropower projects.



A lake near Kharkov in eastern Ukraine, where the GGF closed its first investment in 2012.




# EXTENDING THE GGF'S HORIZON

THE DECISION TO ENLARGE THE GEOGRAPHIC REACH OF THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE TO INCLUDE THE EUROPEAN NEIGHBOURHOOD REGION BRINGS THE FUND'S EFFECTIVE MODEL OF GREEN ENERGY FINANCE TO A BROADER RANGE OF TARGET PARTNERS.

In September 2012, following the recommendation of the Board of Directors, the GGF's shareholders approved the expansion of the Fund's area of operations into five new countries in the European Neighbourhood Region: Armenia, Azerbaijan, Georgia, Moldova and Ukraine. This strategic move increases the total number of target partners to thirteen, in each of which the Fund brings deep domestic and regional market knowledge and outreach to the table via its Investment Advisor.

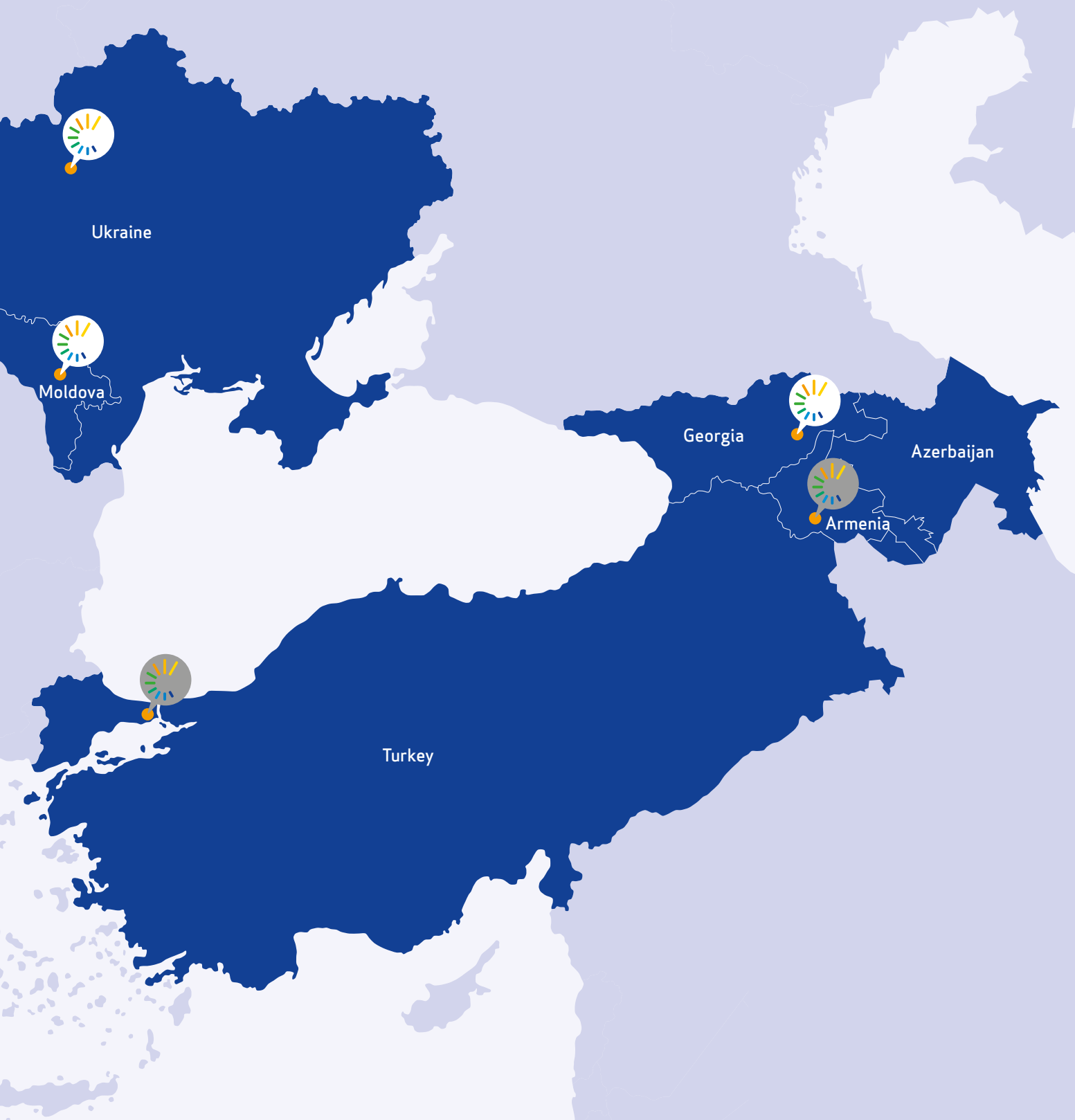
With this structure the Fund was able to reach out to 22 partner institutions and projects in the area of funding and Technical Assistance.

The  denotes offices of the Investment Advisor Finance in Motion.

 in planning



\* This designation is without prejudice to positions on status and is in line with UNSC 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.



# INTERVIEW WITH MONIKA BECK, CHAIRPERSON OF THE BOARD OF DIRECTORS 2010–2012

THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE SAT DOWN WITH MONIKA BECK, FOUNDING MEMBER AND OUTGOING CHAIRPERSON OF THE BOARD OF DIRECTORS, TO GET HER INSIGHTS ON THE ORIGINS OF THE FUND, ITS PROGRESS SO FAR, AND WHAT THE FUTURE HOLDS FOR THE GGF AND FOR GREEN ENERGY FINANCE IN GENERAL.

**GGF:** You were instrumental in the creation of the GGF. What was the rationale for setting up such a fund?

**Monika Beck:** The initiators of the fund, KfW and EIB, had already been working with our other founding investors for many years on meeting development needs in the areas of poverty alleviation and employment generation, most prominently through funds supporting micro, small and medium enterprises. Our view was that this cooperative approach could also be effective in addressing climate change through the promotion of energy efficiency and small-scale renewable energy. In particular, in view of the challenges for implementing energy efficiency and renewable projects, such as weak regulatory frameworks, low energy tariffs, limited awareness and know-how, a joint approach seemed to be the best solution to streamlining the activities of major development finance institutions in the region.

**GGF:** Why was the structure, a Luxembourg-based SICAF-SIV with different layers of risk and return, chosen?

**Monika Beck:** We adopted this structure because it had proved to be very successful in other asset classes. Through diversification and structuring it allows the GGF to attract different investors with different appetites for risk and requirements for returns. Public funds from the EC and BMZ form the foundation of the structure, with the international financial institu-

tions providing mezzanine risk capital. Together, these two layers enable the GGF to source private investors as well by offering them a lower-risk, attractively priced investment that meets an important social need – climate change mitigation.

**GGF:** After three years under your leadership, are you satisfied with where the GGF stands as you hand over the Chairperson's gavel?

**Monika Beck:** By any objective measure, the Fund is a success. Our first two years were largely foundational, with a relatively modest portfolio. 2012, our third year, really saw the GGF take off: our portfolio more than doubled in size, new investors joined the Fund to increase its available capital, and the GGF became a real influence in its region in terms of green energy finance. I'm also proud that the fund is self-sustaining, and will pay target dividends to all its investors after just three short years.

**GGF:** Going forward, what do you see as the GGF's biggest challenges?

**Monika Beck:** The Fund has been very successful in making funds available to and building capacities in the financial sector, as evidenced by the broad range of banks, leasing companies and even microfinance institutions we partner with. So far, however, the GGF has yet to close a direct investment in a renewable energy project. We are almost there, and I hope to see the first of many deals



**MONIKA BECK WITH BOARD CHAIRPERSON CHRISTOPHER KNOWLES**

signed in 2013. Another big challenge in 2013 for my successor will be to mobilize private capital to fund the GGF's growth in the future. We always knew that it would take at least three years to build the track record necessary for obtaining significant private funding. Now that we have reached this milestone, the time is right to begin sourcing these funds, and take the GGF to the next level.

**GGF:** Thank you for taking the time to share your thoughts with us, and for all your work in getting the GGF off the ground and keeping the Fund on course. Good luck in your future endeavors!

**Monika Beck:** Thank you! I look forward to reading about the successes of the GGF for many years to come.



EXCELLENCE

**XCELLENCE**

"WITH REGARD TO EXCELLENCE,  
IT IS NOT ENOUGH TO KNOW,  
BUT WE MUST TRY TO HAVE AND  
USE IT."

Aristotle





Board of Directors: Christopher Knowles (Chairperson), Dominique Courbin, Olaf Zymelka, Michael Mörschel (joined in September 2012), Hubert Cottogni, Michael Neumayr, Monika Beck (stepped down in September 2012)

## LEADERSHIP THROUGH EXPERIENCE

### BOARD OF DIRECTORS

Christopher Knowles, Chairperson  
 Monika Beck (stepped down in September 2012)  
 Dominique Courbin  
 Hubert Cottogni  
 Michael Mörschel (joined in September 2012)  
 Michael Neumayr  
 Olaf Zymelka

### INVESTMENT COMMITTEE

Peter Coveliers, Chairperson  
 Esther Gravenkötter  
 Michael Neumayr

### TECHNICAL ASSISTANCE FACILITY COMMITTEE

Esther Gravenkötter, Chairperson  
 Dirk Roos  
 Ioannis Tsakiris

# EXCELLENCE IN GOVERNANCE

## THE GOVERNANCE STRUCTURE OF THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE ENSURES EXCELLENCE AT ALL LEVELS.

The investors and donors developed and back the Fund’s mission of reducing energy consumption and CO<sub>2</sub> emissions through energy efficiency and renewable energy investments. At the same time, the Board and

its committees ensure that the Fund achieves this goal in a prudent, professional manner. The management team contributes local knowledge and sector expertise to the process.

### INSTITUTIONAL STRUCTURE







## LETTER FROM THE INVESTMENT MANAGEMENT TEAM

The commitment and dedication to the advancement of green energy finance expressed by the key words of the 2012 Annual Report – Expansion, Excellence, Partnership, and Growth – apply not only to the Fund, but to the Investment Management team as well. It carries over to our regional offices and to the staff who serve the Fund’s partner institutions. And it shows in the enhancements brought to team capacity, the strong cooperation with our stakeholders and clients, and of course, in the growth of all success metrics. These metrics – the number of partner institutions, the markets where the Fund is investing, the number of sub-loans financed, and, most importantly, the energy and CO<sub>2</sub> emissions saved – provide the clearest “proof of concept” of what the Fund, and the Investment Management team, are striving to achieve.

The GGF ended 2012 with investments in partner institutions in 8 of its 13 target partners. These investments have funded 4,500 sub-loans to households, small and medium enterprises, and even large corporate borrowers. In fact, we are very pleased to showcase the investment of our partner bank, Komercijalna, in the Sunoko sugar refinery in Serbia. It is the Fund’s largest individual sub-project to date, and it demonstrates that, even in difficult economic times, smart companies are willing to invest in their future by acquiring energy efficient equipment. Taken together, the projects financed by the GGF are saving 406,000 MWh of primary energy and 101,000 tons of CO<sub>2</sub> emissions per year.

This would not have been possible without the strong partnership with the Fund’s shareholders who have invested precious capital to establish and fund the GGF, the governance bodies they appoint, and the Investment Management team along with the full complement of service providers. Together, the shareholders and the Board set the strategic direction for the Fund, which is then implemented by its committees. The Investment Management team translates this into tangible results through its regional network of local experts. With the support of the Board, we have taken a deliberate, holistic approach to building the green energy finance sector in our regions. It means investing the time and effort necessary to build local expertise, and offering a suite of fully integrated services built around funding and technical assistance. Getting the structures and systems in place to make all this possible is a long and arduous process, but the strong results of 2012 demonstrate that this investment was well worth the effort.



The Investment Management team (from left to right):  
Dr. Thomas Schiller, Lloyd Stevens,  
Elvira Lefting, Max von Frantzius,  
Claudia Ploss, Florian Meister,  
Thomas Albert, Sylvia Wisniwski,  
Holger Roentgen

Of course, we cannot speak of partnership without highlighting our partner institutions. Our financial institution partners range from microfinance institutions to systemic, market-leading commercial banks. The common denominator: a shared objective to provide innovative products that benefit their clients and the environment. Besides funding, the GGF provides these institutions with the know-how and tools to succeed in the market, develop and place appropriate products, and to measure results. A notable trend in 2012 was the deepening of support in renewable energy (RE) expertise provided to the Fund's partners, complementing its well-established activities in energy efficiency (EE). The Fund is in a unique position to provide long-term funding for RE finance as well as the expertise to ensure that projects are financed in a responsible, environment-friendly manner.

With growth capital nearing EUR 200 million, an established track record, and a broad reach in terms of geographic scope and client base, the GGF has become the trusted partner for green energy finance. We in the Investment Management team feel privileged to serve this Fund and its mission. We are continuously working with the Fund's committees and the Board to push the envelope, striving to find new ways to efficiently and effectively foster the EE and RE markets in our target regions. We look forward to reporting to you next year on the outcomes of these efforts.

**MAX VON FRANTZIUS,**  
Managing Director,  
Oppenheim Asset  
Management Services

**SYLVIA WISNIWSKI,**  
Managing Director,  
Finance in Motion

**FLORIAN MEISTER,**  
Managing Director,  
Finance in Motion

**ELVIRA LEFTING,**  
Managing Director,  
Finance in Motion

**LLOYD STEVENS,**  
Director,  
Finance in Motion

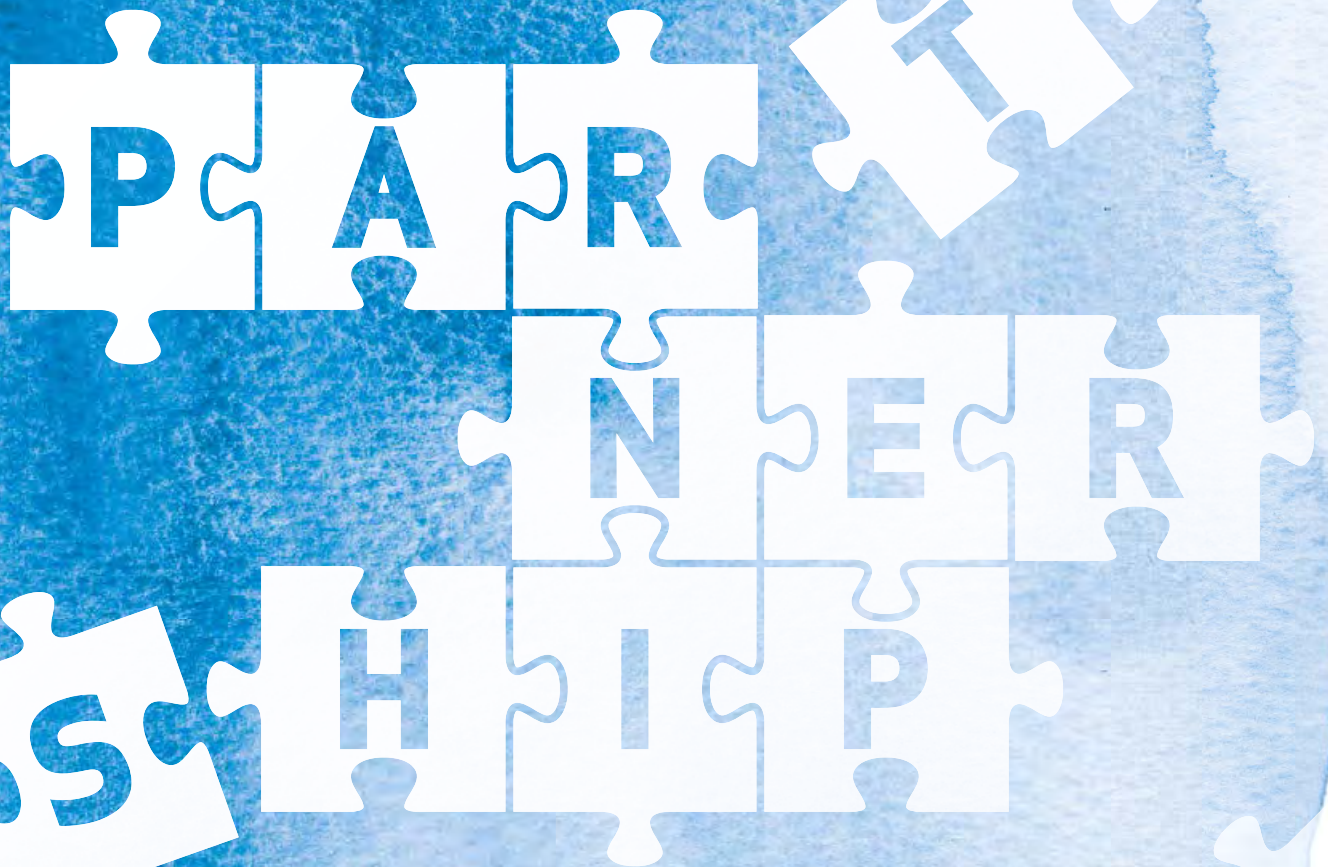
**DR. THOMAS SCHILLER,**  
Managing Director,  
MACS Management and Consulting  
Services (Technical Advisor)



## PARTNERSHIP

"WHAT I DO YOU CANNOT DO;  
BUT WHAT YOU DO, I CANNOT DO.  
TOGETHER WE CAN DO SOMETHING  
WONDERFUL."

Mother Teresa





# BROADENING THE GGF'S BASE: THE SUCCESS OF ENERGY EFFICIENCY FINANCE

ENERGY EFFICIENCY FINANCE CONTINUES TO BE THE MAIN PILLAR OF THE FUND'S SUCCESS ACROSS ITS TARGET REGIONS. WHILE RETAIL LOANS PROVIDED BY OUR PARTNER INSTITUTIONS TO HOUSEHOLDS ARE STILL IMPORTANT TO THE FUND'S CORE BUSINESS, SMALL AND MEDIUM ENTERPRISES AS WELL AS LARGER CORPORATE BORROWERS ACCOUNT FOR AN INCREASING SHARE OF THE GGF'S SUB-LOAN PORTFOLIO.

Although energy prices are still government-subsidized in many countries of the GGF's target regions, the need to improve energy efficiency is increasing. As chronic power under-supply and outages often remain part of the daily reality, there is still work to be done on the regulatory and policy side to facilitate the mainstreaming of energy efficiency (EE) and renewable energy (RE) investments. However, as better energy efficiency would significantly reduce the costs for fuel and electricity, more and more private households and businesses throughout the region are taking energy efficiency into their own hands, and investing in upgrades to their property and assets.

The GGF's flexible approach to eligible measures and borrowers places the Fund in an ideal position to support partner institutions in realizing this significant market potential. The bulk of the GGF's investments are retail loans to private households, typically for upgrading housing envelopes with energy efficiency measures such as new windows, better wall insulation or more modern heating systems.

During 2012, the Fund began to observe a gradual shift from comfort-related loans to investments designed specifically to reduce energy-related costs.

At the other end of the spectrum, the volume of process-related investments by SMEs and larger corporate borrowers increased in 2012. Looking at total investments, these two groups now account for more than 55 % of the GGF's sub-loan portfolio. This not only reflects increasing interest in EE loan products in the business sector across the GGF target regions, but also indicates that the Fund's strategy of working with local energy auditors to secure approvals for non-standard loans is the correct approach for the market. Partner institutions need to know quickly and reliably if any loans they are considering to make will also meet the GGF's funding criteria. The local energy auditors commissioned by the GGF's Technical Assistance Facility fulfill precisely this purpose. They act as a one-stop shop, completing energy audits within two to three days. Knowledge of local conditions and requirements along with the

ability to communicate with the counterparties in their own language are crucial to the auditors' speed and effectiveness.

The GGF is well equipped to continue broadening its lending activities in the future. Businesses and households are not only increasingly aware of the high impact of energy costs, but also translating this awareness into investments such as those profiled in this report. The Energy Community puts the total investment requirement in building envelope improvements in Southeast Europe alone (excluding Turkey) at EUR 5.6 billion to reduce energy consumption by 9 % by 2020. Likewise, the public sector, supported by an array of regional initiatives such as the Covenant of Mayors, to which 122 municipalities in the GGF regions have signed on, is stepping up efforts to improve energy efficiency in its operations and infrastructure. The GGF is responding with tailored products and technical assistance to support its partner institutions in serving the public sector, and further opportunities will arise in the newly added European Neighbourhood Region as well.

# SEEDING GROWTH THROUGH GREEN DEVELOPMENT IN CHALLENGING ECONOMIC TIMES

THE ECONOMIC CRISIS HAS DAMPENED THE APPETITE FOR RISK ON THE PART OF INVESTORS AND CURTAILED GOVERNMENT BUDGETS FOR RENEWABLE ENERGY PROGRAMS. STILL, THE GGF REMAINS AN ANCHOR OF STABILITY, FOLLOWING THROUGH ON A SUCCESSFUL STRATEGY OF GREEN ENERGY INVESTMENT AND CAPACITY BUILDING IN THE REGIONS.

The Fund is squarely on track in fulfilling its mission to foster development in the areas of energy efficiency (EE) and renewable energy (RE). Despite the negative effects of the Eurozone economic crisis on the GGF's regions, funding of partner institutions for financing EE sub-loans has increased. However, larger scale RE investments – specifically for power generation plants with a capacity of over one megawatt – have receded somewhat in the difficult business climate. While RE projects with a higher cost per kilowatt generated have stalled, equally proven but less costly RE technologies such as hydroelectric power generation continue to receive strong support.

RE development is highly dependent on the choice of technology, and local governments tend to prioritize RE technologies in different ways. In 2012, we saw a stronger emphasis on hydropower on the part of the Fund and its partner institutions in our regions. That is because hydropower projects compete with conventional power plants – with the added bonus of additional reductions in CO<sub>2</sub> emissions.

More flexible than hydro in terms of topographical requirements, wind energy is also well accepted, particularly in those regions where power generation receives fewer subsidies. In Croatia and Serbia, for instance,

wind energy is attracting more and more investors from outside the region. Of the 2–3 direct investments expected to close in 2013, two are in the hydro sector and one is in wind. Other RE technologies, such as solar and biomass, are still experiencing difficulties getting off the ground in the Fund's target regions. With costs and technological advances trending to the advantage of these power generation technologies, they should begin to have a greater impact in coming years. Also, a more aggressive approach to adapting feed-in tariffs would improve the chances of these technologies of attracting foreign investment into the target regions.

In view of these developments, the GGF has opted to step up capacity building to enable direct investors in local RE projects to benefit from the Fund's experience and market knowledge. With contacts to over 100 potential partners, including developers, investors and manufacturers, the Fund knows that these projects must deal with a multitude of challenges, which range from navigating regulatory frameworks and incentive prices to adapting to new regulations. Here, the GGF's Technical Assistance Facility (TAF) provides expert support that assists in streamlining processes and keeping administrative costs down, and most importantly enables developers and investors to focus their

resources on project implementation. The TAF will, for instance, commission external experts to conduct environmental and social impact studies to ensure that best practices are met – a prerequisite for securing investments as well. Already four RE projects have benefitted from the GGF's technical assistance, a number expected to increase considerably in 2013.

The GGF's partner banks have in recent years begun to recognize the long-term potential of the RE sector. Despite some substantive issues in the investment environment, partner institutions have been supportive of developers as well as receptive to capacity building support from the GGF. The Fund is also actively working with partner institutions to prepare for and seize more RE opportunities. Already, banks are deepening their know-how, setting up specialized departments and joining forces with the Fund in building relationships with regional and international RE developers. To date, the GGF has supported seven banks with specialized workshops to develop or enhance their RE project finance capacities. These institutions recognize not only that investing in RE will become a need from a reputational perspective, but also that these projects represent an increasingly attractive asset class.

# MAINSTREAMING ENERGY EFFICIENCY FINANCE IN SERBIA



Sunoko is Serbia's largest sugar manufacturer and exporter.

**THE FLEXIBILITY OF THE GGF ENERGY EFFICIENCY LOAN FACILITY IS PERFECTLY SUITED TO THE WIDE-RANGING NEEDS OF KOMERCIJALNA BANKA BEOGRAD IN SERVING A BROAD - AND GROWING - CLIENT BASE, FROM PRIVATE HOUSEHOLDS AND SMALL BUSINESS TO LARGE CORPORATIONS.**

In April 2012, the GGF signed a EUR 23 million loan agreement with Komercijalna Banka Beograd (Komercijalna), one of Serbia's largest financial institutions in terms of assets. It also has the most extensive branch network.

The flexibility afforded by the credit line dovetailed perfectly with Komercijalna's strategy to offer a broader spectrum of energy efficiency (EE) loan products across its whole client base, from small retail to large corporate loans of up to EUR 10 million.



The energy-intensive rotary pulp dryer at Sunoko's Pecinci plant before replacement.

The impact of the GGF's investment is further enhanced by the hands-on support Komercijalna can count on from the GGF Technical Assistance Facility (TAF).

Training on the GGF's eSave environmental impact measurement and monitoring tool, for instance, greatly simplifies the process of screening and validating EE loans as well as identifying those loan products that



The new steam dryer reduces the primary energy consumption of pulp drying by 78%.

work best. Komercijalna works with TAF-trained energy auditors to confirm the eligibility of sub-loans for EE finance; they assist with screening the bank's portfolio for potential energy efficiency loans as well. ►





## 5.2 MILLION HAZELNUT TREES

To achieve the same yearly CO<sub>2</sub> sequestration that is resulting from all GGF loans so far, one would have to plant 5.2 million Hazelnut trees over an area of 65 km<sup>2</sup>.

2012 also saw the successful completion of Komercijalna's flagship EE project with Sunoko, based in Serbia and one of Europe's leading sugar producers. Sugar being a very energy-intensive industry, Sunoko had been keen for some time to optimize energy efficiency at its Pećinci plant. The GGF's backing made Komercijalna the logical choice for financing a major EE upgrade: the replacement of a rotary

dryer that uses heavy oil as fuel for drying pulp with a steam dryer that uses steam produced by the boiler, thus generating new steam (by reducing moisture pulp) for the primary process.

Data collected on this project shows that utilizing steam, which otherwise would have been expelled into the atmosphere, effectively reduces

primary energy consumption for pulp drying by 78 %, and eliminates CO<sub>2</sub> emissions in the pulp drying process. As a result, the project will not only considerably lower the plant's energy consumption, but also will help to significantly reduce costs. This in turn will transform Pećinci into one of Sunoko's most competitive production sites.

**"WE AT SUNOKO STRIVE TO PRODUCE A TOP QUALITY PRODUCT IN THE MOST EFFICIENT AND ENVIRONMENTALLY CONSCIOUS WAY. SIMILARLY, KOMERCIJALNA AND THE GGF PROVIDED US WITH AN EXCELLENT FINANCING PRODUCT TO SUPPORT ENVIRONMENTALLY FRIENDLY ENERGY EFFICIENT TECHNOLOGY!"**



Renovation activities at Sunoko's Pećinci plant.

# ARMENIA: A STEPPING STONE INTO THE EUROPEAN NEIGHBOURHOOD REGION



AAFPC has been producing pasta and sweets in Merdzavan in Armenia's Armavir region since 2003.

**FROM THE START, INECO BANK IMPRESSED THE GGF WITH ITS KNOWLEDGE AND COMMITMENT TO GREEN ENERGY FINANCE. IN A COUNTRY THAT IMPORTS OVER 65 % OF ITS ENERGY NEEDS, INECO BANK IS IDEALLY POSITIONED TO REALIZE THE POTENTIAL FOR ENERGY EFFICIENCY LENDING.**

In 2012 the GGF kicked off its investment activities in the European Neighbourhood Region (ENR) by signing its first loan agreement with an Armenian partner institution. The timing could not have been better: Yerevan-based Ineco Bank had previously realigned its strategy to squarely focus on energy efficiency (EE) and renewable energy (RE) finance. When Ineco Bank became active in green energy finance in 2004, its lending activities centered on small hydropower projects. The bank has since developed a deeper and broader understanding of EE and RE finance. The fact that Ineco Bank is firmly

committed to reducing its own carbon footprint – from conserving energy to reducing paper usage, among other

initiatives – only underscores the bank's credibility as a partner institution. ►



AAFPC invested the money lent by Ineco Bank to purchase a new production line for its PAVAN brand.



Investments in energy efficiency brought the energy cost of producing 1 kg of pasta at AAFPC down to 35 drams from 55.





Biofood – a butter and spread producer in Yerevan – invested the loan disbursed by Ineco Bank in a vacuum pump and in a milk pump that complies with the highest hygiene standards. The vacuum pump's energy consumption dropped from 35 to 8.3 kWh; that of the milk pump went from 8 to 6.5 kWh.

As is usual practice in preparation for an investment, the GGF conducted an energy assessment workshop at Ineco Bank in May 2012. The aim was to gauge existing knowledge and capacities in the area of energy lending, and jointly identify additional training or consulting needs to achieve the goals attached to the GGF's loan. It was concluded that Ineco Bank would initially concentrate on tailored loan products

for energy efficiency (EE) investments in the retail sector. In a second phase, Ineco Bank will expand its activities into SME lending, and from there work towards extending its scope to renewable energy (RE) finance. Throughout this growth process, the bank will be able to count on the GGF's Technical Assistance Facility (TAF) for support in developing the products and procedures for tapping into the high-

potential EE/RE finance market. In addition to intensive training on eSave, the GGF's proven environmental impact measurement and monitoring tool, the package for Ineco Bank includes the provision of energy auditing services. The TAF also assists with the development of green loan products as well as associated marketing and awareness-raising campaigns.

## 405.7 GWh

The annual energy savings achieved by the GGF's investment portfolio are equal to one quarter of the electricity consumed by Bosnia and Herzegovina in 2 weeks.



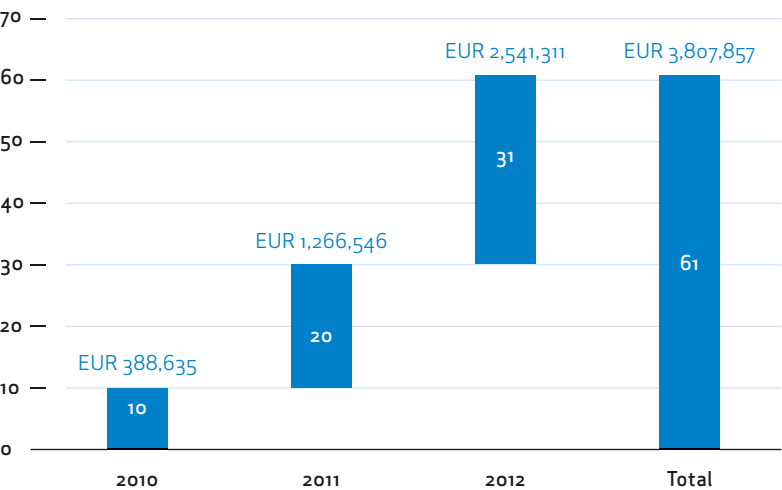


# TECHNICAL ASSISTANCE – THE KEY TO SUCCESSFUL EE/RE FINANCE IMPLEMENTATION

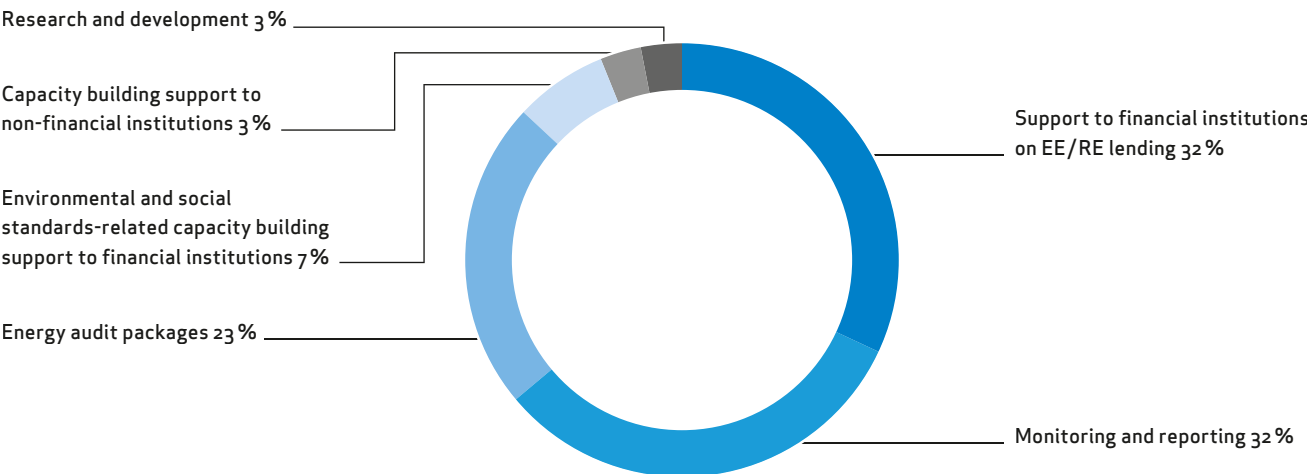
THE TECHNICAL ASSISTANCE FACILITY ACTIVELY SUPPORTS PARTNER INSTITUTIONS IN BRIDGING GAPS AND DEVELOPING CAPACITIES TO REALIZE THE POTENTIAL FOR GREEN ENERGY FINANCE IN THE FUND'S REGIONS. SINCE ITS INCEPTION IT HAS CONSISTENTLY PROVED MISSION-CRITICAL TO ACHIEVING THE GGF'S FINANCIAL AND ENVIRONMENTAL RETURN TARGETS.

With the mission to facilitate access to energy efficiency (EE) and renewable energy (RE) finance comes the responsibility to ensure that investments by the Fund achieve the expected economic and environmental returns. The GGF created the Technical Assistance Facility (TAF) to maximize the impact of its investments by improving the efficiency with which Fund monies translate into energy savings and greenhouse gas emissions reductions. One of the major obstacles is the lack of knowledge of EE/RE-related issues, technologies, and opportunities. ▶

**GGF TAF PROJECT PORTFOLIO GROWTH SINCE INCEPTION**  
(no. of projects and total amount allocated)

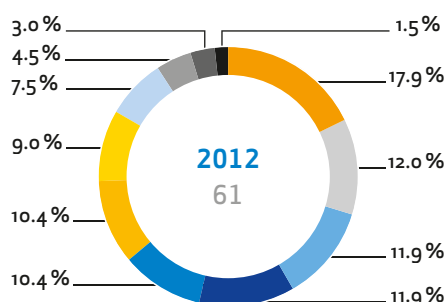
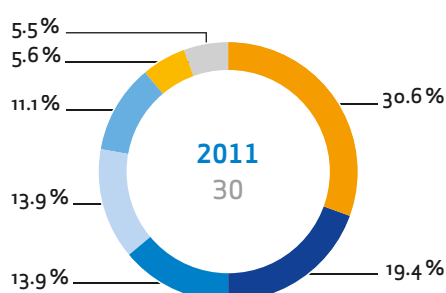
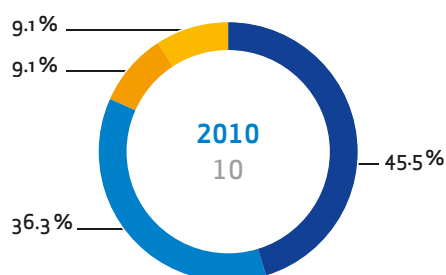


**GGF TAF PROJECTS APPROVED IN 2012**  
(by no. of projects)



## REGIONAL DISTRIBUTION OF TA PROJECTS

(by no. of projects since inception of the Fund)



Another challenge is to ensure that, once the knowledge is there, partner institutions are equipped with the necessary tools and processes to meet the demand for energy efficiency (EE)/renewable energy (RE) financial products and services.

Before approving an investment, the GGF carefully assesses the partner institution's capacities for fulfilling set investment objectives. If targeted support will help achieve these goals, both partner institution and the Technical Assistance Facility (TAF) jointly define the scope, terms and timeframe of a technical assistance (TA) project. For the implementation phase, the TAF relies on a mix of local and international consultants to ensure a rapid and competent response. Wherever possible, the TAF works with contractors on the ground. This has the added benefit of strengthening homegrown EE/RE expertise throughout the region.

Support to partner institutions in either integrating EE into their lending portfolio or strengthening their current EE lending activities accounts for the majority of the TAF's activities. These range from assistance with strategy and product development, and marketing and awareness-raising campaigns, to staff training and other capacity building measures. Depending on the institution's degree of experience and existing capacities, the TAF's services come as a package or in the form of targeted action steps. Also, by measuring and monitoring the environmental impact of their loans, e.g. with the help of the GGF's eSave web application and by commissioning energy audits for loan projects, partner institutions are able to minimize risk not only in their own operations, but also to the GGF.

Due to growing demand, the TAF is now stepping up its activities in the RE sector. Here, the TAF either works directly with developers to see RE projects through, or with its partner financial institution to bolster RE finance capacities. The TAF also provides crucial support in ensuring the observance of environmental and social procedures in line with international best practices and EU standards. In view of the investment volumes involved in RE, compliance is a prerequisite for securing RE finance at the required scale – not only from the GGF, but also from other green development finance institutions. There are thus multiple ways in which TA can make the difference in the bankability of an RE project.

In just three years, the TAF has come a long way in providing hands-on support in navigating regulatory landscapes, bridging knowledge gaps and developing the tools and capacities for successful EE/RE finance in the long term. The TAF's project portfolio has grown significantly: from 10 projects in 2010 to an additional 20 in 2011 to a further 31 new projects approved in 2012. By the end of 2012 the number of projects under TAF management totaled 61 with an aggregate budget of EUR 3.9 million. As the Fund continues to expand its investment portfolio across an area that now also includes the European Neighbourhood Region, the TAF keeps pace, replicating successes and adapting proven concepts as well as coming up with innovative approaches.

# ENABLING THE MARKET FOR RENEWABLE ENERGY FINANCE

WORKSHOPS WITH PARTNER INSTITUTIONS SHARPEN THEIR COMPETENCIES IN THE AREAS OF TECHNOLOGY, REGULATORY FRAMEWORK AND ECONOMIC VIABILITY ASSESSMENT.

The Technical Assistance Facility's (TAF) first renewable energy (RE) workshop dates back to 2011, when our partner institution in Serbia, Banca Intesa Beograd, requested a capacity building workshop on RE finance. The result of this joint process of mapping the bank's needs and objectives: a tailored workshop that covered the regulatory aspects for RE projects, technical knowledge transfer, and kick-starting project finance. The feedback was very positive, and by the end of 2011 the TA Committee had agreed to four additional workshops. These are geared specifically towards banks with an interest in financing RE projects. The workshops were coordinated through an expert consultancy with a profound and complementary understanding of the technical challenges involved

in RE as well as through the active engagement of the Investment Advisor.

Besides equipping our partners with a broader and deeper grasp of RE technologies, the workshops also proved very effective in defining opportunities for adapting their portfolio to green energy investments. Better technical knowledge and greater familiarity with the regulatory landscape makes it easier for mainstream financial institutions to have an open, more informed mind when considering such projects. It also enables them to more reliably screen potential projects, assess their economic viability, and establish realistic time and cost parameters. Given the success of the series, the TA Facility will continue to offer this valuable learning approach.



Practical demonstrations during the workshops brought home the basic principles of the technologies involved in RE investment projects.

## STRENGTHENING THE ENERGY EFFICIENCY AND RENEWABLE ENERGY KNOWLEDGE BASE IN UKRAINIAN FINANCIAL INSTITUTIONS

HANDS-ON ASSISTANCE IN CAPACITY BUILDING ENABLES PARTNER INSTITUTIONS LIKE MEGABANK TO INSTITUTIONALIZE EE LENDING ON A SUSTAINABLE BASIS.

The potential for reducing energy consumption in Ukraine is significant, especially in the agricultural sector where storage facilities and farming processes are to a large degree outdated and very energy as well as cost-inefficient. Yet, although the demand for financing much-needed

energy efficiency (EE) upgrades is substantial, the availability of loan products and services adapted to a rural clientele is lagging. The GGF's Technical Assistance Facility (TAF) plays a key role in enabling partner institutions to develop the tools, systems and

products for catering to this new group. One important aspect of capacity building is to instill efficient workflows and procedures to screen, process and subsequently handle EE loans – and seamlessly integrate this type of lending into the bank's overall management system. ►





◀ Kharkiv-based Megabank is a leading regional bank with a strong focus on knowing its customers.

Megabank, the GGF's first partner institution in Ukraine, is a success story in this regard. In addition to support in developing an EE lending strategy and marketing plan, the TAF provides the tools and training to maximize impact. Here, the GGF's

eSave reporting and monitoring tool along with energy audits conducted by TAF-trained professionals are proving very effective in quantifying actual energy savings and CO<sub>2</sub> emission reductions achieved through EE investments, and in ensuring the

GGF's goals are met. By working with Ukrainian professionals for conducting the audits, we not only shorten response times to energy audit requests, but also help establish a long-term cooperation between local service providers and end-users.

## FOSTERING ENVIRONMENTAL & SOCIAL RESPONSIBILITY IN TURKEY

**SUCCESSFUL INTEGRATION OF THE GGF'S ENVIRONMENTAL AND SOCIAL RESPONSIBILITY STANDARDS MAKES IT EASIER FOR ŞEKERBANK TO RESPONSIBLY INVEST IN RENEWABLE ENERGY PROJECTS.**

After two years of very successful cooperation with the GGF in financing energy efficiency (EE) projects, Şekerbank, one of Turkey's leading banks in the small business segment, is gearing up to take on renewable energy (RE) projects as well. The market potential is there, and the bank has the resources to realize it. These projects must adhere to accepted environmental and social responsibility standards – standards that apply to partner institutions as much as they do to the projects financed directly by the GGF itself.

In keeping with its core mission to support capacity building, the Technical Assistance Facility (TAF) engaged an environmental consulting firm to work with Şekerbank in upgrading its existing environmental and social procedures in compliance with international standards to the GGF's and international standards for RE project



An SHPP spillway near Mut in the Akdeniz region of Turkey.



The headpont of the SHPP near Mut.

assessment. This not only enables the bank to utilize the GGF's funding for RE projects, but also helps it to attract capital from other international financial institutions.

The TAF conducted a gap analysis of Şekerbank's environmental and social procedures as well as an evaluation of four small hydro power plants (SHPPs) from an E&S perspective. The resulting comprehensive report,

together with a tailored workshop, also provided Şekerbank with practical tools to better evaluate renewable energy projects based on environmental and social standards. In the process, this project also increased awareness among the bank's staff, which varies from branch level to regional and head office employees, that the projects being financed must contribute towards the wellbeing of the population and help preserve the environment.

# OUTLOOK: BUILDING ON STRONG FOUNDATIONS TO FURTHER GROWTH AND IMPACT

THE GREEN FOR GROWTH FUND, SOUTHEAST EUROPE HEADS INTO 2013 WITH A SOLID, DIVERSIFIED PORTFOLIO, FINE-TUNED TECHNICAL ASSISTANCE OFFERINGS, AND A NETWORK OF EXPERTISE SPANNING A NOW MUCH LARGER AREA.

This report summarizes the GGF's progress in making a difference in its original region and expanding its scope to five new countries in the European Neighbourhood Region (ENR). It also highlights its success in growing a sustainable portfolio with a measurable impact on energy consumption and CO<sub>2</sub> emissions, and in strengthening relationships with stakeholders and partner institutions alike through best-in-class capacity building and awareness-raising measures. These efforts form a strong foundation to build on in 2013 and beyond. Already, new initiatives are underway.

## CONTINUED GROWTH AND OUTREACH

The Investment Management team has primed a strong pipeline of new investments, both in financial institutions and directly in renewable energy projects, which will further the Fund's strong growth into 2013. The business plan anticipates a total portfolio of nearly EUR 240 million and 24 partner institutions by year-end. Combined with the Fund's existing investments, which continue to finance sub-loans for energy efficiency measures and renewable energy projects, total annual energy savings achieved through the GGF's investments are projected to reach 925,000 MWh, with annual CO<sub>2</sub> savings projected at 225,000 tons. These activities will be supported by 25 to 30 new technical assistance (TA) projects during the year.

## FURTHER DIVERSIFICATION

The Fund's expansion into the ENR in 2012 resulted in significant geographic portfolio diversification: by year-end, no single country accounted for more than 30% of total investments. This trend will continue as the pipeline in both the new ENR and the original Southeast Europe countries points to ever greater diversification with investments in new target markets such as Moldova, and balanced growth in existing markets such as Ukraine, Serbia, Armenia and Croatia. Diversification will also come from the Fund's direct investments in renewable energy projects. Targeted to attain up to 30% of the total portfolio in the medium to long term, these investments provide an attractive return to the Fund and spread its risk profile.

## EFFICIENT, EFFECTIVE TA

This report showcases the excellent, tailored TA provided by the GGF. Given the projected portfolio growth, the Technical Assistance Management team is developing new and innovative approaches to TA. One is Pre-Bankability Technical Assistance, to provide support in a number of areas (technical, regulatory, financial structuring) to promising but earlier-stage renewable energy projects. This will fill a demonstrated need in the market to bring more transactions to successful close. The Fund is also working closely with the regional initiatives of its stakeholders to jointly develop awareness-raising

activities that can increase the adoption of energy savings measures in the Fund's regions, further underscoring the complementarity and additionality of the Fund. The first of these joint ventures is planned to launch in Armenia in the second half of 2013. These and other initiatives are the result of careful listening to the needs of the market, a process that will be continued in 2013 through an Executive Round Table, to be held in Sarajevo, Bosnia and Herzegovina in June. Here, senior managers from the Fund's partner institutions will come together to share their experiences and learn from each other's successes and challenges. Following on the success of the Fund's sponsorship of the 2012 Balkan Energy Finance Forum in Belgrade, Serbia, the GGF will again sponsor this event in 2013. To be held in Zagreb, Croatia, the event will provide yet another forum for exchanging ideas and innovations.

These are just a few of the initiatives already on track. They follow through on the GGF's role as a leading enabler of green energy finance in its regions, reaffirming its mission to reduce energy consumption and to foster renewable energy for years to come.

# ENVIRONMENTAL IMPACT

MAPPING ENERGY AND CO<sub>2</sub> SAVINGS AGAINST INVESTMENTS NOT ONLY ENSURES IMPACT TARGETS ARE MET, BUT ALSO POINTS TO THE MOST EFFECTIVE MEASURES AS WELL AS TO NEW PRODUCT IDEAS.

The GGF is focused and consistent about measuring and monitoring the environmental impact of its investment activities. The GGF's Technical Facility covers training personnel at partner institutions in the use of eSave, a web application developed

specifically to evaluate the performance of energy efficiency (EE) and renewable energy (RE) investments. These results are subsequently aggregated, revealing the evolving composition of the Fund's portfolio. Based on detailed analysis of reporting, the GGF

is in a much better position to ensure that a partner institution is effectively addressing all potential EE and RE market segments with its loan products – as well as explore new areas for product development.

## CO<sub>2</sub> REDUCTIONS AND ENERGY SAVINGS BY TYPE OF PARTNER INSTITUTION as at 31 December 2012

Through the end of 2012, the more than 4,500 sub-loans financed since inception through the GGF funding yielded annual energy savings of 405,769 MWh and CO<sub>2</sub> emissions reductions of 101,160 tons. On average, the projects financed delivered a 59% improvement in terms of energy consumption and emissions, by far exceeding the Fund's minimum requirement of 20% for each category.

MEASURE	PI TYPE	SUBLOAN VOLUME (EUR, SINCE INCEPTION)	CO <sub>2</sub> REDUCTION (tCO <sub>2</sub> /YR)	CO <sub>2</sub> REDUCTION (%)	ENERGY SAVINGS (MWH/YR)	ENERGY SAVINGS (%)
Use of renewable energy sources in SMEs and households	FI*	990,749	1,073	80	3,653	82
Building envelope improvements	FI*	27,522,079	40,541	60	177,562	60
Heating supply systems	FI*	3,964,682	35,832	74	125,717	62
Heating distribution improvements	FI*	81,924	329	37	1,025	36
Energy services and supply businesses**	FI*	1,715,786	-	-	-	-
Process-related equipment	FI*	35,003,205	23,235	55	97,233	55
Lighting	FI*	59,200	15	45	47	45
Motors and drives	FI*	8,666	6	22	22	22
Others	FI*	286,164	129	22	510	22
<b>Total</b>		<b>69,632,455</b>	<b>101,160</b>	<b>63</b>	<b>405,769</b>	<b>59</b>

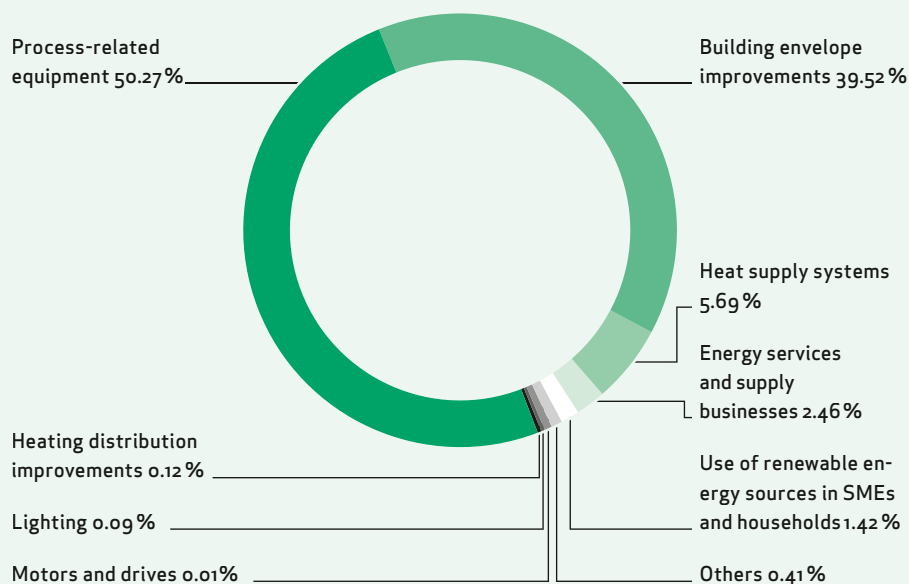
\* FI = Financial Institution

\*\* The supply of energy efficient equipment is eligible for financing by the GGF. However, to ensure that there is no double counting of savings when this equipment is actually purchased and installed, the GGF takes the conservative approach of assigning no savings to the financing of the supplier. Savings are assessed and calculated only from the point at which the equipment is put into operation by the end-user.



## MEASURES FINANCED

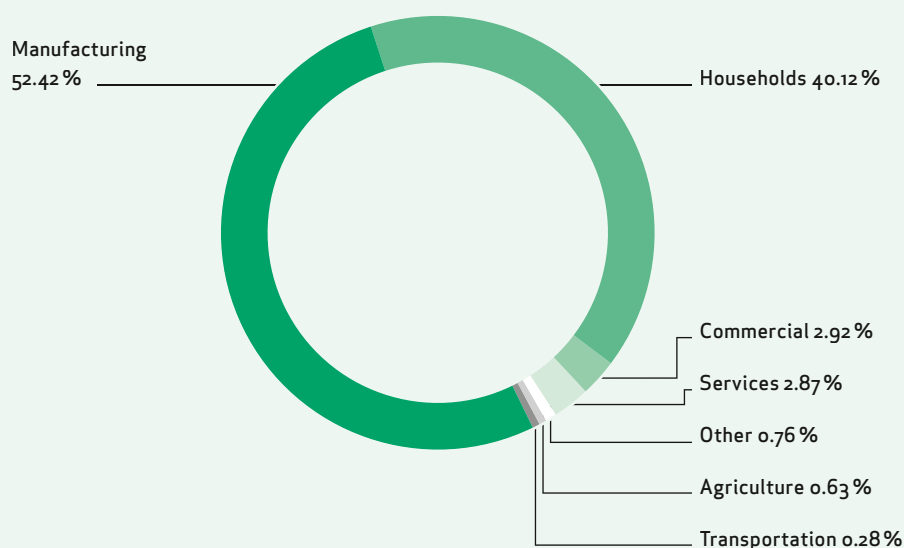
Since inception in December 2009 (based on loan amount disbursed)



As the Fund's portfolio grew in value and scope, the importance of process-related equipment as the leading measure financed by the Fund has declined. This is consistent with the growth in on-lending registered with the more diversified group of partner institutions. This trend is expected to continue, and diversification of the sub-loan portfolio will continue to increase. Small-scale renewable energy projects and heating supply systems have shown emerging growth potential among some of the Fund's new partner institutions.

## SECTORS FINANCED

Since inception in December 2009 (based on loan amount disbursed)



The share of the manufacturing sector in the Fund's investments has diminished as portfolio size has increased. Households, however, continue to account for a significant share due to the sustained demand for building envelope improvements. Although this mix has remained rather stable for the past several quarters, the recent investments in Ukraine and the planned investments will result in agriculture playing a larger role in the portfolio's distribution.

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