Midterm Review of the EBRD-UNIDO GEF Project "Market Transformation Programme on Energy Efficiency in Industry in the Russian Federation"

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This report has been prepared for UNIDO and the EBRD for the Midterm Review of the UNIDO-EBRD GEF Project "Market Transformation Programme on Energy Efficiency in Greenhouse Gas-intensive Industries in the Russian Federation"

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Abbreviations

ASSONEFT	Association of Small Businesses in Oil and Gas Industry
CENEF	Center for Energy Efficiency
CHP	Combined heat and power
DH	district heating
EBRD	European Bank for Reconstruction and Development
EE	Energy efficiency
EnMS	Energy Management System
EPC	Energy performance contracting
ESCO	Energy Services Company
EU	European Union
FI	Financial Institutions
GEF	Global Environment Facility
GHG	Greenhouse Gas
IA	Implementing Agency (for GEF)
ICA	Industry, Commerce and Agribusiness (of EBRD)
IEE	Industrial Energy Efficiency
IFC	International Finance Corporation
IFI	International Financial Institution
M&E	Monitoring and evaluation
MoE	Ministry of Energy
MTR	Midterm Review
NGO	Non-governmental organization
PAC	Project Advisory Committee
PIF	Project identification form
PIR	Project implementation report
PM	Project management
PPG	Project preparation grant
RCE	Request for CEO Endorsement
REA	Russian Energy Agency
RiEEP	Russia Industrial Energy Efficiency Program
RSPP	Russian Union of Industrialists and Entrepreneurs
RuSEFF	EBRD's Russian Sustainable Energy Financing Facility
SME	Small and Medium Sized Enterprises
SO	Systems Optimisation
STAP	Scientific and Technical Advisory Panel of the Global Environment Facility
TA	Technical assistance
TC	Technical cooperation
UNIDO	United Nations Industrial Development Organisation

Executive summary

This report contains the Midterm Review (MTR) of the EBRD-UNIDO GEF Project *"Market Transformation Programme on Energy Efficiency in Greenhouse Gas-intensive Industries in the Russian Federation"* (GEF ID: 3593, "the Project"). Jointly implemented by the European Bank for Reconstruction and Development (EBRD) and the United Nations Industrial Development Organisation (UNIDO), the Project began with the approval of the Project Identification Form (PIF) in July 2008 and was approved by the GEF CEO in June 2010 to run until May 2015. The MTR provides an opportunity to support the sound planning and adaptive management of the Project while facilitating the reporting of progress and impacts to its donors for the first half of the implementation period (until June 2013).

The project aims to reduce greenhouse gas emissions by producing a step-change in industrial energy efficiency (EE) in the Russian Federation. The typical EE of Russian industry is significantly below the global average. The Government has introduced a number of policies to encourage greater EE including allowing national gas prices to increase and liberalising the electricity markets. These developments have increased the interest for EE amongst industries however the uptake rate for these efficiency options has been slow. To produce the step-change a structured approach, based on systems optimisation (SO) and Energy Management Systems (EnMS), was proposed for the project which includes four project components:

- (1) "Enhancing knowledge assets" creating the training materials, information campaign and training trainers;
- (2) "Capacity building for large industry" and (3) "Capacity Building for SMEs" each targeting knowledge and financial market barriers aiming to facilitate investment in EE; and
- (4) "Policy support" targeting legislative and market barriers.

The key finding from the review is that the Project is on track to reduce GHG emissions through energy efficient investments in industry in the Russian Federation. However it is taking longer than planned, mainly due to slower than expected enterprise engagement.

The MTR was conducted in accordance with internationally recognized professional standards that are applied to GEF project evaluations. The MTR covers five principal review criteria as outlined in the *GEF Monitoring and Evaluation Policy 2010*[1]. By using these criteria, the Reviewers were able to arrive at a consolidated picture of the Project's progress. Review findings by criteria, recommendations for the next implementation period and lessons learned are summarised below.

Key findings

Project design and relevance - The original GEF Project design has proved to be relevant to the country context and addresses key sector needs and market barriers. The Project is timely and fits well with both EBRD's and UNIDO's organizational strengths and priorities – as well as the current priorities of the Russian Government. The four Project Components and the approach are generally appropriate to address market barriers and the Project strategy responds to the needs of key stakeholders. However, the Project design was too optimistic in some of its assumptions – and consequently targets and timeframes – and did not adequately anticipate some implementation risks:

- Some targets and timeframes in the original design have proved to be too optimistic. The design under-estimated the challenges relating to engaging with enterprises. The design assumed that through publicity and awareness building of the benefits of EnMS and SO it would be able to generate interest, investments and behavioural changes from newly engaged enterprises. However accomplishing this involves a much more in-depth process of relationship-building prior to any newly engaged enterprise even investigating EE let alone committing finance to an EE project. Consequently in the opinion of the Reviewers, the targets for the SMEs investment, the energy saved, and thus the targets for GHG reduced are not likely to be met by the Project Closing Date of May 2015.

[1] The GEF (2010) Monitoring and Evaluation Policy.

- In addition, project risks identified in the original Project design did not take adequate account of the risks associated with SMEs accessing finance for EE measures.

Results and achievements - As the Project currently stands, the Reviewers think that the volume of financing in industrial EE is unlikely to reach USD 300 million by the end of the Project in May 2015 – although significant progress can be made if there is an appreciable increase in deal-flow from the project. The investment facilitated for large industries of USD 150 million is likely to be reached since this can equate to a few very large projects, and there is already a pipeline of potential projects and a strong client base interested in EE. However for the investments facilitated in the SMEs, USD 150 million is a more difficult target because SME EE projects are necessarily small and generating such a large amount in investment would require many more projects. In addition the Implementing Agency dealing with SMEs does not have an existing client base upon which to build its EE projects. It is more likely for the targets for SMEs to be met if an additional year is added to the Project duration. The Reviewers think that capacity in government and industry will be developed as foreseen but over a longer timeframe than envisaged at project design. For each Component the results are as follows:

Component 1: Enhancing Knowledge Assets: UNIDO and EBRD have made steps towards achieving the targets for this component and it is realistic that most of the outputs and outcomes will be achieved, but in the second half of the project – whereas the project document sets the expectation for completion within the first half of the project. An information campaign has been implemented by both EBRD and UNIDO and has included publishing brochures, articles in magazines, attendance/publicity at energy events, workshops and a very well-attended national webinar (~25,000 attendees). Progress has been made towards producing a fully developed set of Russian training material on EnMS and SO and the first trainers have been trained. However, the proposed website and peer to peer network are not launched yet.

Component 2: Capacity building in large industries: Progress is being made towards meeting the output-level targets to be achieved for Component 2. Studies and training work undertaken needs to start being converted into EE investments during the second half of the Project to meet the outcome indicator for EE investment. Introductory training sessions/workshops have been successfully carried out for approximately 180-190 managers, surpassing the target of 100 managers. The project is actively working with 12 enterprises providing a variety of assistance. To date one EE project looks likely to proceed.

Component 3: Capacity building in SMEs: Progress is being made towards meeting the output-level targets for Component 3. Progress has been slower than expected partly because, despite widespread promotion, it has been difficult to involve SMEs in the project due to the SME's lack of understanding of the benefits of the training and due to their other priorities. However, the first signs of progress have been seen in the last few months. Confidentiality agreements have been signed with six SMEs and larger organizations. The services offered to these enterprises will depend on their requirements. The project IA is working with larger organizations, to leverage their SME subsidiaries and suppliers. Reaching the 50 SMEs foreseen at project design will be difficult. Work has also started on a web-based tool to assist companies in benchmarking their energy performance, following a review of best practice of benchmarking.

Component 4: Policy Support: Work under Component 4 has been flexible in line with the Russian Energy Agency's (REA) requirements and is likely to achieve its targets by the end of the project. Consultants have been contracted to develop a voluntary certification scheme for EnMS and to deliver proposals to Government on Energy Saving Obligations/White Certificates by the end of 2013.

Whether the Project will achieve its Outcome-level targets will depend on (i) accelerating enterprise engagement; (ii) translating technical assistance into financial commitment and (iii) extending the Project duration, for instance for the period of one year.

Effectiveness - The Reviewers' rating of overall Implementation Progress is **"Satisfactory"**, meaning that implementation of most components is in substantial compliance with the original plan except for only a few that are subject to remedial action. This rating could be improved if there is a significant stepping up of actions ensuring further enterprises are engaged and that project outputs are converted to investment commitment in EE. However, as mentioned above there is significant risk that the Project will not achieve the overall development objectives within the originally planned timeframe. The volume of financing in SME investment, GHG emission reduction, energy savings are not likely to be met. For

this reason, the Project's Global Environmental Objective/ Development Objective Rating is rated as **"Moderately Satisfactory"** at this stage – meaning that the Project is expected to achieve most of its major relevant objectives but with potentially significant shortcomings. The slow pace of progress towards reaching overall environmental objectives appears to reflect an overly optimistic assessment during Project design of the start-up pace of the two implementation agencies and the under-estimation of the challenge in engaging with enterprises. Both EBRD and UNIDO have recently changed their strategies with respect to engaging with enterprises and it is still too early to be able to assess their effectiveness.

There is a clear perception from the stakeholders consulted during the MTR that the project is already providing added value and a belief that if the project meets its targets then it will improve the energy intensity of Russian industry beyond what would be possible in the absence of the project.

Efficiency - The MTR team considers that an appropriate balance between impact and resources has been achieved, and the Project is being efficiently implemented. Overall, the GEF Implementing Agencies' inputs have been of a high quality and have clearly met the beneficiaries' needs. All organisations consulted believed that the training and technical assistance provided by EBRD and UNIDO has been important for increasing the capacity and knowledge on EE in their companies. Public awareness events reached a large number of participants, exceeding the output targets. These training and technical assistance inputs will facilitate the achievement of the Project's expected results in terms of investment, although significant scaling-up of inputs will be necessary to achieve levels to meet the Project targets.

Implementation and Management - The notable aspect of the implementation and managerial arrangements of the Project is that it is being jointly implemented by UNIDO and EBRD. For the most part the project management has been effective and efficient. Both EBRD and UNIDO have clear roles and responsibilities and are adequately resourced for their project management. UNIDO and EBRD keep each other up to date on progress at regular meetings and concentrate on their own project responsibilities, but beyond this limited interaction there is little cooperation or sharing of information.

While the Project team has made good use of the adaptive management approach as originally set out in the Project design it seems that some of the GEF output indicators are not being tracked: formal reporting and use of the Results Framework is limited to the Project Implementation Reviews. There is also no operational Project Advisory Committee as envisaged at project design.

Sustainability - It is the Reviewers' opinion that the Project will likely have significant sustainable impacts on the market for industrial EE improvements beyond the duration of the Project. Sustainability is an essential part of energy management systems. Introducing EnMS into enterprises will "hardwire" industrial EE projects/investments into management structures that provide for continuous improvement, thus ensuring change over the long term. Added to this are the benefits due to building local capacity in government, industry (including training of trainers) and banks to ensure ongoing project identification, supportive legislation and available finance.

Recommendations

Recommendations on ***Project design*** include:

1) To make the Project goal realistic, in the opinion of the Reviewers, the Project's duration should be extended by at least 1 year.
2) The Project should explicitly track the risk of accessing finance for the SMEs.

Recommendations on ***Project Implementation*** include the following.

Relating to Management approaches:

1) It is recommended that the Project Advisory Committee (PAC) is re-established and convenes regularly. Not only will this ensure regular stakeholder dialogue it will also ensure both UNIDO and EBRD report their progress on the project. The Implementing Agencies should start to report progress to the PAC every 6 months against the Results Framework.
2) As part of the formal reporting, the PIR should be used to capture learning and these lessons should be communicated to, and shared with, relevant shareholders.

3) There is a need to ensure that Russian expertise is included in all outsourced activities. Although the project is designed to include this, more attention should be paid to ensuring the Russian context is truly understood. Outputs should all in be Russian since the beneficiaries are Russian.

4) Regarding indicators, the Project should track the "trainers' capacity score" and the "Government capacity score" and it is recommended to introduce a monitoring mechanism for the energy professional trainees to report on the EE projects they have identified as a direct result of the training.

5) Donors' logos should be put on all applicable materials (including reports and presentations).

Relating to Training:

6) It is recommended to incorporate the peer reviewers' recommendations into all the training packages. Primarily these amendments relate to the need for all the material (including tools) to be in Russian and for it to clearly relate to the Russian context.

Relating to Web-site and peer-to-peer network:

7) It is recommended that EBRD work closely with UNIDO and other stakeholders (i.e. the REA and the Russian Union of Industrialists and Entrepreneurs – RSPP) to identify the required functionality of a website and to ensure the most efficient use of resources.

Relating to Enterprise engagement:

8) Further collaboration between UNIDO and EBRD is needed regarding enterprise engagement. Now that UNIDO is targeting larger enterprises, to leverage their SME networks, it is particularly important to ensure there are no overlaps.

9) UNIDO should focus on larger SMEs and those that are particularly GHG intensive to assist in meeting the targets. There is a possibility that UNIDO could target projects and organisations that fall below EBRD's minimum investment threshold but are larger than typical SME projects.

10) It is recommended that UNIDO develops relationships with banks which have EE credit lines. Finding clients and EE projects and then trying to find finance for those projects is very difficult. If UNIDO works directly with the banks and targets their existing clients this will help mitigate the risk. UNIDO can offer additional technical assistance to these banks in helping to identify EE projects. The first banks that could be targeted for collaborative effort should be the RuSEFF local partner banks. Not only is there still some RuSEFF money available (as envisaged at project design as potential co-finance) but these banks have also shown an appetite to lend to EE with their own funds.

11) In parallel to its current strategy of leveraging larger enterprises' SME subsidiary and supply chains, and working with banks as recommended above, it is recommended that UNIDO also engages further with the following organizations to target their existing partners and clients:

    - In the regions through REA local offices; and
    - RSPP /other associations.

Lessons learned

1) Engagement with enterprises is a lengthy process that requires dedicated relationship building prior to any work and financial commitment.

2) Build in project start-up time into the project design. This is for two reasons: one is to assess the project design against changes in context and secondly to allow for project teams to be put in place.

3) Designing in adaptive management has worked well and allowed the project to be flexible: allowing for adaptive management in this project has been key to the project achieving progress.

4) Cooperation between agencies works well where there are clear areas of focus and responsibility. However care should be taken when designing projects where different IAs are responsible for inputs that are needed by the whole project as there can be difficulties in aligning timelines which can result in inefficiencies.

1 Introduction and Context

1.1 Scope and objective of the MTR

1. This report contains the Midterm Review (MTR) of the EBRD-UNIDO GEF Project ***"Market Transformation Programme on Energy Efficiency in Greenhouse Gas-intensive Industries in the Russian Federation"*** (GEF ID: 3593, "the Project"). Jointly implemented by the European Bank for Reconstruction and Development (EBRD) and the United Nations Industrial Development Organisation (UNIDO), the Project began with the approval of the Project Identification Form (PIF) in July 2008 and was approved by the GEF CEO in June 2010, started in September 2010 and is set to run until May 2015.

2. The MTR provides an opportunity to support the sound planning and adaptive management of the Project by UNIDO and EBRD while facilitating the reporting of progress and impacts to the GEF Secretariat for the first half of its implementation period (until June 2013). Specifically the MTR has the following objectives:

   - Identify whether the project is on track to achieve its objectives and to identify what actions can be taken to improve the delivery of outputs, the achievement of outcomes and impacts, and/or improved monitoring of the project's progress to assist in planning and carrying out activities effectively.
   - Promote accountability for the achievement of GEF and Implementation Agencies' (UNIDO and EBRD) objectives through the assessment of results, effectiveness, processes, and performance of the partners involved in the activities. In particular, GEF results will be monitored and evaluated for their contribution to global environmental benefits.
   - Promote learning, feedback, and knowledge sharing on results and lessons learned among the GEF, the implementing agencies and other GEF partners, as a basis for decision making on policies, strategies, programme management, projects, and programmes; and to improve performance.

3. The scope of the MTR includes examining the following areas of the project:

   - Project design;
   - Implementation approach; and
   - Outcome/Achievement of Project Objectives.

1.2 Project context

4. The typical energy efficiency (EE) of Russian industry is significantly below the global average. The Government has introduced a number of policies to encourage greater energy efficiency – including allowing national gas prices to increase and liberalising the electricity markets. These developments have increased the interest for energy efficiency amongst industries. However the uptake rate for these efficiency options has been slow leading to a lack of competitiveness among industries, wasted energy and excessive emissions of greenhouse gases.

5. On 27 November 2009 the Federal Law No. 261-FZ "On Saving Energy and Increasing Energy Efficiency, and on Amendments to Certain Legislative Acts of the Russian Federation" (The Law) came into force. The Law is mainly related towards the public sector and includes only a few provisions relevant to the improvement of energy efficiency in industry. The Law establishes energy audits as a voluntary action, although it establishes that the following organizations are subject to mandatory energy audits: organizations that produce, generate, and/or transport water, natural gas, heat, or electric power, produce natural gas, oil, or coal, manufacture oil products, process natural gas, refine crude oil, or transport petroleum and oil products; organizations whose total expenses on consumption of natural gas, diesel and other fuel, residual fuel, heat, coal, and electric power exceed RUB 10 million per calendar year; organizations engaged in "regulated activities"; and organizations conducting energy saving activities with support through the state funding.

6. The findings of mandatory (and voluntary, upon request) energy audits should be recorded in an "energy passport", which is subject to systematization, analysis, and use by the duly authorized state authority.

7. The key drawback of these provisions is that there is no requirement in the Law to improve EE according to the results of its energy audit. Moreover, the Law does not provide incentives to encourage energy efficient measures in industries (so there are neither "sticks" nor "carrots").

8. Taking into account the lack of trust between government and industry and lack of knowledge in the field of EE (both in the governmental and industry sectors), enhancement of EE in industry in Russia seems to be significantly aggravated without technical and financial support from international organisations.

1.3 Intervention logic of Project

9. The overall objective of the project is to reduce greenhouse gas emissions in the Russian Federation by transforming the market for industrial energy efficiency in GHG-intensive industries. The project aims to achieve this market transformation through activities that will:

    - structurally improve industrial energy efficiency (EE) in heavy and light industries through increased energy efficiency investments,
    - have a wider direct positive effect on rational energy use with related environmental benefits, and
    - improve the capacity of the government to develop effective (industrial) energy efficiency policies.

10. To reach these objectives a structured approach based on systems optimisation (SO) and Energy Management Systems (EnMS) was proposed. Although it is initially resource intensive, evidence shows that this approach generates more cost-effective projects and projects with greater emissions reduction than projects using a less structured approach.

11. With this in mind, activities were designed to i) demonstrate that energy management systems are beneficial for industry and lead to increased investments in EE and ii) to target national experts, service providers and industry experts, which will support legislative developments in the Ministry of Energy of the Russian Federation and the Russian Energy Agency. The project aims to provide the basis for the policy development by assisting in developing a full proposal to the government for the introduction of a national energy management standard, including the necessary institutional and legal actions to be taken.

12. In summary the Project consists of four components:

    - Component 1: "Enhancing knowledge assets" creating the training materials, information campaign and training trainers;
    - Components 2 and 3 "Capacity building for large industry" and "Capacity Building for SMEs" each targeting knowledge and financial market barriers aiming to facilitate investment in EE; and
    - Component 4 "Policy support" targeting legislative and market barriers".

1.4 The Project's impact and targets

13. The end of project targets included at the project design were:

- Total CO2eq emission reductions as a result of the investments made up to 2015 (and of project) in industrial energy efficiency – target 3.8 million tonnes (over 10 year lifetimes)
- Total energy saved (GWh/yr) – target 1.4 TWh annually by 2015
- Volume of investment – target USD 300 million by 2015

1.5 Mid Term Review approach, methodology and limitations

14. The MTR was conducted in accordance with internationally recognized professional standards that are applied to GEF project evaluations. The MTR approach has been to design a methodology which allows the project to be reviewed against the following five key GEF evaluation criteria[2]:

    - **Project Design and Relevance** – referring to GEF Project's relevance to the environmental priorities at national and local levels;
    - **Effectiveness** – referring to the achievement or likelihood of achieving objectives;
    - **Efficiency** – referring to the balance between impact and financial resources expended;
    - **Results** – referring to the GEF Project's direct output, outcomes and long term impacts; and
    - **Sustainability** – referring to the potential of positive impacts to outlast the GEF Project beyond their completion.

15. The methodology chosen for this assignment included the following steps:

    a) **Development of an evaluation matrix**. The evaluation matrix is a tool for evaluating a project's progress by breaking down the elements of the project against the five GEF criteria using a set of review questions. The evaluation matrix developed served as a framework for the subsequent stages of the review.

    b) **In-depth desk review**. Desk review and analysis of all (available) project documentation;

    c) **Site visit and stakeholder interviews** – including preparation of field visits and interviews, and follow-up interviews and requests for clarification from stakeholders and UNIDO staff/ EBRD staff/ consultancy firms as necessary. Interviewees included:

        i. EBRD and UNIDO project management and appropriate evaluation teams;
        ii. Consulting teams supporting the project;
        iii. Company beneficiaries (of training and other support);
        iv. Government Stakeholders;
        v. Trainers trained within the project.

    d) **Drafting the MTR** report based upon the information gathered including analysis of findings;

    e) **Internal quality review**;

    f) **Review of the Draft Report** - following the initial internal review, the Draft Report will be made available to relevant staff at UNIDO and EBRD for scrutiny, feedback and comments.

16. A full list of the documents reviewed and of the stakeholders consulted during the MTR are provided in Annex B and A respectively. A copy of the evaluation matrix is presented in Annex C.

17. Following comments and review from UNIDO and EBRD counterparts a Final Report (with GEF Tracking tool) will be submitted. The MTR will be submitted to the GEF as part of the annual reporting function during the FY2013 reporting cycle.

18. This MTR approach and methodology has allowed for different opportunities to engage with stakeholders at various levels, as well as provide opportunities to take corrective action or redirects. The only real limitation identified has been that, as with any review, it has been difficult to evaluate the impact of any changes that have been made only recently.

19. Following this approach and using the review criteria listed, the Reviewers arrived at a consolidated picture of the Project's progress since its start in August 2010, until the timing of the MTR in June/July 2013.

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[2] This is in line with the general guidelines of the GEF Monitoring and Evaluation Policy 2010

2 Midterm Review Findings

2.1 Project Design and Relevance

20. This section reviews the link between the original Project design and local circumstances to assess whether the Project has continued relevance. The Reviewers assessed the problem addressed by the Project, the Project strategy and the Project results framework. A more in-depth analysis of the Project Results Framework, including at the Output and Outcome indicator levels, is included in Annex D.

2.1.1 Problem Identification and strategy

Addressing identified challenges

21. The original project design is still relevant to the country context and addresses key needs and market barriers to industrial energy efficiency in Russia.

22. The typical energy efficiency of Russian industry is significantly below the global average. This is due to a number of reasons including an ageing capital equipment stock, traditionally low energy prices and low management interest. As noted in the CEO Endorsement manufacturing is the largest end user of energy in Russia representing roughly 25% of total final energy consumption in the country. The potential for industrial energy efficiency is difficult to evaluate but studies have estimated that Russia could cut its total final energy consumption by roughly 5% through EE investment in industry[3]. This would clearly have a positive impact on energy costs, industrial competiveness and GHG emissions. This challenge, as identified in the RCE, is consistent with what has been found during the MTR, through the literature review and confirmed during stakeholder interviews.

23. The status of industrial EE in Russia has not changed significantly since the Project's inception. Although the Energy Efficiency Law (FZ-261) was passed at the time of the project design, and subsequently a number of supporting acts have been passed, it has not had the expected impact on investment in EE in industry. Partly this is due to the fact that the EE Law only requests all large energy users to carry out an energy audit and to be issued with an energy passport. The law does not require any enterprise to implement any of the EE measures identified in the energy audit. It is also due to the continued barriers to investment in EE in industry.

24. The significant barriers identified when the Project was designed appear to remain valid. These included: legislative and regulatory barriers and the need to strengthen institutional capacities; distorted economic drivers due to continued low energy prices and a lack of energy service providers; a lack of availability of suitable finance; and a lack of awareness and knowledge regarding EE opportunities and an inability to propose high quality investment projects to FIs. These barriers and their level of continued relevance, as assessed by the MTR team, are described in detail in Annex D. Stakeholder interviews confirmed the continued relevance of these barriers with the one exception of a Government stakeholder who believes that there is sufficient capacity in government to take forward EE regulation without assistance.

25. In the opinion of the Reviewers, UNIDO and EBRD are well-suited to address these barriers through the combined efforts of their staff and consultant teams.

Relevance to policies (at conception and continuing) and country ownership

26. The project outputs and activities are in line with Russian Government priorities. Not only has the Russian Government set an ambitious target of a 40% improvement in energy intensity by 2020 but since the submission of the final GEF project document impressive progress has been made

[3] IFC/World Bank, Energy Efficiency in Russia: Untapped Reserves, 2009 & CENEF, Resource of energy efficiency in Russia: scale, costs and benefits, 2008.

by the Russian Government and authorities with respect to the policy and legal framework for EE, including the launch of the Federal Program on Energy Efficiency and of the State Energy Efficiency Information System. Since the adoption of Federal Law # 261 on Energy Efficiency over 40 legislative and normative acts supporting this Law and creating the legal and institutional infrastructure for comprehensive EE policy have been developed and adopted.

27. The Russian Government support for EE is clearly strong. There is a clear understanding in government that the existing law does not go far enough and the Russian Energy Agency (REA) is very supportive of energy management systems and ISO 50001, and has even carried out joint promotional and awareness activities with the project. REA was involved in the design of the project and the project activities reflect REA's priorities and needs. Although there have been many advances in supporting legislature in the interim, REA is in constant collaboration with the project team, regarding how the project can continue to best meet the Russian government's needs.

Relevance to stakeholders

28. The non-Government stakeholders consulted all agreed with the barrier analysis and the relevance of the project activities in meeting these barriers. This is particularly relevant in the current context of increasing competitive pressures and rising energy prices leading to an increased attention to efficiency gains among Russian industrial companies.

29. The RSPP agree that the project activities are important for addressing the barriers; in particular for SMEs where the lack of knowledge and interest barriers are more pronounced. Beneficiary organizations and energy professionals see the real value of the project.

30. The project is also in line with EBRD and UNIDO's strategies and work in Russia.

31. EBRD also confirmed that there is a sustained demand for support on EE among their industrial sector clients. In addition, the project has become a key tool in the marketing and project origination and implementation efforts of the Industry, Commerce and Agribusiness (ICA) section of EBRD in Russia.. This Project is the only way through which EBRD can provide technical assistance for these projects as there are no alternative funds available for TA in Russia.

Linkages to other initiatives

32. No single programme will solve all the barriers to industrial EE in Russia and co-ordination with government and non-government initiatives in this sector is essential. The project design built upon lessons learnt from earlier programmes such as the EU-Russia Energy Dialogue programme on EE.

33. One similar initiative, the EBRD credit line facility RuSEFF, addresses industrial EE by building capacity for participating banks, and providing limited support to sub-borrowers to prepare bankable proposals. EBRD staff involved in RuSEFF were consulted during the project design. It was intended that RuSEFF would be able to provide some of the co-finance for the SMEs for the project. EBRD continue to believe that there is a real need for this project for EnMS and for Russian case studies. The resources from the GEF for awareness-raising and promotional activities as well as the promotion of EnMS allowed for the RuSEFF program to focus its resources elsewhere.

2.1.2 Review of Project objective

34. The GEF-EBRD-UNIDO developed the Project "Market Transformation Programme on Energy Efficiency in Greenhouse Gas-intensive industries in the Russian Federation", with the objective of[4]:

"The proposed project will reduce greenhouse gas emissions in the Russian Federation by transforming the market for Industrial Energy Efficiency in GHG-intensive industries. The project

[4] The Request for CEO Endorsement is available at: http://www.thegef.org/gef/project_detail?projID=3593

will lead to a transformation of the market for industrial energy efficiency through activities that will:

i) improve industrial energy efficiency in heavy industries,

ii) have a direct positive effect on rational energy use with related environmental benefits, and

iii) improve the commercial prospects of industrial borrowers.

Financing of over 300 million USD will be facilitated through this project resulting in potential direct emission reductions of up to 3.8 million tonnes CO2eq over 10-year equipment lifetimes."

35. Based upon interviews with various stakeholders and review of Project documentation, the Reviewers consider that this objective remains highly relevant to addressing the issues of EE in industry in Russia.

2.1.3 Review of Project Methodology, Targets, Assumptions and Risks

36. The Project was designed to address the aforementioned barriers through four interlinked components:

Component 1 - Enhancing knowledge asset. Activities were designed to establish industrial EE (IEE) knowledge dissemination platforms, develop training programs and material on energy management system, system optimization (steam, pumps, compressed-air, fans and motors) and process heat. The training program and material were to be tailored to the Russian Federation context and to the specific targeted stakeholder group: local consultants, enterprises and equipment vendors.

Component 2 - Capacity building in large industries. Activities were to include extensive capacity building and technical assistance to 20-30 large enterprises to implement energy management systems and system optimization projects. Technical assistance was also to be provided for developing technology innovation plans and prepare IEE investments plans for submission to commercial banks

Component 3 - Capacity building and Energy Management Systems in SMEs. Activities were to include capacity building and technical assistance to 50-75 SMEs to implement energy management systems, energy system assessment and optimization projects. Some technical assistance was also to be provided for preparing IEE investments plans for submission to financial institutions.

Component 4 - Policy support. Activities included working with federal and regional governments and other IEE relevant institutions to strengthen IEE policy-making and program-implementation capacity and reinforce the existing policy, legal and regulatory framework for IEE. The goal of this component is to ensure the establishment of an environment supporting long-term sustainability of project outputs and outcomes.

37. Based on information examined during the MTR process, these components and their associated activities are generally highly relevant for addressing the barriers for developing the market for EnMS, SO and EE in industry. In addition the project builds on the relative strengths of UNIDO and EBRD in delivering these activities. Annex D outlines the relevance of planned activities for addressing the barriers.

38. The GEF "Project Results Framework" details the Project's objectives, the objectively verifiable indicators, targets, sources of verification and assumptions for each of the project activities, for the project outcomes and overall project impact. The key impact targets, included as part of the Project Results Framework and in the initial monitoring and evaluation (M&E) plan, are:

- Investments from participating large and energy intensive industrial companies reaching USD 150 million by the end of the project
- Investments from participating SMEs reaching USD 150 million by the end of the project
- 3.8 million tonnes (over 10 year lifetime) of CO2eq emission reductions as a result of the investments made up to 2015 (and of project) in industrial EE; and

- 1.4 TWh energy saved annually by 2015.

In addition the target outcome indicators include associated capacity building as follows:

- Local trainers with knowledge resources and skills needed to enhance capacity of others in industrial EE (target to increase trainers capacity by a factor of 4 compared to the start of project baseline) [5]
- Government capacity to design and implement an effective, long-term industrial EE policy enhanced by a factor of four by the end of the project compared to the start of project baseline.

39. Using the approach outlined in the RCE, the volume of investment is proportionally linked to the other impacts. Thus, the question of whether the GHG reduction and energy saved targets are realistic is more about the volume of investment being possible. Of course the actual results of the project will depend on the energy source of the beneficiary enterprises and the potential for savings at that enterprise. The costs per GHG reduction will vary significantly. Therefore to assist in reaching the targets the IAs should focus on high GHG emitting enterprises if possible.

40. The key assumptions for the above project targets and activities are:

- that macroeconomic conditions are such that investment in efficiency continues to be attractive and that banks have capital for investment;
- local trainers are interested in the information and resources; and
- institutional and political barriers can effectively be overcome through analysis, information and co-ordination.

41. There was an assumption in the project design, which was never made explicit, that these macroeconomic drivers are sufficient for industry to be interested in investing in EE; that industrial actors would be interested in training and then be interested in investment and behavioural change once they had learned about the opportunities. However this over-simplifies the situation and resulted in the project design under-estimating the challenges in engaging with new enterprises. In practice it is not that simple and triggering investments and behavioural change involves a much more in-depth process of relationship-building prior to any new enterprise reviewing its EE options, which is a number of steps still from committing finance to an EE project.

42. Because the agencies had not laid this groundwork with SMEs, in the opinion of the Reviewers the USD 150 m target for SME investment was overly ambitious: the targets for the SMEs investment, the energy saved, and thus the targets for GHG reduced are therefore not likely to be met by the Project Closing Date of May 2015. This is a fault of the Project's initial design in that it under-estimated the challenge related to engaging SMEs and over-estimated the readiness of SMEs to embrace EE. The challenge related to SMEs is much greater than that associated with larger industries since the SMEs tend to have lower interest and less knowledge of energy management and its benefits. In addition projects are necessarily smaller so it is necessary to work with many more enterprises and have many more investments to achieve the same target.

43. The barrier associated with accessing finance is also greater for SMEs. SMEs struggle to access credit for energy efficiency projects if their own bank has no experience of EE projects. At the same time if an SME approaches a bank with EE experience they may not be able to access finance since that bank does not know the SME. At Project inception, it was believed that RuSEFF, and its partner banks, would be able to provide some of the co-finance for the SMEs. Unrelated to this GEF project, RuSEFF has now successfully disbursed USD 130 million to EE projects in Russia, so the majority of its allocated funds for industry (USD 200 million) are already committed elsewhere.

[5] The system for scoring trainers capacity and government capacity, including weighting of factors, will be determined at project inception. Scores will be assigned based on results of the start of project survey, and compared to that in the mid-term and end-term survey. Indicators for enhanced capacity may for example include: knowledge of international best practice, appropriate staffing in terms of number and skills, presence of processes and procedures to facilitate industrial EE.

44. In contrast the reviewers believe that the $US150 million invested in large enterprises is feasible in the second half of the project since it requires only a few large projects to meet the target.

45. To allow sufficient time for engagement and for the required number of SMEs to access finance the Reviewers recommend that the Project be extended by at least one year to May 2016. For the use of GEF funds beyond May 2015, this will require an official request to the GEF Secretariat by UNIDO and EBRD combined.

46. Four significant risks were identified in the RCE document that might prevent these project objectives from being achieved. Annex D includes a table showing the risks identified during the project design phase and comments on the appropriateness of the risks identified. The Reviewers believe that the main risks were well-identified and the overall project risk is fairly low assuming the mitigation measures are followed. However the reviewers believe there was one key omission, although listed as a barrier at project design, the risk associated with access to finance was omitted. This is dealt with further in Section 2.5.7.

2.1.4 Comments on the designed implementation arrangements

47. A key positive element of the project design has been the allowance for adaptive management. This has allowed the approach to be changed in line with changing circumstances, for example changes in the progress of EE legislation implementation.

48. The reviewers believe that the schedule for the project was ambitious since it did not allow for sufficient start-up time.

49. The project design appropriately allowed for coordination by EBRD and UNIDO through their local Russian offices and headquarters in London and Vienna. Local execution was to take place through two Project Management Units to address project management needs of UNIDO and EBRD. With responsibilities between the two Implementing Agencies (IAs) clearly outlined (and shown in Table 1) this arrangement makes sense.

50. However the implementation arrangements also assumed a central project management structure and there was the intention that the two project management units would be housed in the same office. The concept of a Project Advisory Committee was very sensible but the concept of any other central management and shared office was overly-ambitious and unlikely to be implemented by two very different organizations, both of which have existing offices in Moscow.

51. Finally the design stated that the UNIDO executing agency will be the Russian Energy Agency, which is a Federal State Enterprise. Since UNIDO is unable to contract government agencies this was not a possibility.

2.1.5 Amendments to the project design

52. Overall, in the period between design of the Project (2008-2010) and this MTR, the Project has remained very relevant. From a design standpoint, the original design and Project strategy is generally consistent with the needs of all stakeholders. The Project's design is strong though there are a few amendments, mainly due to the more tailored approach to dealing with enterprises and due to on-going progress in EE legislation. Additional commentary on the Project design is included in Annex D.

53. Related to the impacts of the Project, no major amendments have been made. However, the Reviewers highly recommend the following amendments:

- Based on discussions with the Project managers and stakeholders, it is the Reviewers' opinion that the impact-level targets of USD 150 million for SMEs may take additional time to be realized, so the Project should consider adding another year to implementation.

54. **Related to the Project Outcomes**, no significant amendments have been made.

55. **Component 1: Enhancing Knowledge Assets**. No significant amendments have been made. There is a possibility that the format of a discussion forum and peer-to-peer network may change since it was agreed by stakeholders that a simple peer-to-peer network was unlikely to work in

Russia given that there is not a history of sharing information. Discussions are on-going as to how the same objective of "sharing ideas" could be designed to work within the Russian context.

56. **Component 2: Capacity Building in large industries.** There have been no significant amendments to the activities in Component 2 although the assistance is tailored, or customized, to the individual enterprise. Each enterprise is offered a "menu" of possible technical assistance and therefore the targets for exact numbers of audits, system assessments, trainings etc. in each of the activities is likely to be different from those in the Results Framework. For example: one organization only received training whilst another had work on an investment programme; one had an energy audit carried out and yet another a gap analysis on ISO 50001.

57. In the original design it had been anticipated that work would be undertaken with 10 core enterprises and then 20 additional enterprises. In reality, using the customized approach the actual activities will depend on the needs of the companies and any definition of primary and secondary becomes arbitrary so there is no clear split between them. However there is a clear understanding that the more companies engaged, the more likely it is to get the results in terms of investments.

58. It has become clear during the project implementation that to engage with sufficient numbers of enterprises the initial five sectors identified during the design were too limiting and the project team are now engaging with enterprises outside those five sectors, such as the food and drink industry.

59. It seems unlikely that the activity to include training for energy & energy efficient equipment suppliers will happen. Equipment suppliers have not shown interest. They were invited to the kick-off meetings in the hope that they would propose generic solutions but were only interested in advertising their own equipment. Unless work being carried out separately by RuSEFF with leasing equipment and labelling can include EnMS training it is likely that this activity will be omitted.

60. **Component 3: capacity building in SMEs.** There have been no significant changes to component 3 although the target of reaching 50 SMEs is considered too ambitious and may need to be revised downwards. As with Component 2 the approach has been to offer enterprises an option of the services they would like to receive. This means that the resulting figures on actual system assessments, audits, etc. are likely to be different from those in the Results Framework.

61. A data bank on EE technologies was to be developed at design stage. This is still part of the project but UNIDO is working with REA and RSPP to ensure that there is no duplication and it may be that the resulting data bank is an addition/link to an existing resource.

62. It is unclear why the voluntary certification scheme proposal forms part of Component 3 and so this is recommended to be incorporated into Component 4.

63. **Component 4: Policy support**. Based on discussions with the project managers and REA it is clear that the project team is supporting REA in EE policy as proposed at project design. However the specific support offered has changed.

64. There has been a rapidly changing baseline policy scenario and therefore the government's requirements have changed. This has led to a change to some of the outputs of Component 4. For example some of the outputs set out under Component 4 became obsolete because they had already been implemented by REA. In their place the project responded to a direct request from REA and is supporting research, development and capacity building for other policies that can support and accelerate industrial EE improvements, such as Energy Savings Obligations / White Certificates. Work on EnMS certification is including voluntary certification (from Component 3).

65. The number of government officials to be trained is high and it is recommended that this target is expanded to include agency and regional energy staff in additional to Government officials.

Table 1: Project components and tasks and the division of responsibilities

Project Component and Activities	Lead
Component 1: Development of training materials, website & train-the-trainers programme	UNIDO
1.1 Development and translation of training materials and tools.	UNIDO
1.2 Information campaign and development of a project web site	EBRD
1.3 Training of national experts on energy management systems and systems optimization.	UNIDO
1.4 Training of loan officers in local banks and technical assistance to banks	EBRD
Component 2: Energy management system capacity building programme for large energy –intensive industries	EBRD
2.1 General enterprise training on energy management systems	EBRD
2.2 On-site energy management system training	EBRD
2.3 On-site systems optimisation training	EBRD
2.4 Energy audits	EBRD
2.5 Development of EE investment plans	EBRD
2.6 Documented demonstration projects.	EBRD
2.7 Recognition and peer-to peer/knowledge networks	EBRD
2.8 Participation of equipment manufacturers and suppliers	EBRD
Component 3: Introduction and implementation of an energy management system in selected SMEs	UNIDO
3.1 Energy management training and implementation in SMEs	UNIDO
3.2 Systems optimisation training for SMEs	UNIDO
3.3 Implementation of energy management and benchmarking to increase EE of SME's	UNIDO
3.4 Energy audits	UNIDO
3.5 Technology database and certification	UNIDO
3.6 Preparation of EE investment plans	UNIDO
Component 4: Government capacity building and support programme	UNIDO
4.1 Capacity building on industrial EE policy	UNIDO
4.2 Support to the implementation of the new law on EE in Russia	UNIDO

2.2 Results and Achievements

66. This section reviews the Project's mid-point achievements in terms of stated outputs, short- to medium-term outcomes, and progress toward longer-term impact including global environmental benefits and replication effects. This is used as an indication of the likelihood that the Project will meet its targets, achieve the overall results by the end of the Project and global environment objectives (see Table 2 and Table 3 for a summary of progress towards meeting targets).

2.2.1 Likelihood of meeting objectives and global environmental objectives

67. At the mid-point of the project there has been noticeable progress however due to the slow progress in some activities there is a significant risk that the project will not achieve its overall development objectives within the project timeframe. Based on progress to date and within the current timeframe, the total volume of financing, energy saved and GHG emission reductions is likely to be less than envisaged. At the mid-term no financing has been committed for EE in industry, nor have there been any resulting emission reductions.

68. Both EBRD and UNIDO have recently changed their strategies with respect to engaging with enterprises and so it is still too early to be able to assess their effectiveness. However in both cases the first EE projects have been identified for investment. If these new strategies prove successful then there is still a possibility that the overall objectives could be met.

69. In particular, the Reviewers believe that the target of USD 300 million in investment is only achievable with additional time and if there is an appreciable increase in momentum and deal flow of the project.

    - The investment facilitated for large industries of USD 150 million is likely to be reached since this can equate to a few very large projects. What is more, the IA already has a pipeline of projects and a strong client base interested in EE. It is, however, important that there is clear reporting of the additional value due to this project of these EE investments.
    - However for the investments facilitated in the SMEs this is a more difficult target where many SME EE projects are necessarily small. In addition the IA does not have an existing client base upon which to build its EE projects. It is more likely for the targets for SMEs to be met if an additional year is added to the Project duration.

70. The Reviewers believe that the capacity in government and industry will be developed as planned but over a longer timeframe than envisaged at project design. The capacity of local trainers was to have been enhanced by the mid-point of the project but this has only recently begun. Some industries, trainers and government already have increased capacity. This is because there was a delay in the preparation of the co-financed training materials. It has been difficult to find Russian experts to assist in making the training relevant to the Russian context mainly due to the need for them to also speak English. Translation is now underway so further training is imminent. During the whole project timeframe this is likely to be achieved.

71. It is also possible that the national trainers' training, under Component 1, will trigger further EE investments (and associated energy savings and GHG reductions) because energy professionals are then able to provide additional advice. There is no mechanism for measuring these benefits. Already one of the energy professionals who received training claims that as a result of the training his organization has been able to identify 1,200 low cost measures resulting in 725 GWh of electricity and 160 million m3 of natural gas being saved, with an investment cost of 690m RUB (USD 21 m). Of course it is difficult to know how much of this was directly attributable to the training. It is recommended to introduce a monitoring mechanism, or feedback, for the energy professional trainees to report every 6 months on the EE projects they have identified as a direct result of the training. This could then be included as an additional impact of the project.

72. Based on the MTR process, Table 2 indicates the main Project impact indicators, their targets for the end of the Project, the results achieved to date, and the results expected by the end of the Project.

73. The Reviewers highlight two potential issues related to the monitoring of Outcome-level targets:

    - The indicator "*Local trainers have the knowledge resources and skills needed to enhance capacity*", has a target of "*Average 'trainers capacity score' increased by x4*". However no system has been put in place to measure this. UNIDO has designed some testing and certificates for their training which could contribute to the measurement. This monitoring requirement should be made explicit.
    - For the target "*Government capacity enhanced"*, this could be tracked via, for example, a survey distributed at the beginning of a training session and following it. Since this activity has not begun in earnest it is not currently being tracked.

74. It is also worth noting that, since the Project inception, the GEF has developed a framework for tracking targets related to policy and regulatory framework development, the establishment of financial facilities (e.g. credit lines, risk guarantees, revolving funds) and capacity building. This framework is contained within the "Tracking Tool for Climate Change Mitigation Projects". Because these were not the original indicators for success in the Project, an evaluation of progress to date has not been included in this report but has been provided separately in the Tracking Tool. The use of the tracking tool indicators does not imply that the Reviewers consider these indicators as best practice but rather that the tool is necessary for reporting to the GEF.

75. Table 3 indicates the Output-level targets to be achieved by the end of the Project due to Project activities in the various components, the Results achieved to date, and the Reviewers' assessment of the likelihood of meeting targets by the end of the Project. Additional discussion on these targets and results achieved is provided in the sub-sections below.

2.2.2 Component 1: Enhancing Knowledge Assets

76. UNIDO and EBRD have made positive steps towards achieving the targets for this component and it is realistic that most of the outputs and outcomes will be achieved only in the second half of the project.

77. An information campaign has been implemented by both EBRD and UNIDO and has included publishing brochures, articles in magazines, attendance/publicity at energy events, workshops and a national webinar. There were issues with the consultant's proposals for a website and the concept of a peer-to-peer network is under discussion so neither of these outputs have been achieved. Since there was no project platform UNIDO have developed two websites with information relating to this project, although neither are complete yet. Stakeholders confirm there is a clear need for a Russian website so this should be advanced as soon as possible. Continued awareness raising would be appropriate for the project.

78. Progress has been made towards producing a fully developed set of training material on EnMS and systems optimization (SO). However, of the five sets produced to date, only two have been translated into Russian. The work is on-going but should have been completed by the mid-term point. Work has started on a SO library to be included on their websites. In addition, UNIDO has started work on a Russian Guidebook for ISO 50001 following discussions with REA.

79. EBRD has developed its own training material on EnMS and ISO 50001.

80. Initial training on EnMS of national trainers has been undertaken and further training on EnMS and SO is scheduled for the Autumn 2013. This target is likely to be reached once the training material is available.

81. As proposed in the Project design EBRD, through RuSEFF co-finance, has been training its local partner banks in marketing EE and its benefits, and in how to help their clients to develop and improve their EE projects. Eight local banks have already been trained so this target has been achieved. In the next 2 years further banks may receive training. The indicator and means of verification for this target is based on deal flow through local banks. Although RuSEFF's local banks have not provided finance under this GEF project they have clearly disbursed to other EE projects.

2.2.3 Component 2: Capacity building in large industries

82. Progress has been made towards meeting the output-level targets to be achieved for Component 2. Studies and training work undertaken needs to start being converted into EE investments during the second half of the Project to meet the outcome indicator for EE investment.

83. Introductory training sessions/workshops have been successfully carried out for approximately 180-190 managers, surpassing the target of 100 managers.

84. EBRD is actively working with 12 enterprises. EnMS training has been carried out for four enterprises; two organizations had a short one-day training and one organization had extensive on-site training. In addition an ISO 50001 gap analysis was carried out for a steel manufacturer, who subsequently implemented the certification at their own expense.

85. Five energy audits, system assessments, EE investment plans have been completed and a further seven are planned, with TOR already prepared. These studies cover at least 10 large enterprises, a number of different systems and a variety of sectors.

86. However, the Project has not had as much success yet related to achieving the impact targets that relate to investment (and related energy savings and GHG reduction). To date one project looks likely to proceed with EBRD funding; aproject at a sugar manufacturer. Although EBRD co-

finance and investment is not yet as successful as anticipated it is envisaged that the total USD 150m will be facilitated within the project timescale because, as mentioned earlier, there is a strong pipeline of projects.

87. Although not included as EBRD's co-finance another EE project identified within the GEF project subsequently sourced funding from IFC. It would be possible to claim the benefits of this project, plus the savings from the ISO 50001 certification, as additional to the EBRD co-finance.

2.2.4 Component 3: Capacity building in SMEs

88. Progress has been made towards meeting the output-level targets for Component 3. Progress has been slower than expected partly because, despite widespread promotion, it has been difficult to involve SMEs in the project due to the SME's lack of understanding of the benefits of the training and due to their other priorities, particularly keen during an economic downturn. However the first signs of real progress has been seen in the last few months. Now confidentiality agreements have been signed with six large SMEs and larger organizations. The services offered to these enterprises will depend on their requirements. EnMS training has already been delivered to one organization. The aim is that through working with larger organizations, they can help leverage outreach to their SME subsidiaries and suppliers as well as trigger investment. However reaching the 50 SMEs foreseen at project design will still be difficult.

89. The Project has not yet had any success related to achieving the impact targets that relate to investment. However the first potential projects have been identified at a refrigerator manufacturer. It is envisaged that the total USD 150m will be facilitated, but they may require an additional year and to work with larger SMEs with access to finance.

90. Work has also started on a web-based tool to assist companies in benchmarking their energy performance, following a review of best practice of benchmarking. A Russian booklet on benchmarking has also been produced. In addition work has been carried out reviewing and recommending best practice for a Russian databank on EE technologies. These activities will be finalized within the second half of the project.

2.2.5 Component 4: Policy support

91. Work under Component 4 has been flexible in line with REA's requirements and is likely to achieve its objectives by the end of the project. Consultants have been contracted to develop a voluntary certification scheme for EnMS and to deliver proposals on Energy Saving Obligations/White Certificates. Both of these contracts will deliver proposals to government by the end of 2013.

92. Interim work has been delivered to REA on options on baselines for energy performance delivered. This is now the focus of further discussions of next steps with REA.

93. Capacity building for government is on-going. As mentioned earlier the figures for government officials to be trained are over-ambitious, but if agency and regional staff are included as beneficiaries then this target will be achieved. Training programmes are currently being prepared and once the information tools are available these programmes will begin. .

Table 2: Main project impact and outcome-level indicators, their results achieved to date, and the likelihood of meeting the targets by the end of the Project

Project Strategy	Objectively Verifiable Indicators	Target (both EBRD and UNIDO)	Progress to date	Likelihood of meeting the targets by the end of the Project
Impact				
GEF Strategic Priorities: Strategic Program 2: Promoting EE in the industrial sector	Total CO_{2eq} emission reductions as a result of the investments made up to 2015 (and of project) in industrial EE	3.8 million tonnes (over 10 year lifetimes)	Facilitating activities carried out to date. No investment yet.	**Possible** – The USD 300m will be difficult to reach and therefore the associated energy savings and GHG reductions. However if EBRD and UNIDO's new strategies for engaging enterprises succeed and one year is added then the project may reach its intended impact.
	Volume of investment	300 million USD by 2015		
	Total energy saved (GWh/yr)	1.4 TWh annually by 2015		
Outcomes				
Local trainers have the knowledge resources and skills needed to enhance capacity	Average "trainers capacity score" increased[6]	x4 by project mid-term compared to start of project status	On-going. Some local trainers have enhanced knowledge and skills.	**Likely –** by the end of the project, rather than at mid-term. Note that a means for measuring "trainers' capacity scores" has not yet been designed.
Participating large industries make EE investments	Investment facilitated in large industries.	USD 150 million submitted to EBRD credit lines and/or local banks for financing by end of project	No finance committed yet. First project identified	**Likely** – Only a few projects of this size are needed to reach its target so likely.
Participating SMEs make EE investments	Investments facilitated in SMEs	USD 150 million by end of project	No finance committed yet.	**Possible** – With an additional year and assuming the new enterprise engagement strategy finds sufficient SMEs then it will be possible to reach. However it will be necessary to focus on larger SMEs with access to finance.

[6] The system for scoring trainers capacity, including weighting of factors, will be determined at project inception. Scores will be assigned based on results of the start of project survey, and compared to that in the mid-term and end-term survey. Indicators for enhanced capacity may include: knowledge of international best practice, appropriate staffing in terms of number and skills, presence of processes and procedures to facilitate industrial EE.

Project Strategy	Objectively Verifiable Indicators	Target (both EBRD and UNIDO)	Progress to date	Likelihood of meeting the targets by the end of the Project
Government capacity enhanced	Government capacity to design and implement an effective industrial EE policy enhanced[7]	x2 by project mid-term and x4 by end of project compared to start of project.	REA capacity enhanced wrt. EnMS and White Certificates.	**Likely** - though a means for measuring "institutional capacity scores" has not yet been designed.

Table 3: Project output-level indicators, progress to date and the likelihood of meeting targets

End of project targets	Progress to date	Likelihood or reaching targets by end of project
Component 1: Enhancing knowledge assets		
Fully developed set of training materials for energy management system implementation and systems optimisation training, including build-up of systems optimisation library	5 full sets of training materials for: • EnMS (user and expert) • Steam • Pumps • Fans(user, expert and vendor) • Motors • Compressed Air 2 sets peer reviewed and translated. Others in process. Certificates for training and to provide training developed. Proposal for a Russian Guidebook on ISO50001 EnMS Development discussed with REA. Review of existing digital libraries, samples of best practices as benchmarks and recommendation of software and design of web library to be included into the user- friendly web portal to be used for e-learning and webinars.	**Likely –** Much of this work has been completed already. Ensuring that the training material is relevant to the Russian context and translated is important.
Information campaign implemented	EBRD activities included: Kick-off event in Moscow November 2011 Moscow event in March 2012 Vladivostok event in October 2012	**Likely** – Much already achieved although activities relating to information on the website are outstanding.

[7] The system for scoring government institutional capacity, including weighting of factors, will be determined at project inception. Scores will be based on expert reviews at the beginning middle and end of the project.

	Krasnoyarsk introductory workshop March 2012; Volgograd Introductory workshop April 2012; Ekaterinburg introductory workshop June 2012 St. Petersburg introductory workshop June 2012 Brochure outlining project and case studies printed	
	UNIDO activities carried out include: a. National webinar training on EnMS and ISO 50001 in collaboration with Russian Energy Agency (REA) - 25,000 participants recorded b. Brochure published (bilingual) c. Article in magazines d. Two websites developed: http://www.energy.unido.ru/ http://50001.pro/	
Fully functional Russian-English language web site;	Not yet established	**Likely** – If agreement reached between all stakeholders on the required functionality
Discussion forum and Peer-to-Peer network established and operational;	Review of other platforms carried out and functionality requirements identified.	**Likely** – If agreement reached between all stakeholders on what is likely to work in Russia.
Up to 120 national trainers fully trained in EMS and systems optimisation	Discussions with REA on joint training implementation. Identification and selection of national trainers is ongoing. Criteria developed for selection. • EnMS training for users in December 2012 (27 participants) • EnMs training for experts in February 2013 (>40 participants) Training on SO postponed until Sept 2013.	**Likely** – Once material is translated further training will be planned.
Enhanced capacity of local banks to identify and process loans for industrial EE	8 local banks trained in marketing EE and its benefits, and in helping clients to develop/improve their projects.	**Already achieved –** This has already been achieved, but additional training is likely if new banks partner with RUSEFF.
Component 2: Capacity building in large industries		
½-day introductory training sessions to 100 managers in 50 large enterprises delivered;	6 introductory regional seminars held: • Moscow Kick-Off meeting – November 2011 (with invited enterprises by the EBRD); ▪ Moscow Introductory workshop – March 12th 2012 (both EBRD and consultant invited enterprises); ▪ Krasnoyarsk introductory workshop – March 27th 2012 (organised by the EBRD-RO); ▪ Volgograd Introductory workshop – April 3rd 2012 (enterprises invited by local RSPP, consultant and EBRD); ▪ Ekaterinburg introductory workshop – June 21st 2012 (local	**Already achieved –** Approximately 180-190 beneficiaries of introductory workshops.

	RSPP and consultant invited enterprises); ▪ St. Petersburg introductory workshop – June 28th 2012 (enterprises invited by local RSPP and consultant)	
Formal classroom training in energy management systems and systems optimisation to 100 managers in 20 large enterprises delivered that are additional to the core 10 enterprises;	Initial identification of enterprises And meetings held with enterprises some..	**Possible** – The approach taken to provide support to enterprises is a customised approach where the enterprises are offered a range of services to choose from. Therefore the specific numbers delivered of each of the services (EnMS training, implementation, SO training, energy audits, system assessments etc) will depend on the requirement of the enterprises. It is unlikely that the exact total numbers set out in the Results framework will be reached but likely that the outcomes envisaged from these outputs will still be reached.
2-day training sessions to participating large enterprises staff delivered;	2 enterprises received 1-day training.	
Extensive on-site EMS training for 10 large enterprises	Training material developed. 1 large company has received extensive EMS training	
Implementation of EMS in 10 large enterprises;	Gap analysis for ISO50001 at steel manufacturer carried out and subsequently implemented ISO 50001 at own cost in Dec 2012.	
Full energy audits for the 10 large enterprises carried out;	EWPs carried out for 3 enterprises. Energy assessments or audits at 3 enterprises. TORs developed for other enterprises.	
40-60 enterprise staff trained in systems optimisation at the 10 core enterprises (a total of 30 three-day workshops);		
40 system assessments prepared at the 10 core enterprises ;		
40 system assessments prepared at the 20 additional enterprises;		
35 full case studies developed;	None developed	**Possible** – It is likely that case studies will be developed but unlikely that they will number 35.
Recognition programme established and participants registered in the peer-to-peer network;	Peer-to-peer network not established	**Possible** – assuming that a form of the peer-to-peer network is established and enterprises are interested.
10 complete company EE investment plans developed;	Due diligence/tech and economic study of a cement investment. New cogeneration for sugar manufacturer	**Likely** – It is likely that there will be studies on 10 EE investment plans although not all may receive commitment to funding.
40 Russian EE equipment suppliers trained in optimisation of six types of systems (twelve three-day workshops)	No activity	**Unlikely** – Equipment suppliers have not shown interest in this activity.
Component 3: Capacity building in SMEs		

100 SMEs trained in energy management systems 25 large SMEs trained in systems optimisation; 25 systems optimisation assessments completed in large SMEs;	Task changed to deliver either: a. SO and investment package; or b. EnMS capacity building and investment package. Opportunities for participation highlighted at numerous conferences. Preliminary questionnaire developed for eligibility and contractors appointed to develop a list of enterprises in 2 sectors (oil and gas and machine building and metallurgy). 6 organisations identified to date. Draft Confidentiality agreement drafted. Training provided to Russian Railways in May 2013 Systems optimisation assessments to be carried out at fridge manufacturer.	**Possible** – To date only one large organisation has received training. It is possible that 25-100 SMEs will receive training once the training packages are translated and further SMEs are identified. It is still too early to assess the new strategy for engaging with stakeholders.
Russian benchmarking developed and introduced in 2-3 SME-sectors and 50 SMEs;	Review of benchmarking best practice completed. Web-based software tools to introduce and assist industrial companies in benchmarking their energy performance have been developed.	**Possible –** There is a new strategy to identify SMEs and so it is possible that they will introduce benchmarking. However it will be difficult to reach the 50 SMEs.
50 quick audits carried out by national experts and audit companies;	No audits carried out	**Possible –** There is a new strategy to identify SMEs and so it is possible that they will carry out many audits. It will be possible to reach 50 if more than one audit is carried out at each enterprise.
Data bank on EE technologies developed;	Review and recommendations of both Russian databanks and international best practice for databank completed. Database architecture now complete and environment set up.	**Likely** – Final output may be an addition to existing banks such as those owned by REA and RSPP
Voluntary certification scheme prepared;		Incorporated into Component 4
50 EE investment plans prepared;	Not started. Planned for fridge manufacturer.	**Possible –** Following new enterprise engagement strategy it is expected to identify enterprises for cooperation. More than one EE investment plan can be prepared within one enterprise so 50 is achievable.
Component 4: Policy support (UNIDO)		
80 government officials trained in industrial EE policy preparation;	A preliminary study on international experience with Energy Saving Obligations (ESO) and White Certificates (WC) carried out and presented to REA.	**Possible** – UNIDO is planning training for Government officials. However if training is just provided to government officials it will not be

	Workshop planned for July 2013 with representation from 7 ministries.	possible to reach 80. There are 7 relevant ministries and each will have 2-3 people (i.e. 21). If training of agency staff and regional staff is included here then it becomes **likely**.
Proposals delivered to REA on Energy Saving Obligations and White Certificates	Based on the findings of the above study REA request to carry out further research and provide further technical assistance for policy development and capacity building. TOR developed and contractor selected. Kick off meeting for first work in March 2013.	**Likely** – Ecofys have been contracted to provide clear recommendations regarding White Certificates.
Proposals for selection and approval of projects submitted to the new federal target programme delivered;	Completed prior to the project start by REA.	n/a
Monitoring and evaluation procedures for the federal target programme developed;	Report on international M&V protocols. REA then said this was not longer a priority for them.	n/a
Experts of the energy agency trained in information campaigns and the use of the web site and its tools;	Initial capacity building on raising awareness about EnMS/ISO50001 was carried out. On-going.	**Likely** – Once information tools available
Proposals delivered to REA on data collection and analysis structure;	Study undertaken into options and challenges for defining baselines for industry energy performance, including implications for data collection and possible changes in existing institutional practices. Included a set of initial recommendations to be further analyzed and developed in a more substantial Phase 2 research and technical assistance effort. The study findings and the proposal for follow-up work were presented to REA.	**Likely** - Currently the focus and format of further research work on this issue are being discussed with REA.
Proposals delivered for the introduction of a Russian Energy Management Standard and road map for long-term agreements with industry;	TOR developed and contractor selected to develop a voluntary certification scheme for EnMS and ISO 5000. Initial roundtable workshop undertaken in May 2013..	**Likely** – ICF have been contracted with clear TOR to recommend a EnMS scheme. However the work does not include for long term agreements with industry.
Recommendations prepared for certification scheme of industrial EE equipment;	No activity yet.	**Possible –** This activity is still up for discussion. Minimum performance standards for motors were looked at during the design stage but there was resistance from the motor manufacturers. However EBRD are working separately on energy labelling of motors. It is possible that REA request something specific.

2.3 Effectiveness

94. The section focuses on the Project's effectiveness to date – that is, the extent to which the Project has achieved its Objective, the likelihood of achieving the objectives and the likely situation in the absence of the Project. Other elements that contribute to the effectiveness of programmes including: the implementation approach, the extent to which relevant stakeholders were included in the implementation of the Project, the Project's risk management strategy to date, and donor visibility are all dealt with in Section 2.5 Implementation approach and management arrangements.

2.3.1 Achievement of objectives

95. Overall, the Project is on the right track but it is significantly behind schedule. Although considerably slower than planned, the project is on track to achieve its targets related to enhancing knowledge assets (Component 1), assuming that a workable solution is agreed for the web site and peer to peer network. The schedule at design was to have completed Component 1 by the mid-point. Progress relating to capacity building and financing facilitation for large industry and SMEs (Components 2&3) is beginning to show results and work providing policy support (Component 4) is progressing well against revised activities. Components 2&3 were designed to be well progressed with most activities completed by the mid-point whilst Component 4 was designed to continue for the first four years. To review the extent to which the Project is on track to achieve its Objective to date, the Reviewers separated out the overall assessment into two categories (see Annex G for rating definitions):

- "Implementation Progress Rating" – the level and quality of implementation;
- "Development Objective Rating" – the level of achievement of the overall goal and objectives of the Project.

96. The overall *Implementation Progress Rating* is deemed **"Satisfactory"**, meaning that implementation of most Project components are in substantial compliance with the original plan except for only a few that are subject to remedial action. This rating could be improved if there is a significant stepping up of actions ensuring further large and SME enterprises are engaged and that project outputs are converted to investment commitment in EE.

97. The overall Global Environment Objective/ Development Objective Rating is deemed "**Moderately Satisfactory**", meaning that the Project is expected to achieve most of its major relevant objectives but with potentially significant shortcomings related to investment volumes and GHG reductions within the current timeframe. Specifically:

- As the Project currently stands, the Reviewers think that the volume of investments in EE are unlikely to reach USD 300 million by the end of the Project in May 2015. At the time of the MTR, there has been no financial commitment to EE projects directly under this project.
- However the first investment projects have been identified, much of the preparatory work has been undertaken so if work is accelerated it is possible that substantial progress towards the targets could be reached.
- It will be easier to achieve the targets relating to larger industries than that related to SMEs due to the likely size of each EE project.

98. It appears that some of this situation stems from the Project design being overly optimistic about the start-up pace of the two implementation agencies and the under estimation of the challenge in engaging with enterprises. No projects or enterprises were identified during the project preparation phase. In particular:

- Both organizations took time to either put staff in place, or to contract consultants, to start implementing the project.
- Both organizations initial approach to engaging with potential enterprises followed the approach suggested in the project design which was to use workshops, training, marketing

and publicity to identify organizations who were interested in EnMS and SO. However this did not result in any real enterprise engagement.

- Subsequently, both UNIDO and EBRD have changed their approaches: EBRD is now using its existing customer base and UNIDO is leveraging larger organizations to access their SME subsidiaries and suppliers. More than a year passed before changes were made so further impacting on the project achievements to date.

99. Given that the new approaches appear to be working, although it is too early to evaluate, it is possible for the targets to be met if one year is added to the Project's duration. This applies specifically to the SME investment target since the large industry target could be achieved within the project timeframe.

2.3.2 Outcome in absence of project

100. There is a clear perception from the stakeholders consulted during the MTR that the project is already providing added value and a belief that if the project meets its objectives then it will reduce the energy intensity of Russian industry more than would be possible without the project.

101. The policy support work is providing added value through bringing international experience to Russia's existing work in EE policy. Through the introduction of international best practice the impact can be increased and implementation errors can be minimised.

102. Although EBRD is working with existing customers and already focuses on EE, work from this project clearly helps to improve or optimise the EE solution over the proposed sub-optimal solutions, and helps to increase the confidence in technology, leading to greater energy savings and sustainability. For example TA from this project has improved the possible energy savings at a cement facility and proposed the best available technology and additional technologies for a sugar manufacturer. At the moment the GEF funding is the only finance available to EBRD for this type of project support. Without GEF funding EBRD would have to look for other finance to fund technical assistance in this area. Similarly without EBRD the steel manufacturer would have to find other sources of funding for assistance in EE.

103. EBRD believe that the capacity building delivered through this GEF project, and the focus on Energy Management Systems and System Optimisation, will lead to higher quality projects being financed through RUSEFF and other credit lines, and much wider replication and sustainability.

2.4 Efficiency

104. This section assesses the GEF Project's efficiency to date, which is understood as the balance between impact and resources, and within benchmarks set by other projects of a similar scope. For this, the MTR Team considered the quality and timeliness of inputs, and examined managerial arrangements, the work plan and budget.

2.4.1 Inputs/Outputs: quality and timeliness

105. Overall, it appears that the inputs by EBRD, UNIDO and their consultants have been of a high quality and have clearly met the beneficiaries' needs. All companies consulted believed that the training and technical assistance provided by EBRD and UNIDO has been important for increasing the capacity and knowledge on EE in their companies. These inputs will facilitate the achievement of the Project's expected results in terms of investment, although this is progressing slower than expected. Component-level summaries are provided below:

106. **Component 1: Enhancing knowledge assets**

- **Training materials and training national trainers.** Training materials have been developed in English for EnMS and for five systems' optimizations. The quality of the products is considered good although there have been significant delays in its preparation. At one point, REA expressed dissatisfaction with the timing of delivery of training packages and that this could jeopardise

cooperation with REA and its Education and Training plan. The delay also increased work for the large industry capacity building since it meant that the consultants have had to develop their own training materials, although based on an English version of the material. Since then REA have expressed their satisfaction with the training materials and the extremely good cooperation between UNIDO and REA on training.

- To date, two of the training packages have been peer reviewed and translated into Russian although the Russian versions still require editing by a Russian technical expert. The process is on-going for the other training packages. The training material is detailed and includes packages for users, for experts and vendors with training programmes from half a day to five days. The peer reviews state that the training programmes (EnMS and Fan SO) provide up-to-date information, are intelligible and are good training models. They recommend the use of the modules in Russia but only after a number of amendments have been carried out to the training structure and content. Primarily these amendments relate to the need for all the material (including tools) to be in Russian and for it to clearly relate to the Russian context. This means including*, inter alia*, examples from Russia, the use of Russian currency in examples, reference to relevant Russian laws, standards and regulations, tailoring content to the experience of Russian audience, including typical Russian energy costs and specific indices and links to Russian websites.
- The EnMS training material has been used with very positive feedback. According to the opinion of the beneficiaries who participated in the training, the Project inputs and support were extremely valuable and useful. The training met expectations in most cases. The training was carried out prior to the translation and edits and the recommendations of the participants are in line with those of the peer reviewers. i.e that the course should be in Russian (including all spreadsheets and handouts), that it should more clearly reflect the Russian context and that there should be more case studies and practical examples of implementation, particularly Russian examples. One beneficiary consulted suggested that the effectiveness of the training could be further improved by working with energy professionals who already have some practical experience of implementation of EnMS and that those managers then work on actual implementation of EnMS at enterprises assigned to them. This is something that the Reviewers believe UNIDO could incorporate in their criteria for selection of trainees.
- The SO training has been postponed until September so there is no feedback yet.
- **Information campaign, website and peer-to-peer network (EBRD)**. An information campaign has been implemented including workshop events and the publication of a brochure. The campaign has clearly reached many organizations since attendance at the workshop events was good, and better than targeted. The event programmes were certainly relevant but it is not possible for the Reviewers to comment on feedback from the events since it was not collected.
- The website and peer-to-peer network is seriously delayed. The need for a website has been mentioned by some stakeholders and in particular by those who have received training and would like some follow up. The Reviewers recommend that EBRD (and their consultant) work with UNIDO and REA to resolve the issue of the website and peer-to-peer network agreeing on their functionality, content and ownership.
- **Information campaign and website (UNIDO)**. As part of the information campaign UNIDO carried out a national webinar in collaboration with REA which recorded 25,000 participants and was seen as a clear success by REA. UNIDO have also published a brochure and have included articles in their magazine and timely attendance/publicity at numerous events. It was originally envisaged that information and materials developed within the project would be hosted on the project website. Since it was not available UNIDO have also developed two related websites although neither are fully functional yet they look like they will provide useful information. As mentioned above they should work with EBRD on the finalization of the website.

107. The following table provides an overview of the numbers trained so far within the project and, where possible, the satisfaction rate.

Table 4: The selected events and participant satisfaction rates (Component 1,2 and 3)

Event	No. of Participants	Satisfaction rate / comment
EBRD (Component 1 and 2)		
Moscow Kick-off meeting, November 2011	30-40	No feedback forms
Introductory regional seminars:		
Moscow, March 2012	30-40	No feedback forms
Krasnoyarsk, March 2012	15	No feedback forms
Volgograd, April 2012	20	No feedback forms
Ekaterinburg, June 2012	40	No feedback forms
St Petersburg, June 2012	35	No feedback forms
Vladivostok, October 2012	40	No feedback forms
Enterprise training		
Enterprise 1 – 5 day training on EnMS		Overall satisfaction at 82% *Understanding of objectives – 81%* *Usefulness of training materials – 74%* *Did exercises assist training – 83%*
Enterprise 2 – 1 day training		Awaiting feedback
Enterprise 3 – 1 day training		Awaiting feedback
UNIDO (Component 1 and 3)		
National webinar training on EnMS and ISO 50001	25,000	Thank you letter from REA
EnMS training for users, December 2012	27	Very positive. > 80% liked the content
EnMS training for experts, February 2013	40	
Russian Railways		Awaiting feedback

108. ***Component 2: Capacity Building for large industries –*** According to the beneficiary enterprises, the technical assistance made available to date by the project has been of high quality and very valuable. Depending on the needs of the enterprises, they have received energy audits, systems assessments, due diligence, ISO 50001 gap analysis and/or training. The beneficiary organizations were already clients of EBRD but they see the work carried out under this project as really adding value by providing better or more optimal solutions for EE than would have been proposed in its absence. The quality of the work of the consultants is seen as being better than that provided in the more procedural energy audits carried out as part of adherence to the EE law. What's more EBRD offers real benefits by being able to offer longer term credit lines so enabling investment in projects with a longer payback.

109. Delivering results under this component has taken longer than anticipated but it is the Reviewers' opinion that now that enterprises are actively engaged, it will deliver in the second half of the project.

110. The current approach to the project is thought to be efficient for the following reasons:

- Targeting existing clients - EBRD has a strong pipeline of potential EE projects with its existing clients all of which have been supported or are expected to be supported by this project. Targeting this group is clearly an efficient use of resources as opposed to finding new clients.
- Providing bespoke services to the enterprises ensures that the resources are only used for what the beneficiaries need so there is no, or little, wasted effort.

111. The initial EnMS and SO contract with MWH and then ICF has shown to be inefficient since the introductory workshops did not result in new enterprises partnering with EBRD and work on the website and peer-to-peer network was never successfully delivered. However training to three enterprises was successfully delivered.

112. ***Component 3: Capacity building in SMEs –*** The capacity building under this component has been slow to get going due to the delay in the preparation of the training materials, but those who have benefited have found the assistance to be have been very valuable. Six enterprises have now been identified but assistance has not started in earnest. One beneficiary believes the added value from the project is in providing the international view to add to their own knowledge. They

are very happy with the support provided, in particular the very good technical expertise. Similarly the training provided was found to be very useful and gave the participants new knowledge which can be combined with their existing systems. They would certainly recommend the training to subsidiaries and suppliers.

113. Delivering results under this component is taking longer than anticipated but it is the Reviewers opinion that now with the new approach leveraging supply chain networks it will begin to deliver in the second half of the project. The level of deal flow and pipeline of EE projects for this Component will need significant scaling-up to meet the Impact target.

114. UNIDO's new approach has the potential to be efficient by leveraging supply chains but it is still too early to see how successful it is.

115. The initial approach of promotional and marketing effort to engage with enterprises did not prove to be efficient although the effort is not entirely wasted since it will continue to promote the project, EnMS and SO.

116. Also under this component an energy management benchmarking resource and EE technologies information database has been established on line. This is only just becoming active so there is not yet any feedback on its content and usability.

117. **Component 4: Policy support** – According to Project stakeholders (including Government counterparts), the inputs on policy support from Project consultants, and from the Project management teams have been very valuable and very timely.

- The Project team and its consultants have delivered a number of international reviews on EE policies and capacity building, on EE industrial indicators and M&V protocols. These have been well received and now discussions are underway with REA on the next steps in terms of clear recommendations for Russia
- REA specifically says that it requires support from international organizations, in particular for supporting the introduction of EnMS and to develop recommendations and tools to motivate companies to implement ISO 50001. REA would like to amend legislation to include for EnMS and for a system for (voluntary) EnMS which would include trainers, certification, audits, monitoring and supervision. The work being undertaken by the consultants will help to deliver this. According to the stakeholders the information provided by the project has been really helpful in demonstrating the positive effects of EnMS, which is needed to stimulate the market.
- REA also requested recommendations on White Certificates. A consultant has been recruited to carry out this work which is due to deliver at the end of 2013. For efficiency it is recommended that the project team builds upon existing materials, such as REA's previous work on White Certificates.

2.4.2 Level of execution of budget

118. The GEF contribution of USD 15.6 million (as described in Table 5) is to be leveraged with approximately USD 308.2 million in co-financing allocated.

Table 5: Total GEF financial contribution to the Project

Type of Allocation	Total allocation
Project Preparation Grant	225,000
Technical Assistance	15,395,125
Total	**15,610,000**
Agency Fees	1,562,013

119. At the mid-term USD xx of the GEF budget has been spent on technical assistance. This is x % of the total GEF budget. This is significantly less than foreseen in the RCE where more than USD 8 million would have been spent by the mid-point. However, the spend to date is in line with the current delays in the project. Technical assistance activities need to be accelerated to spend the

GEF budget within the project timeframe. Table 6 shows how the contribution is broken down by component and between UNIDO and EBRD.

120. During the same period USD yy has been spent in co-finance. This was all for technical assistance and project management since no money has been allocated to EE investment projects yet. USD 7.6 million of co-finance was envisaged for technical assistance within the project.

121. Since no funds have been allocated to investment projects yet it is too early to assess the leveraging effect on investment and if there is any differences between sectors and regions and between large and small enterprises.

122. In addition to the co-finance shown here there is also un-recorded co-finance from the project beneficiaries. In particular personnel at REA have spent considerable time working with UNIDO and their consultants on Components 1 & 4.

Table 6: GEF financial contribution and Co-finance at Mid Term [Awaiting figures]

	Project Design (USD)			Mid-term expenditure (USD)				
				EBRD		UNIDO		
Project Component	GEF	Co-finance	Total	GEF	Co-finance	GEF	Co-finance	Total
Component 1	2,179,175	2,300,000	4,479,175	600,000[8]	270,000			
Component 2	6,119,750	150,600,000	156,719,750	1,207,375		-	-	
Component 3	5,022,300	150,895,631	155,917,931	-	-			
Component 4	1,329,850	500,000	1,829,850	-	-			
Project Management	744,050	3,300,000	4,044,050				100,000	
Total	**15,395,125**	**307,595,631**	**322,990,756**	**1,807,375**[9]				
% of GEF allocation				**24.7%**				

123. A further USD 910,000 (700,000 EUR) has been committed to planned, and under way, TA activities by EBRD under Component 2. This would take the percentage of EBRD's GEF allocated funds to 37%.

2.4.3 Efficiency of results delivered (cost-effectiveness)

124. To assess the cost-effectiveness of this GEF project it has been compared to RuSEFF, which is similar in that the facility offers credit for EE and renewable energy projects and associated technical assistance[10]. The RUSEFF technical assistance equals approximately USD 12m against a credit line of USD 300m, i.e. equivalent to a 4 % TA-investment ratio. Assuming this GEF project results in the expected outcomes then the cost effectiveness will be similar (at 5% TA-investment ratio).

125. Over the last two years (until the end of June 2013) RuSEFF implemented 356 projects throughout Russia with a total volume of USD 129.6 million. The investments resulted in annual energy saving of 418.7 GWh and reduction of 98.2 thousand tonnes of CO2 emission per year.

[8] An estimate of breakdown based on MWH contract spend.
[9] 1,390,228.44.Euros. Converted to USD at 1.3
[10] Note that RUSEFF was also identified as potential co-finance for SMEs within the GEF project and that some of its bank training was also counted as co-finance.

2.5 Implementation approach and management arrangements

126. This section reviews the efficiency and effectiveness of the implementation and project management approach to date, including the use of results based management/ adaptive management as originally set out in the Project design and the appropriateness of any changes made during implementation. The section also includes the extent to which relevant stakeholders were included in the implementation of the Project, the Project's risk management strategy to date, and donor visibility.

127. The Reviewers make the following key points relating to the project management approach:

- Both EBRD and UNIDO have made use of adaptive management processes as originally set out in the Project design, despite not using the results framework as a formal management tool.
- It is difficult to assess the success of the resulting changes since they have only taken place in the last six months.
- The Project teams have worked to stick to the Project plan where appropriate and adaptive management has allowed flexibility where needed.
- There is no operational Project Advisory Committee.
- Each IA has concentrated on their own areas of activities with minimal contact between them.

2.5.1 EBRD's Implementation and Adaptive Management

128. ERBD's initial approach to the project involved two assignments to support the implementation of the two components for which EBRD was responsible (part of Component 1 and Component 2).

- The first assignment was a large general contract covering EnMS and SO and included for the marketing of the project to enterprises, identification of enterprises to work with, training, an information campaign and the development of a website and peer-to-peer network. This contract was awarded to MWH who struggled to deliver on the project. Although they organized 6 workshops few appropriate enterprises were identified and it was difficult to bring companies into the pipeline. Part of this was due to a perceived lack of ownership from MWH and part of this was that EBRD have a specific approach and criteria for identifying client enterprises. These were communicated to MWH but they are difficult for an organization outside of EBRD, with its institutional memory, to fully interpret and deliver on. In addition MWH did not deliver on the website or peer to peer network.
- EBRD now believe that this initial large contract approach was not the best approach. Since ERBD procurement rules mean that it takes from 6 to 9 months to contract, it had seemed to make sense to include as many tasks as possible into the one contract. However it ended up being a very large assignment which MWH struggled with. MWH then went through re-organisation and were unable to resource the project so following lengthy negotiations the project was novated to ICF, a sub-contractor of MWH's. Subsequently ICF have closed their Moscow office and since EBRD believe that local presence is needed, following further negotiations, the contract has been cancelled.
- The second assignment covering Process Integration and Innovation was based on short-term sector specific assignments with a number of framework contractors. Three or four firms in each of the five sectors (cement, chemicals, ferrous metals, machine building and pulp and paper) were contracted in October 2011. To date this approach has worked well. So far five activities have been undertaken and a further seven are under way or planned. These framework contractors have now had their roles expanded to also undertake the EnMS and SO activities previously performed by EnMS and SO consultants.

129. EBRD has shown a clear ability to adapt their approach. As a result of their experience and the realization that the method for engaging with enterprises was not working, EBRD have changed

their approach to better match the needs of the EBRD clients, the specific EBRD business model and its internal capacity. EBRD is now concentrating on its existing customers and looking to extend its assistance to them to include EnMs and SO. In each case enterprises are offered a menu of potential technical assistance and can select the most appropriate option(s) for their enterprise. EBRD are also still considering whether to engage a local expert to help market the project.

130. In addition EBRD noted that there was substantial interest among clients that fall outside the five original sectors, such as energy intensive processes in the food sector (e.g. sugar) whereas in some sectors (e.g. pulp and paper and wood processing) it has also been difficult to identify clients mainly as a consequence of a weak pipeline of new projects. EBRD therefore have widened the scope of the project beyond the initial five sectors.

131. EBRD also propose to contract a specialized firm for the development of a project website and the peer-to-peer network rather than the previous approach of involving a non-specialist for these tasks.

2.5.2 UNIDO's Implementation and Adaptive Management

132. UNIDO has also shown a clear ability to adapt their approach particularly within their work on component 3 & 4.

133. UNIDO's initial approach was to promote awareness with SMEs on the benefits of training, on the technical assistance opportunities on offer and on introducing EnMS and ISO 50001. Following identification of SMEs tailored services would then be offered around the EnMS and SO approaches. UNIDO used their own resources and contracted a consultant to help to identify SMEs in two sectors. However despite the significant work on promotion and awareness raising this did not translate into the expected level of interest or partnerships. As a result of their experience and the realization that the method for engaging with enterprises was not working, UNIDO have changed their approach to better leverage existing networks such as supplier and subsidiary networks of existing partners, and providing a more structured approach to individual SMEs.

134. There has been a need to make significant changes to the policy component to take into account Government priorities and work already completed at project start. UNIDO have had to deal with and adapt to a rapidly changing policy scenario and related changing requirements. While keeping firm the ultimate development objectives of the project UNIDO has shown clear flexibility in meeting the changing needs of REA. Proposals for approval of projects in federal target programme and M&E procedures were already developed. Instead UNIDO is supporting work on white certificates and energy saving obligations.

2.5.3 Partnership arrangements

135. There is minimal collaboration between EBRD and UNIDO. To ensure efficiency the two organisations have regular updates on the progress of the project and also ensure that there are no overlaps in work. For example UNIDO consulted with EBRD on working with Pozis, which is not an SME, and EBRD consulted with UNIDO regarding their work on energy labelling. However beyond this limited interaction there is little cooperation or sharing of information.

136. Although the project design split the project activities between the two organizations there was still an intention that the two organizations work together, particularly in Component 1 and with respect to the co-finance. It was intended that the outputs from Component 1 could be used by both parties. However this has not occurred for a number of reasons relating to the training material and website, as discussed earlier.

137. In Component 2 EBRD is responsible for the training, the development of audits and investment plans as well as having the ability to provide the finance to the large industry enterprises identified. There is no real need for a third party. This is beginning to show positive results where EBRD has concentrated on some of its existing clients.

138. In contrast in Component 3 UNIDO is also responsible for the training, the development of audits and investment plans but since they are not a FI, they do not have access to finance. The project was designed with potential co-finance being available from RuSEFF yet there has been little contact between UNIDO and RUSEFF since the project design stage (one meeting in early 2013). This is because there were not projects identified that needed finance. However one of the key challenges identified by UNIDO is the availability of co-finance for the potential investment projects. Although not explicit in the design it seems reasonable that UNIDO should be working with RuSEFF more closely and in particular with its partner local banks and possibly targeting their clients.

2.5.4 Cost effectiveness/efficiency of management

139. For the most part the project management has been effective and efficient. Both EBRD and UNIDO have clear roles and responsibilities and are adequately resourced for their project management. EBRD manages the project from Moscow with assistance from staff in London and outsource specific assignments. UNIDO have a team in Moscow with each individual having responsibility for specific deliverables. With these management structures the organizations have both started to fulfill their goals in line with those set out in the results framework, although both are behind schedule.

140. The notable aspect of the implementation and managerial arrangements of the Project is that it is being jointly implemented by EBRD and UNIDO. To date the two IAs have worked independently from one another with each concentrating on their own areas of project delivery.

141. There does not seem to have been much overlap in terms of resources spent on consultancy assignments, etc. because the IAs have followed the project design to ensure that they each had a clear focus. The target audiences and activities to date have mostly been quite different.

142. There are two exceptions where there has been an overlap of resources, as mentioned earlier. These have been on the production of training material and on the development of a website.

- Due to the delay in producing the training materials additional materials were developed for the large enterprises. Although there is an aspect of overlap here, it is possible that this was unavoidable since training has to be tailored to the beneficiary organization.
- In the absence of a website, two project websites have been prepared to host the benchmarking and database information. Some of the functionality of these websites would have to have been performed in any case but the resources may have been slightly less if the front-end of a website had already been built.
- It is recommended that EBRD and UNIDO work together on the website (and associated peer-to-peer network) to ensure the most efficient use of resources.

143. The percentage of budget spent on project management versus other activities is x%, as shown in Table 6. At project design project management was envisaged to take up 1.25 % of the total budget and 17.6% of the TA component. Therefore the project management spend to date is considered xxx.

2.5.5 Project Advisory Committee

144. A Project Advisory Committee (PAC) was to be established to provide advice and feedback on the project design and support implementation during operations with policy support and by facilitating key partnerships across the market. The UNIDO and EBRD project teams were to convene the PAC to advise of operational issues and to promote coordination with other national initiatives and policies. However since the project's inception the committee has not met. Although a Project Supervisory Committee was approved by REA's General Director in September 2011 meetings were postponed due to the slow pace of the project, at the suggestion of REA. When the Director left REA, according to the rules, the Committee needed to be re-confirmed. This is still an outstanding action.

145. The reporting and inclusiveness of the appropriate Russian Government Stakeholders has not been consistent. Though the project staff are interacting with Government stakeholders and in some cases reporting directly to them – especially to the Head and Deputy Head of REA – both IAs are not always reporting back in a systematic way.

2.5.6 Monitoring and use of results framework

146. There is no formal reporting on the project beyond the PIRs. Both EBRD and UNIDO have submitted PIRs to the GEF Secretariat. M&E activities were to be based on the Results Framework provided in the CEO document and on the concrete and fully budgeted monitoring and evaluation plan, as shown in Table 7. The table includes a statement on whether the M & E activity foreseen is being undertaken at the mid-point of the project.

147. The Project Inception Workshop, as envisaged, was held in November 2011. No project level inception report has been produced although an inception report was produced by EBRD's consultants on their part of the work. At inception there was to have been a Measurement of Means of Verification for the project indicators. For the output level indicators this is not necessary since the sources of verification were clearly identified in the Results Framework. However at the Outcome level there is a clear need for a means to score the capacity of trainers and government, as mentioned in Section 2.2.1. A means for measuring this should be determined as soon as possible.

148. Use of the results framework is limited. UNIDO's PIR includes progress against each of the output indicators and activities. EBRD is not tracking the project against the Results Framework.

149. The sources for verification within the Results Framework include copies of training material, copies of contact logs, participant logs and evaluation forms from some training sessions plus copies of reports and assessments. Of these the following sources were available for verification by the Reviewers: training material, contact log, reports and assessments carried out. However participant logs and evaluation forms have not been completed for the initial workshops and training although they have been completed, or are in the process of being completed, for the subsequent training sessions. It is important that EBRD, UNIDO and their consultants monitor and evaluate the training sessions undertaken.

150. Six monthly progress reporting was envisaged but this has not happened. UNIDO keep up to date from regular meetings and have prepared a mid-term report on progress. EBRD also keep up to date at regular internal meetings. EBRD's consultant provided monthly reports for 6 months but there have been no reports since June 2012 when their contract was under discussion. The Reviewers recommend six monthly reporting should be carried out by both EBRD and UNIDO and progress should be demonstrated against the indicators in the Results Framework.

Table 7: Monitoring of the project

Type of M&E activity	Responsible Parties	Being undertaken	Remarks
Inception Workshop (IW)	▪ Project Manager (PM) ▪ UNIDO & EBRD PMs	Y	Held in November 2011
Inception Report	▪ Project Management Team ▪ UNIDO & EBRD PM	N	Inception report provided for some of Component 1&2 only.
Measurement of Means of Verification for Project Purpose Indicators	▪ UNIDO and EBRD PM will oversee the hiring of specific institutions and delegate responsibilities to relevant team members	N	Start, mid and end of project No necessary for output level indicators but needed for outcome level indicators.
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	▪ Oversight by PM and UNIDO/EBRD PM		Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	▪ PM	Y	EBRD PIR December 2012

		Y	UNIDO PIR December 2012
Project Advisory Committee (PAC) Meetings	▪ PM ▪ UNIDO PM ▪ EBRD PM	N	No formal Project Advisory Committee formed. UNIDO keep REA up to date (with Head and Deputy Head of nominal PAC). No reporting from EBRD.
Quarterly/six monthly progress reports	▪ UNIDO PM	N	Mid term report prepared. Other progress reporting on an ad-hoc basis at regular project team meetings.
	▪ EBRD PM	N	Initial progress reports provided by MWH for part of the project. No reports since June 2012.
Use of the Results Framework	▪ UNIDO PM	Y	Included in PIR
	▪ EBRD PM	N	Not reported against
Technical reports	▪ Project Management Team ▪ Hired consultants as needed	Y	Reports provided against TOR and client requirements.
Mid-term Review and External Evaluation	▪ PM ▪ External Consultants	n/a	Underway
Terminal Project Evaluation and Report	▪ Project Management Team ▪ UNIDO / EBRD PM ▪ External Consultants	n/a	Due at the end of the project
Terminal Project Report	• PM ▪ UNIDO / EBRD PM	n/a	At least one month before the end of the project
Lessons learned	▪ Project Management Team	N	Informal only – no reporting other than in PIR
Audit	▪ UNIDO / EBRD ▪ Project Management Team	N	Not carried out
Visits to field sites (UNIDO & EBRD staff travel costs to be charged to agency fees)	▪ UNIDO / EBRD PM ▪ Government representatives	n/a	As needed

2.5.7 Risk management

151. Overall the Reviewers found that risks were reasonably well-identified, and the project's risk management strategy has been followed successfully. That said the "*intensive on the ground work with industries*" has not resulted in the anticipated number of enterprises cooperating with the project in the first half of the project. As determined during the MTR there is a clear demand for EE projects so this is expected to change in the second half of the project as the 'enterprise engagement' increases.

152. The key risk outside the control of the project management team is if Russia faces another economic crisis. If that occurs then the appetite for investment will certainly decrease. Similarly if energy prices do not increase this may undermine some of the potential for EE projects. However even at current prices there is significant demand and sufficient number of projects with reasonable returns.

153. One further challenge and risk has been identified during the MTR and the Reviewers believe that actions should be taken to mitigate against this risk, and that it should continue to be tracked during project implementation.

- **Additional Risk: Access to suitable finance for SMEs.** SMEs struggle to access credit for energy efficiency projects if their own bank has no experience of EE projects. RuSEFF was identified as potential co-finance for the SMEs with their local partner banks able to provide credit facilities for EE projects. However in the period since the project started RuSEFF has committed nearly all its allocated industrial EE finance (more than USD 130m of USD200m

allocated). Although the local partner banks are now lending for industrial EE using their own funds there is a risk that the SMEs will find it difficult to source suitable finance.

154. While UNIDO's management and consultants have been working to mitigate against this risk, it remains significant. UNIDO has already identified this risk and included it in its PIR. Explicit management of this risk seems appropriate. This could include UNIDO coordinating directly with banks with clear EE credit lines (including RUSEFF's local partner banks). UNIDO could offer additional technical assistance to these banks to help identify EE projects with their existing clients. This approach would help identify a pipeline of projects with access to finance.

2.5.8 Stakeholder inclusiveness and collaboration

155. The project teams have been inclusive of relevant stakeholders. The MTR team carried out interviews with 20 stakeholders in addition to UNIDO and EBRD, and found that there was consensus that Project activities have been inclusive of the relevant stakeholders.

156. The main stakeholders, aside from EBRD and UNIDO, involved to date in the Project are listed in the following table.

Table 8: Project Stakeholders

Stakeholders	Description / Level of Involvement to date
Russian Energy Agency	REA is an agency under the Ministry of Energy. One of its main objectives is to implement government policy on energy conservation and EE. It has an extensive network of local branches in 70 regions of Russia. There has been strong collaboration between UNIDO, its consultants and REA with respect to training and policy development. UNIDO has a key contact point in REA and different aspects of policy are dealt with by different REA departments. There is sometimes a lack of communication between these departments.
Ministry of Energy	MoE is responsible for preparation of new EE programs and for draft regulatory acts related to energy audits and energy passports. MoE has delegated all work on this project to REA. As a result there has been no consultation with MoE until a recent roundtable discussion on EnMS certification schemes.
Ministry of Industry and Trade	MIT is responsible for preparing drafts of legal acts related to EE and EE devices that can apply for an accelerated depreciation rate. MIT's first real involvement in the project is in a seminar on EnMS in July 2013.
Ministry of Economic Development	Key government partner involved in the preparation of legislation and various recommendations, e.g. on models for financing capital and EE repairs and international best practices. To date invited to EnMS training seminar in July 2013.
Federal Agency for Technical Regulation and Metrology	Responsible for technical regulation. Consulted on the EnMS certification scheme.
RSPP	Umbrella industrial trade association with a regional reach. RSPP has a special department on energy policy and EE, which deals with the issues related to EE in the energy sector, analyses existing legislative framework and submits proposals for adoption of new and improvement of existing normative and legal acts, organizes events, discussions, workshops in the field of EE etc. At the moment RSPP is also creating a Russian Register of Energy Effective Technologies. RSPP have worked with both EBRD and UNIDO in helping to identify enterprises for workshops and training, including the master

	class on energy management under the ISO-50001 and workshop on "white certificates" carried out in a close collaboration with UNIDO.
EBRD / RuSEFF	RuSEFF is an EBRD USD 300 million facility providing an EE credit line through Russian banks for small and medium sized projects. At project design it was identified as possible co-finance for the SMEs and as providing co-finance for bank training. Despite this, there has been limited contact between the SME IA and RuSEFF, partly because investment projects have not been identified until now
Business Russia SME Association, Russian Chamber of Commerce and Industry, Russian Union of Industrialists & Entrepreneurs	These industrial networks were consulted by UNIDO contractors in order to identify suitable potential SMEs for participation in the UNIDO SME Capacity Building and Energy Management Systems program
Technical Institutes	FSO Analytical Centre of the Government for the RF - a nonprofit federal state institution providing information and analytical support for the Russian Government and performing related research. Within the project the Analytical Centre contributed to the primary identification of the suitable SMEs for participation in the UNIDO /SME programme

157. Additional stakeholders that have not been as extensively involved but could be important in the Project's future activities are:

- Other industrial associations (such as Association of Sugar Producers, or REMA – Russian energy managers association). Such industrial associations usually have a broad coverage of the enterprises and help in effective development of their respective market. For example, Association of Sugar Producers ("Sojuzrossahar") includes: 46 sugar factories, 12 companies of commerce and industry, 2 regional associations of the sugar industry, 2 machine-building factories, 1 university, 1 college, 2 designed and 2 research institutes. The capacity and connection of such association can be potentially utilized to involve more enterprises in the project.
- Local banks - 8 local banks have partnered with EBRD's RuSEFF and have benefited from co-financed training on EE. Further collaboration is recommended between UNIDO and these banks to help identify enterprises and to help access credit lines.

158. In addition a number of the stakeholders (RSPP, REA, banks, EBRD) have good regional spread and could be utilized to help identify enterprises in the regions.

159. Specific examples of inclusion of appropriate stakeholders include:

- Roundtable on Conference and Roundtable Discussion on Energy Management System (EnMS) Certification Schemes which took place in Moscow in May 2013.
- Volgograd, Ekaterinburg and St Petersbug workshops in 2012 – enterprises invited by RSPP
- A Special Roundtable on the Barriers for the EE Project Financing (February 14, 2011) organized in collaboration with the Russian Energy Agency

160. In the opinion of those interviewed, there do not appear to be key stakeholder groups that the Project has failed to identify. Although there is a feeling amongst some stakeholders that they are not kept abreast of the project progress. It is recommended that both Agencies continue to keep the relevant stakeholders up to date of their developments. As previously discussed one option may be through a re-activated Project Advisory Committee.

161. Moving forward, an increased focus on industrial associations, existing and banking partners provides a real scope for potential EE investment.

2.5.9 Integration and communication of lessons learned

162. The PIR is a formal mechanism for integrating and communicating lessons learned. EBRD reported lessons learned in the PIR but they are not included in the UNIDO PIR. The Reviewers recommend that formal reporting of lessons learned is included in each PIR.

163. Informal learning within both EBRD and UNIDO has successfully resulted in changes to approaches as shown by their adaptive management.

2.5.10 Donor visibility

164. Donor visibility was assessed based on evidence of the use of donors' logos, and mention of the donors' roles in the Project in media coverage, official notices and press releases, reports and publications referring to the Project.

165. Whilst contracting MWH, MWH designed a 'brand name', RiEEP, plus an associated logo for the work on this project. All the work carried out by MWH/ICF carried this logo, for example the training material and on most of its reports.

166. For the most part, the use of the donors' logos and mentioning of the donors' role in the Project has been appropriate. The donors' logos are present on official EBRD and UNIDO information materials and ToRs, however there are a few materials developed by external consultants (e.g. training materials, reports, etc.) which do not include mention of the donor. EBRD's more recent Terms of Reference for external work includes a clause to include the donor's details. It is recommended that EBRD and UNIDO communicate to their consultants the appropriate use of donors' logos for all outputs.

2.6 Sustainability

167. This Section reviews the Project's sustainability, referring to whether the Project's is likely to continue to deliver benefits for an extended period of time after completion. To gauge sustainability, the MTR Team examined the likely longevity of benefits from the Project and global environment benefits.

168. Overall, based upon interviews with experts in the field and the implementing agencies involved, it is the Reviewers' opinion that the Project will likely have significant sustainable impacts on the market for industrial EE improvements beyond the duration of the Project. Sustainability is an essential part of energy management systems. Introducing EnMS into enterprises will "hardwire" industrial EE projects/investments into management structures that provide for documentation, independent verification, and continuous improvement, thus ensuring change over the long term. Added to this are the benefits due to building local capacity in government, industry (including training of trainers) and banks to ensure ongoing project identification, supportive legislation and available finance.

169. This scenario and short/medium-term trend is expected to have a positive and tangible impact on the long-term sustainability of the project as well as on pushing the market for industrial EE. There is a strong feeling that once a critical mass of enterprises adopt ISO 50001, and EnMS and SO more generally, then the market is likely to accelerate. Of course if EnMS is incorporated into the EE law then there will be further market transformation.

170. The prospects for Sustainability of each Component are described below:

171. **Component 1: Enhancing knowledge assets –** The Project's approach of working with energy professionals and trainers means that capacity building and awareness-raising can have a sustainable impact both in terms of outreach to stakeholders at local levels and in terms of post-Project impacts. In addition to on-going training, the website and availability of training materials will help to sustain the capacity building, assuming that the ownership and maintenance of the website is agreed beyond project completion. Peer to peer knowledge sharing has the potential to

spread the word further. Working with industrial associations will also ensure the long term sustainability of the project where they continue to make their members aware of the benefits.

The awareness raising and capacity building of specific banks is likely to also have long-term and wide-spread impacts, as banks have client bases with which they can work on EE.

172. **Component 2: Capacity building for large industries –** The clear sustainability for this component is based on the implementation of EnMS within industry which will ensure that, beyond the initial investments and associated savings, the organizations go on to continue saving year on year and to identify new investment projects. The greater the number of examples of enterprises adopting EnMS and SO the clearer the benefits to others and so the likely uptake from others beyond the project. Beyond this, it would be necessary to scale up the financing for it to have significant sustainable impact. However already those local banks associated with RuSEFF have shown their appetite for EE investments and are lending from their own funds.

173. **Component 3: Capacity building for SMEs –** As with Component 2 there is clear sustainability based on the implementation of EnMS and SO within SMEs. Again the issues are the same on the need for scale up of financing to have significant sustainable impact. In addition the work on energy performance benchmarking and EE technologies will help to engage SMEs assuming a sustainable means of maintaining the website is found.

174. **Component 4: Policy support –**This area is likely to have a clear sustainable impact. If government officials and agency staff are trained in EE policy and are aware of best practice, the institutional framework will be strengthened considerably resulting in more effective EE policy initiatives from the government.

3 Conclusions, recommendations and lessons learned

3.1 Conclusions

175. The analysis carried out for this MTR indicates that the GEF Project is on track to reduce GHG emissions through energy efficient investments in energy management systems and systems optimisation in industry in the Russian Federation. However it is taking longer than planned mainly due to slower than expected enterprise engagement.

Project design

176. The original GEF Project design has proved to be relevant to the country context and addresses key sector needs and market barriers. The Project is timely and fits well with both EBRD's and UNIDO's organizational strengths and priorities – as well as the current priorities of the Russian Government. The four Project Components are generally appropriate to address market barriers and the Project strategy responds to the needs of key stakeholders.

177. However, the Project design was too optimistic in some of its assumptions – and consequently targets and timeframes – and did not adequately anticipate some implementation risks:

- Some targets and timeframes in the original design have proved to be too optimistic. The design under-estimated the challenges relating to engaging with enterprises. The design assumed that through publicity and awareness building of the benefits of EnMS and SO it would be able to generate interest from, and engage with, new enterprises. However accomplishing this involves a much more in-depth process of relationship-building prior to any new enterprise reviewing its EE options before even committing finance to an EE project. Consequently in the opinion of the Reviewers, the targets for the SMEs investment, the energy saved, and thus the targets for GHG reduced are likely not to be met by the Project Closing Date of May 2015.
- In addition, project risks identified in the original Project design did not take adequate account of the risks associated with SMEs having access to finance for EE measures.

178. Despite some overly optimistic targets, the overall Project approach appears to be appropriate and of continued relevance. There are a few amendments to the outputs and activities, mainly due to the more tailored approach to dealing with enterprises and due to on-going progress in EE legislation. No major amendments have been made to the impact or outcome targets.

179. The project design appropriately allowed for coordination by EBRD and UNIDO through their local Russian offices and headquarters in London and Vienna however the concept of sharing offices and central management was ambitious. The reviewers also believe that the schedule for the project was ambitious since it did not allow for sufficient start-up time.

Results and achievements

180. As the Project currently stands, the Reviewers think that the volume of financing in industrial EE is unlikely to reach USD 300 million by the end of the Project in May 2015 – although significant progress can be make if there is an appreciable increase in deal flow from the project.

- The investment facilitated for large industries of USD 150 million is likely to be reached since this can equate to a few very large projects and there is already a pipeline of projects and a strong client base interested in EE.
- However for the investments facilitated in the SMEs USD 150 million is a more difficult target where many SME EE projects are necessarily small and generating such a large amount in investment would require many more projects. In addition UNIDO does not have an existing client base upon which to build its EE projects. It is more likely for the targets for SMEs to be met if an additional year is added to the Project duration.

181. The Reviewers think that capacity in government and industry will be developed as foreseen but over a longer timeframe than envisaged at project design.

182. Despite this level of uncertainty about reaching targets, fairly good progress has been made. For each Component the results are as follows:

183. *Component 1: Enhancing Knowledge Assets:* UNIDO and EBRD have made steps towards achieving the targets for this component and it is realistic that most of the outputs and outcomes will be achieved only in the second half of the project. An information campaign has been implemented by both EBRD and UNIDO and has included publishing brochures, articles in magazines, attendance/publicity at energy events, workshops and a very well-attended national webinar (~25,000 attendees). Progress has been made towards producing a fully developed set of Russian training material on EnMS and SO and the first trainers have been trained. However the proposed website and peer to peer network are not launched yet.

184. *Component 2: Capacity building in large industries*: Progress is being made towards meeting the output-level targets to be achieved for Component 2. Studies and training work undertaken needs to start being converted into EE investments during the second half of the Project to meet the outcome indicator for EE investment. Introductory training sessions/workshops have been successfully carried out for approximately 180-190 managers, surpassing the target of 100 managers. The project is actively working with 12 enterprises providing a variety of assistance. To date one EE project looks likely to proceed; a project at a sugar manufacturer.

185. *Component 3: Capacity building in SMEs*: Progress is being made towards meeting the output-level targets for Component 3. Progress has been slower than expected partly because, despite widespread promotion, it has been difficult to involve SMEs in the project due to the SME's lack of understanding of the benefits of the training and due to their other priorities. However, the first signs of progress have been seen in the last few months. Confidentiality agreements have been signed with six SMEs and larger organizations. The services offered to these enterprises will depend on their requirements. The project IA is working with larger organizations, to leverage their SME subsidiaries and suppliers. Reaching the 50 SMEs foreseen at project design will be difficult. Work has also started on a web-based tool to assist companies in benchmarking their energy performance, following a review of best practice of benchmarking.

186. *Component 4: Policy Support*: Work under Component 4 has been flexible in line with REA's requirements and is likely to achieve its targets by the end of the project. Consultants have been contracted to develop a voluntary certification scheme for EnMS and to deliver proposals to Government on Energy Saving Obligations/White Certificates by the end of 2013.

187. Whether the Project will achieve its outcome-level targets will depend on (i) accelerating enterprise engagement; (ii) translating TA into financial commitment and (iii) extending the Project duration, for instance for the period of one year.

Effectiveness

188. The overall *Implementation Progress Rating* is deemed **"Satisfactory"**, meaning that implementation of most Project components are in substantial compliance with the original plan except for only a few that are subject to remedial action. This rating could be improved if there is a significant stepping up of actions ensuring further enterprises are engaged and that project outputs are converted to investment commitment in EE.

189. Both EBRD and UNIDO have recently changed their strategies with respect to engaging with enterprises and so it is still too early to be able to assess their effectiveness. However in both cases the first EE projects have been identified for investment.

190. The overall Global Environment Objective/ Development Objective Rating is deemed "**Moderately Satisfactory**", meaning that the Project is expected to achieve most of its major relevant objectives but with potentially significant shortcomings related to investment volumes and GHG reductions within the current timeframe.

191. The slow pace of progress towards reaching overall environmental objectives – particularly related to GHG reductions related to target investment volumes appears to reflect an overly

optimistic assessment during Project design of the start-up pace of the two implementation agencies and the under estimation of the challenge in engaging with enterprises.

192. There is a clear perception from the stakeholders consulted during the MTR that the project is already providing added value and a belief that if the project meets its objectives then it will improve the energy intensity of Russian industry beyond what would be possible in the absence of the project.

Efficiency

193. The MTR team considers that an appropriate balance between impact and resources has been achieved, and the Project is being efficiently implemented.

194. Overall, the GEF Implementing Agencies' inputs have been of a high quality and have clearly met the beneficiaries' needs. All companies consulted believed that the training and technical assistance provided by EBRD and UNIDO has been important for increasing the capacity and knowledge on EE in their companies. Public awareness events reached a large number of participants, exceeding the Output targets. These training and technical assistance inputs will facilitate the achievement of the Project's expected results in terms of investment, although significant scaling-up of inputs will be necessary to achieve levels to meet the Project targets.

Implementation and Management

195. The notable aspect of the implementation and managerial arrangements of the Project is that it is being jointly implemented by UNIDO and EBRD. For the most part the project management has been effective and efficient. Both EBRD and UNIDO have clear roles and responsibilities and are adequately resourced for their project management.

196. UNIDO and EBRD keep each other up to date on progress at regular meetings and concentrate on their own project responsibilities, but beyond this limited interaction there is little cooperation or sharing of information.

197. There is no formal reporting on the project beyond the PIRs. Both EBRD and UNIDO have submitted PIRs to the GEF Secretariat. There is also no operational Project Advisory Committee to report to.

198. While the Project team has made good use of the adaptive management approach as originally set out in the Project design it seems that some of the GEF output indicators are not being tracked. Use of the results framework is limited. UNIDO's PIR includes progress against each of the output indicators and activities. EBRD is not tracking the project against the Results Framework.

199. Informal learning within both EBRD and UNIDO has successfully resulted in changes to approaches as shown by their adaptive management. The PIR is a formal mechanism for integrating and communicating lessons learned. The Reviewers recommend that formal reporting of lessons learned is included in each PIR

200. Overall the Reviewers found that risks were reasonably well-identified, and the project's risk management strategy has been followed successfully. One further challenge and risk relating to access to finance for SMEs has been identified during the MTR and the Reviewers believe that actions should be taken to mitigate against this risk and that it should continue to be tracked during project implementation. The key risk outside the control of the project management team is if Russia faces another economic crisis.

201. The project teams have been inclusive of relevant stakeholders, although there is a feeling amongst some stakeholders that they are not kept abreast of the project progress. It is recommended that both Agencies continue to keep the relevant stakeholders up to date of their developments.

Sustainability

202. It is the Reviewers' opinion that the Project will likely have significant sustainable impacts on the market for industrial EE improvements beyond the duration of the Project. Sustainability is an

essential part of energy management systems. Introducing EnMS into enterprises will “hardwire” industrial EE projects/investments into management structures that provide for documentation, independent verification, and continuous improvement, thus ensuring change over the long term. Added to this are the benefits due to building local capacity in government, industry (including training of trainers) and banks to ensure ongoing project identification, supportive legislation and available finance.

3.2 Recommendations

3.2.1 Project design

203. Given the current status of project progress, the Project is unlikely to reach the expected emissions and investment targets from the original Project design related to EE investments in SMEs within the project timeframe. To make the Project’s goal realistic in the opinion of the Reviewers, the duration of the Project should be extended by at least 1 year. For the use of GEF funds beyond May 2015, this will require an official request to the GEF Secretariat by UNIDO and EBRD combined.

204. The Project should explicitly track the risk of access to finance for the SMEs.

3.2.2 Project Implementation

Management approaches

205. It is recommended that the Project Advisory Committee is re-established and convenes regularly. Not only will this ensure regular stakeholder dialogue it will also ensure both UNIDO and EBRD report their progress on the project. The Implementing Agencies should start to report progress to the PAC every 6 months against the Results Framework.

206. As part of the formal reporting, the PIR should be used to capture learning and these lessons should be communicated to, and shared with, relevant shareholders.

207. There is a need to ensure that Russian expertise is included in all outsourced activities. Although to the project design included for this, more attention should be paid to ensuring the Russian context is truly understood. Outputs should all in be Russian since the beneficiaries are Russian.

208. Regarding indicators, the Project should:

- Measure the changes in capacity of trainers and government that are involved in training activities, as required by the Project Results Framework. This measurement could potentially involve self-assessment of capacity by the Government and other stakeholders involved. It could also be done through an expert-led ex-ante training needs assessment combined with an ex-post evaluation of progress.
- It is also recommended to introduce some monitoring mechanism, or feedback, for the energy professional trainees for them to report every 6 months on the EE projects they have identified as a direct result of the training. This could then be included as an additional impact of the project.

209. Donors’ logos should be put on all applicable materials (including reports and presentations).

Training

210. It is recommended to incorporate the peer reviewers’ recommendations into all the training packages. Primarily these amendments relate to the need for all the material (including tools) to be in Russian and for it to clearly relate to the Russian context. This means including, *inter alia*, examples from Russia, the use of Russian currency in examples, reference to relevant Russian laws, standards and regulations, tailoring content to the experience of Russian audience, including typical Russian energy costs and specific indices and links to Russian websites.

Web-site and peer-to-peer network

211. It is recommended that EBRD work closely with UNIDO and other stakeholders (REA, RSPP) to identify the required functionality of a website and to ensure the most efficient use of resources. The peer-to-peer network, or its final incarnation, is likely to be web-based so this should be included within the discussions. UNIDO's prototype website already includes for some benchmarking and it might be possible to build upon this some form of Technology User Group or similar.

Enterprise engagement

212. Further collaboration between UNIDO and EBRD is needed regarding enterprise engagement. Now that UNIDO is targeting larger enterprises, to leverage their SME networks, it is particularly important to ensure there are no overlaps.

213. UNIDO should focus on larger SMEs and those that are particularly GHG intensive, to assist in meeting the targets. There is a possibility that UNIDO could target projects and organisations that fall below EBRD's minimum investment threshold but are larger than typical SME projects.

214. It is recommended that UNIDO develops relationships with banks which have EE credit lines. Finding clients and EE projects and then trying to find finance for those projects is very difficult. If UNIDO works directly with the banks and targets their existing clients this will help mitigate the risk. UNIDO can offer additional technical assistance to these banks in helping to identify EE projects. The first banks that could be targeted for collaborative effort should be the RuSEFF local partner banks. Not only is there still some RuSEFF money available (as envisaged at project design as potential co-finance) but these banks have also shown an appetite to lend to EE with their own funds.

215. In parallel to its current strategy of leveraging larger enterprises' SME subsidiary and supply chains, and working with banks as recommended above, it is recommended that UNIDO also engages further with the following organizations to target their existing partners and clients:

    - In the regions through REA local offices; and
    - RSPP /other associations.

3.3 Lessons learned

216. **Engagement with enterprises is a lengthy process** that requires dedicated relationship building prior to any work and financial commitment. This is an important lesson for future GEF projects which rely upon beneficiary organizations and where the organizations are not confirmed prior to project approval. Project design should include for this process rather than just relying on publicity.

217. **Build in project start-up time** into the project design. This is for two reasons: one is to assess the project design against changes in context and secondly to allow for project teams to be put in place. In many cases there is a significant delay between the project design, its approval and the project start. During that time changes to the country context can occur which require a review of the relevance of the proposed project activities so delaying real project work. Project teams are not instantly available. Where the proposed implementation approach is to sub-contract various activities the time associated with this should be included within the project design. IAs have strict tendering rules which can easily add six months to the programme.

218. **Designing in adaptive management has worked well and allowed project to be flexible**. Allowing for adaptive management in this project has been key to the project achieving progress. Initial approaches for enterprise development were not successful and adaptive management has allowed both EBRD and UNIDO to change their approaches accordingly. Similarly flexibility has been key to meeting the demands of REA and the changing regulatory landscape.

219. **Cooperation between agencies** works well where there are clear areas of focus and responsibility. However care should be taken when designing projects where different IAs are

responsible for inputs that are needed by the whole project as there can be difficulties in aligning timelines which can result in inefficiencies.

Annexes

A. Stakeholders consulted

Stakeholders / Groups	Key Participants	Relevance to the review	Date and time	Meeting location
EBRD	Vincent Duijnhouwer	Project Manager	24/06/13	EBRD Office
UNIDO	Marco Matteini, Sergey Korotkov	Project Managers	24/06/13	UNIDO office
UNIDO	Vladimir Nikitaev Ildar Utiamyshev Boris Melnichuk Mikhail Dubov	Component managers		
REA	Alexey Konev	Governmental official, contributor to the Component 4	24/06/13	REA office
MWH	Alessandro Tarantini	EBRD consultant	25/06/13	EBRD Office Teleconference
REA	Aleksey Tulikov	Governmental official, contributor to the Component 4	26/06/13	REA office
Pozis	Dmitrij Pershin	Beneficiary of UNIDO training	26/06/13	UNIDO office Teleconference
Russian Railways	Boris Ivanov	Beneficiary of UNIDO training	26/06/13	Russian Railway office
Ministry of Energy	Alexey Kulapin	Governmental official, contributor to the Component 4	27/06/13	MinEnergo office
Ministry of Industry and Trade	Mikhail Kalemanov	Governmental official	27/06/13	UNIDO office Teleconference
ICF	Albert Zweering	EBRD consultant	27/06/13	UNIDO office Teleconference
xx		Beneficiary of EBRD support	28/06/13	Their office
xx		Beneficiary of EBRD training	01/07/13	Teleconference
EBRD London	Ian Smith,	RuSEFF project coordinators	01/07/13	EBRD office in London
ICF Consulting	Yeen Chan	UNIDO consultant	04/07/13	ICF office in London
Ecofys	Alyssa Gilbert	UNIDO consultant	08/07/13	Ecofys office in London
ZAO «Atomstroy export»	Andrey Dizhevskiy	Beneficiary of UNIDO training	28/06/13	Email
OOO “Expertnyj Center”	Nicolaiy Zaitcev	Beneficiary of UNIDO training	07/07/13	Email
OOO «IKIE»	Maksim Artamonov	Beneficiary of UNIDO training	08/07/13	Email
OOO «ESKO - Engineering»	Sergey Krentc	Beneficiary of UNIDO training	02/07/13	Email
OOO «Techno - AS»	Sergey Sergeev	Beneficiary of UNIDO training	01/07/13	Email
RSPP	???	Industry association, contributor to Components 1,2&3	15/07/13	Email
JSC Hydraulic Engineering Technologies	???	Consultant to UNIDO tasked with identifying enterprises to work with	04/04/2013	Teleconference

B. List of documents reviewed

Document title or description	Author	Date
EBRD documents		
Agenda invitation for the Workshop on the "Russian industrial Energy Efficiency Programme" (RiEEP) on March 12, 2012 in Moscow	A.Zweering	14/02/2012
Power Point Presentation "Energy and Resource Efficiency Study at xx in Russia. Main Results".	EBRD	2011
Draft Final Report "Energy and Resource Efficiency Study – xx (Russian Federation)"	MWH	11/2012
Term of Reference "Energy and Resource Efficiency Study – xx (Russian Federation)"	EBRD	11/2011
Inception/Progress Report "RiEEP - Russian industrial Energy Efficiency Programme"	A.Zweering	01/2012
Progress Report – January "RiEEP - Russian industrial Energy Efficiency Programme"	A.Zweering	02/2012
Progress Report – March and April (revised) "RiEEP - Russian industrial Energy Efficiency Programme"	A.Zweering	05/2012
Progress Report – May "RiEEP - Russian industrial Energy Efficiency Programme"	A.Zweering	06/2012
Progress Report – July "RiEEP - Russian industrial Energy Efficiency Programme"	A.Zweering	07/2012
EnMS Training materials for xx. Power Point Presentation "xx: Introduction to Energy Management Systems" / "xx: Введение в системы энергоменеджмента"	EBRD	05/2012
EnMS Training materials for xx. Power Point Presentation "xx: Energy Management Information Systems / "xx: Системы информационного энергоменеджмента"	EBRD	05/2012
EnMS Training materials for xx. Power Point Presentation "xx: Energy Team, Policy, roles and responsibilities" / "xx: Отдел энергетики, стратегия, роли и ответственность"	EBRD	05/2012
EnMS Training materials for xx. Power Point Presentation "Interactive Exercise (1) Identifying important energy centres" / "Практическое задание (1) Определение главных энергетических центров"	EBRD	05/2012
EnMS Training materials for xx. Power Point Presentation "xx: Characterizing energy consumption and target setting"/ "xx: Характеристика энергопотребления и постановка цели"	EBRD	05/2012
EnMS Training materials for xx. Power Point Presentation "xx: Energy Management System"	EBRD	06/2012
Mission report xx	EBRD & consultants	16-18/01/2012
Mission report to xx "xx mission 2"	EBRD	Spring 2013
Mission report to xx 2 "Рабочая поездка на xx"	EBRD	Spring 2013
RIEEP: xx Energy Management Training	EBRD	01/02/2013
Enterprise Target List	MWH	25.06.2012
Draft Enterprise Work Plan – company xx	P.Stevenson	05.2012
Draft Enterprise Work Plan – company xx	P.Stevenson	05.2012

Document title or description	Author	Date
Draft Enterprise Work Plan – company xx	P.Stevenson	05.2012
Assessment of the Brewery and Beverages Operations and Planned Expansion at xx	Royal Haskoning DHV: F. Heuven, N. Groeneveld, D. Tjin Wong Joe, H. Oosterdijk	21.12.2012
Training materials. Power Point Presentation “Russian industrial sectors-Cement: Training support”	MWH	12/2011
Draft Proposed Structure - EnMS Training Modules	P. Stevenson, L. Fumasi	12/2011
Training materials. Power Point Presentation “Russian industrial sectors-Ferrous Metals: Training support”	MWH	12/2011
Training materials. Power Point Presentation “Russian industrial sectors – Machine Buildings: Training support”	MWH	01/2012
Training materials. Power Point Presentation “Energy Management Information Systems (EMIS)”	MWH	12/2011
Training materials. Power Point Presentation “Energy Management Systems and ISO 50001 – Overview. Part 1A”	MWH	12/2011
Training materials. Power Point Presentation “Energy Management Systems and ISO 50001 – Overview. Part 1B”	MWH	12/2011
Training materials. Power Point Presentation “Energy Management Systems and ISO 50001 – Overview. Part 2”	MWH	12/2011
Training materials. Power Point Presentation “Energy Monitoring & Targeting. The Basics of M,M&T”	MWH	12/2011
Power Presentation “ЕБРР: Финансирование энергоэффективности в России”	EBRD	10/2012
Power Presentation “Примеры поддержки проектов по энергоэффективности в промышленном секторе и агробизнесе”	EBRD	30/10/2012
Power Presentation “EBRD: Financing Energy Efficiency Projects in the Russian Industrial Sector”	EBRD	
Global Environment Facility Project Implementation Reports GEF FY 2012	EBRD	12/2012
Energy Audit and Development of an Energy Efficient Investment Program OAO xx, Samara Region	JACOBS Consulting	09/2011
Framework Terms of Reference “Capacity Building in Large Industries – Process Integration and Process Innovation Support. Sector: Cement”	EBRD	
Term of Reference “Energy Audit and Development of an energy efficiency investment programme at OAO xx, Samara Region “	EBRD	
List of invitees for GEF Industry seminar March 2012	EBRD	03/2012
MWH RiEEP overall workplan	MWH	
xx Energy Management System – Actual Efficiency and Long-term Objectives	Alexander Starchenko	25/11/2011
Assignment xx on ISO 50001 Certification	MWH	11/2011
xx Action Plan to ISO 50001 Certification-Ready Status	MWH	
Term of Reference “Steel Gas Recovery for Power Generation at xx”	EBRD	
Term of Reference “Waste Streams Recovery Potential at xx”	EBRD	
Term of Reference “Water Efficiency Study at xx”	EBRD	
Power Presentation “Системы энергоменеджмента и системы	A.Zweering	

Document title or description	Author	Date
оптимизации в сфере крупных промышленных предприятий - Описание Программы”		
RuSEFF training module	EBRD	
Cutting energy costs, improving competitiveness, increasing profit	MWH, ENSAT, ICF	
Sustainable Energy Initiative Scaling up finance to address climate change	EBRD	11/2012
Sustainable Energy Initiative in Russia	EBRD	2013
xx Cement Plant - Project Technical and Economic Evaluation	ATKINS	07/2011
Business Case Feasibility: Desktop Study of xx cement, Russia. Proposal	ATKINS	02/06/2011
Project Technical and Economic Evaluation of xx cement, Russia. Proposal	ATKINS	02/06/2011
Terms of Reference “Capacity Building in Large Industries - Energy management system capacity building, systems optimisation and energy audits”	EBRD	
Terms of Reference for the Pulp/Paper sector from GEF “Assessment of Second Generation Biofuels and Market Potential for Russia”	EBRD	
Energy Audits Programme –Funded by EBRD ETC Fund, EBRD Western Balkans Fund, Germany, Greece, Italy, Netherlands and NIF. Terms of Reference “Water supply and usage study – xx (Russian Federation)”	EBRD	
UNIDO documents		
Letter from Prof Dr Galperina to Mr. Marco Matteini	Russian Energy Agency	02/11/2011
Letter from Mr. Alexei Konev to Mr. Marco Matteini	Russian Energy Agency	02/11/2011
Back-to-Office Report	M.Matteini, M.Khoroshev, R. Vermeeren	06/12/2010
Back-to-Office Report	M.Matteini	20/07/2012
GEF/UNIDO/EBRD Project Market Transformation Programme on Energy Efficiency In Greenhouse Gas-intensive Industries in Russian Federation. Tentative list of Stakeholders	UNIDO	27/05/2013
GEF/UNIDO/EBRD Project Market Transformation Programme on Energy Efficiency In Greenhouse Gas-intensive Industries in Russian Federation. Mid-term Progress Report of UNIDO Activities	UNIDO	05/2013
Annex 1. UNIDO Training Seminar on Energy Management System for Experts	UNIDO	
Annex 1. Международный опыт практического применения Annex 1. Стандарта ISO 50001. Практические вопросы разработки и внедрения систем энергоменеджмента и энергосбережения на промышленных предприятиях. Ступень 1. Пользователь (User). Тренинг-семинар для пользователей	UNIDO	12/2012
Annex 1_EnMS Expert Training Feedback	UNIDO	
Annex 1. Letter from Prof Dr Galperina to Mr. Pradeep Monga	UNIDO	

Document title or description	Author	Date
Annex 1. Report “Energy Management System (EnMS) Implementation Training RUSSIA”	UNIDO	
Annex 1. Report “UNIDO Fan System Optimization Training Package RUSSIA”	UNIDO	
Annex 1. Final Report “Review Build-up SO Library”	Dr. Viacheslav Aleksandrov	
Annex 3. Confidentiality agreement	UNIDO	
Annex 3. “Assessment of Best International Practices and Experiences in Creating and Operating Industrial Energy Efficiency Equipment and Technology Databases”. Component 3 of the Project: “Capacity Building and Energy Management Systems in SMEs.	UNIDO	
Annex 3. Автоматизированная система сравнительного анализа энергоуправления. Руководство контент-администратора	UNIDO	
Annex 3. Автоматизированная система сравнительного анализа энергоуправления. Руководство пользователя	UNIDO	
Annex 3. Energy management benchmarking system (EMBS)	UNIDO	
Annex 3. Identified and Selected Partner Enteprises	UNIDO	
Annex 3. Questionnaire for preliminary analysis of activities in the field of energy conservation and energy efficiency improvement in accordance with requirements of standard ISO 50001	UNIDO	
Annex 3. Final Report “Development of the list of Enterprises to work with UNIDO in Implementing the Component 3 of the Project: Capacity Building and Energy Management Systems in SMEs”	JSC " Hydraulic Engineering Technologies "	2012
Annex 3. Development of the list of Enterprises to work with UNIDO in Implementing the Component 3 of the Project: Capacity Building and Energy Management Systems in SMEs	FSO Analytical Centre of the Government for the Russian Federation	16/02/2012
Annex 3. Report. Special Service Agreement Expert on Mission. Index Number: 485684	Mr. Iakov Nicolaevich DRANEV	2012
Annex 3. Report. Individual Service Agreement. Index Number: 00485684	Mr. Iakov Nicolaevich DRANEV	2013
Annex 3. Preliminary Study on IEE Technology Databases and Software for Supporting Energy Management System Implementation in SMEs	Vladimir Nikitaev	28/06/2011
Annex 3. Terms of Reference “Development of the list of Enterprises for Implementation of the Component 3 of the Project: Capacity Building and Energy Management Systems in SMEs”	UNIDO	
Annex 3. Terms of Reference “Development of the list of Enterprises for Implementation of the Component 3 of the Project: Capacity Building and Energy Management Systems in SMEs”	UNIDO	
Annex 4. Russian and International Approaches to Measure Energy Efficiency in Industry. Final Report of the First Phase of a Baseline Study	UNIDO	26/06/2011
Annex 4. Enterprise Energy Consumption and Energy Efficiency Performance Questionnaire/ Анкета для оценки состояния энергопотребления и энергоэффективности предприятия	UNIDO	
Annex 4. Letter from Mr. Kalemanov to Mr. Korotokov	Ministry of Trade and	14/02/2013

Document title or description	Author	Date
	Industry	
Annex 4. Review of International Approaches to Monitoring and Verification (M&V) in Industry Energy Saving and Energy Efficiency Policy	Vladimir Nikitaev	29/10/2012
Annex 4. Energy Efficiency Policies, Measures and Capacity Building Programs	UNIDO	
Annex 4. Terms of Reference "Policy research and development work on Energy Management System (EnMS) Certification Schemes in support of the Russian Federal Programme on Energy Efficiency"	UNIDO	
Annex 4. Terms of Reference "Policy research and development work on Energy Saving Obligations and White Certificates in support of the Russian Federal Programme on Energy Efficiency"	UNIDO	
Annex 4. Report "White Certificates as Energy Efficiency Market Instrument: International Experience"	Dr. Irina Karzanova	02/2012
Annex 4. Agenda of the Kick-off Meeting "Policy research and development work on Energy Saving Obligation and White Certificates (ESO-WC)"	UNIDO	
UNIDO Annual Project Implementation Report (PIR)	UNIDO	27/10/2012
Training Materials "COMPRESSED-AIR_EXPERT_Package_Part1"	UNIDO	2012
Training Materials "COMPRESSED-AIR_EXPERT_Package_Part2"	UNIDO	2012
Training Materials "COMPRESSED-AIR_EXPERT_Package_Part3"	UNIDO	2012
Training Materials "COMPRESSED-AIR_EXPERT_Package_Part4"	UNIDO	2012
Training Materials "COMPRESSED-AIR_USER_Package"	UNIDO	2012
Training Materials "FANS_EXPERT_Package_Part1"	UNIDO	2012
Training Materials "FANS_EXPERT_Package_Part2"	UNIDO	2012
Training Materials "FANS_EXPERT_Package_Part3"	UNIDO	2012
Training Materials "FANS_USER_Package_Part1"	UNIDO	2012
Training Materials "FANS_USER_Package_Part2"	UNIDO	2012
Training Materials "FANS_VENDOR_Package"	UNIDO	2012
Training Materials "PUMPS_EXPERT Training_Part1"	UNIDO	2012
Training Materials "PUMPS_EXPERT Training_Part2"	UNIDO	2012
Training Materials "PUMPS_USER Training_Part1"	UNIDO	2012
Training Materials "PUMPS_USER Training_Part2"	UNIDO	2012
Training Materials "STEAM EXPERT Training_Part1"	UNIDO	2012
Training Materials "STEAM EXPERT Training_Part2"	UNIDO	2012
Training Materials "STEAM USER Training_Part1"	UNIDO	2012
Training Materials "STEAM VENDOR Workshop"	UNIDO	2012
Criteria for the Selection of National Trainees for the Energy Management System Expert Training	UNIDO	16/11/2012
Energy Management System (EnMS) Implementation Training, Day 1 &	Richard Morrison	3-

Document title or description	Author	Date
Day 2		4/12/2012
UNIDO EnMS Expert Training 5 day program Day 1	Liam McLaughlin, Bill Meffert	30/01/2013
Power Point Presentation “Проект GEF/UNIDO/EBRD **Программа повышения энергоэффективности российской промышленности»**	Sergey Korotkov	30/11/2012
Energy Management System (EnMS) Guide and Tools	UNIDO	2012

C.Evaluation Matrix

Judgment Criteria	Evaluation Questions	Indicator(s) proposed	Means of verification	Source of verification
1. RELEVANCE **To what extent does the Project relate to Russian environmental and energy policies and priorities and to global environmental benefits and the main objectives of GEF focal areas**				
How does the Project support the GEF climate change focal area	Is the Project relevant to the GEF climate change focal area	• Existence of clear relationship between the Project objectives and the GEF climate change focal area	Desk review	Project documents GEF focal area strategies and documents
Project addresses identified challenges in the energy sector	Is the Project relevant to Russian environmental and energy policies and priorities? a) What are the Project 'objectives', 'planned outputs', 'activities and inputs'? (b) What are the local and national environmental priorities and policies, and expected global environmental benefits to be obtained? (c) Are (a) formulated with relevance to (b)?	• Coherence matrix showing Project objectives and identified national energy priorities, policies and strategies •	Desk review	Project documents and reviews, national energy policies
		• Perceptions of in-country stakeholders, including energy sector practitioners, CSOs, NGOs, communities, local government, as to whether Project responds to national priorities and existing capacities	Interviews	Project partners and other organizations, stakeholders
	Do (a) continue to be relevant in relation to (b) at the midterm point of the Project?	• Evidence of adjustment of Project activities during implementation because of new information on challenges or concerns	Interviews	EBRD and UNIDO staff and relevant peers and stakeholders
Level of stakeholder ownership in Project / Project addresses concerns of stakeholders	Is the Project addressing the needs of the target beneficiaries	• Level of involvement of government officials and other partners in the Project design process	Interviews	Government reps
		• Degree of involvement and inclusiveness of stakeholders in Project design	Interviews	Other stakeholder groups (industry. RUSEFF, banks)
		• Strength of link between expected results and the needs of relevant stakeholders	Interviews	Project partners and other organizations

Judgment Criteria	Evaluation Questions	Indicator(s) proposed	Means of verification	Source of verification
Is the Project relevant with respect to other donor supported activities	Does GEF funding support activities not addressed by other donors / How does it fill the gaps?	• Degree to which Project is coherent and complementary to other donor programming • Is there co-ordination and complementarity between donors • Other possible options for industry to meet their needs in goods and services area covered by Project	Document review Interviews	Documents from other donors Other donor reps Project documents
Project has a clear identity and niche	Project has a clear identity	• Perceived relative advantages of working with Project over other competitive options, according to clients and other stakeholders	Interviews	Project stakeholders
Assumptions and targets are realistic	a) Are the assumptions on which the Project strategy is based reflective of the operational realities on the ground? (b) How have the assumptions been used to formulate planned activities? (c) Has the Project strategy been formulated with targets that are (i) clearly defined, (ii) measurable and (iii) achievable, given the lifetime of the Project? (d) Have any amendments to the assumptions or targets been made or planned during the Project's implementation? If so, (i) how were these carried out, (ii) for what purpose, and (iii) what were the consequences of these amendments?	• Extent to which assumptions are reflected in project documents and strategy • Extent to which targets are deemed realistic by stakeholders	Document review Interviews	Project documents Stakeholders (project staff, govt, industry, banks, industry)
Risks identified at Project design are still adequate	a) Are the risks identified at Project design still adequate? b) Have any new risks emerged?	• Extent to which identified risks are adequate	Desk review Interviews	Project documents Stakeholders
Intervention logic reflects program objectives at each level of Project planning and implementation	In each area of the work plan, are the identified activities, outputs, and products appropriate to the objectives of the Project?	• Extent to which Project objectives are reflected in planned activities and services	Desk review	Project documents
Program results are measureable	Are program results measureable?	• Number and type of performance measurement indicators for monitoring of implementation of strategy and intended results in planning documents	Desk review	Project documents/ results framework

Judgment Criteria	Evaluation Questions	Indicator(s) proposed	Means of verification	Source of verification
		• Level of reporting on performance measurement indicators for monitoring of implementation of strategy and intended results stated in planning documents		
Any amendments still ensure Project on track to meet target	a) Were any amendments to Project design made during implementation to date? (b) If so, why and with what consequences? (c) Is the Project on track to meet its targets? (d) What recommendations, if any, can be made based on the mid-term review to ensure the Project is on track to meet its targets?	• Number of amendments made to project design	Desk review Interviews	Project management documents EBRD/UNIDO staff
2. EFFECTIVENESS **To what extent have/will the expected outcomes and objectives of the Project been/be achieved?**				
The Project has achieved its mid-term objectives	Has the Project been effective in achieving the expected outcomes and objectives?	• Degree of achievement in meeting Project objectives as set out in the Project results framework • Program level of achievement (intended and unintended outputs, outcomes and impacts) • Number of planned vs. implemented Projects/activities • (see indicators in document)	Interviews Desk review	Project management and relevant peers and stakeholders Project documents and reviews, other relevant docs
Project management exhibits flexibility in reaching Project objectives	To what extent does the Project management have the flexibility to design and effectively execute the activities to achieve Project goals? a) Has the Project team made use of results based management/ adaptive management processes as originally set out in the Project design during implementation? b) Has there been evidence of flexibility in Project management? c) Have any changes been made in response to the results based management/ adaptive management processes? d) If so, (a) which changes were made, (b) for what purpose, and (c) with what results?	• Examples of changes made in approach or strategy by management after learning new information	Interviews Desk review	Project management and relevant peers and stakeholders Project documents and reviews, other relevant docs

Judgment Criteria	Evaluation Questions	Indicator(s) proposed	Means of verification	Source of verification
Project management identifies and manages key risks to fulfilling its mandate / How is risk and risk mitigation being managed	How has the Project identified and managed risks? a) What is the Project's Risk Mitigation strategy? b) To date, has the Project's Risk Management strategy been effective in mitigating implementation challenges encountered? c) What challenges, if any, have arisen during implementation? (i) what risks are compromising (ii) which specific results? d) If so, how did the Project's Risk Management strategy assist to mitigate emerging problem(s)? If not, why not?	• Evidence of a risk management • Quality of risk mitigation strategy developed and followed • Quality of existing information systems in place to identify emerging risks and other issues • Mechanisms and means for UNIDO and EBRD staff managing Project Projects to identify and bring forward risks • Clients have means and mechanisms to report risks to mgt • Mechanisms and means for Project staff to mitigate identified risks	Desk review Interviews	Project documents Project team
Project has a functional M&E system	To what extent does the project have an effective monitoring, reporting and evaluation framework including measurable indicators, systematic and regular processes for collecting data, and feedback processes to facilitate decision making and learning?	• Project evaluation framework including indicators: - at the activity level - measurable (achievable, reportable, timely, specific)	Desk review	Project documents and reviews, other relevant docs
			Interviews	Project-selected management and staff
		• Existence of a Project M&E system, including relevant processes and mechanisms for: - monitoring - reporting - data collection & management - feedback and learning	Desk review	Project documents and reviews, other relevant docs
			Interviews	Project-selected managers and staff
Project's M&E system is used for feedback, adaptive management, and learning		• Internal learning achieved from the use of the M&E system by relevant individuals and ways they have learned	Desk review	Project documents and reviews, other relevant docs
			Interviews	Project-selected staff, managers
		• Actual use of the M&E system to change or improve decision-making/adaptive management	Interviews	Project-selected staff, managers
Stakeholder inclusiveness and collaboration	a) Who are the Project stakeholders and partners? b) To date, has Project implementation been inclusive of the relevant stakeholders and collaboration between	• Extent to which the implementation of the Project has been inclusive of relevant stakeholders and	Interviews	Stakeholders

Judgment Criteria	Evaluation Questions	Indicator(s) proposed	Means of verification	Source of verification
	different partners identified in the Project strategy? c) What means have been employed to ensure inclusiveness? (give concrete examples) d) Are there stakeholder groups that the Project strategy failed to identify? If so, (i) which ones and (ii) why?	collaboration between partners		
Donor visibility related to this Project	What evidence is there of the donors' visibility? b) Is there other evidence of the donors' visibility that relates specifically to the assignment?	• Donor visible relating to this Project	Document review	media coverage, official notices and press releases, reports and publications referring to the assignment
Outcome in absence of Project	What would be the outcome if the project did not take place?	• Perception of stakeholders of outcome in absence of project	Interviews	Stakeholders
What lessons can be drawn regarding the effectiveness for the remainder of the project		• What lessons have been learned regarding achievement of outcomes • What changes could have been made (if any) to the design to improve the achievement of the results	Interviews	Project-selected staff, managers, stakeholders
3. EFFICIENCY **The extent to which results have been delivered with the least costly resources possible**				
Project results achieved (outcomes and impacts) and justify the input and investment	To what extent are the impacts and benefits arising from the Project commensurate with the level of effort and resources expended? a) Have Project inputs been (a) of suitable quality and (b) available when required to allow the Project to achieve the expected results? b) If not, in what instances? Why was this the case? How has this adversely affected the Project? c) How the quality of the inputs is being monitored by the Projects, through which indicators?	• Overall investments (funding, time, other resources)	Desk review	Project documents and reviews, other relevant docs
		• Extent to which level of co-financing has occurred compared to that planned	Desk review Interviews	Project documents, deal flows
		• Timeline for implementation and completion of activities	Interviews	Project-selected and relevant staff
			Desk review	Project documents and reviews, other relevant docs
		• Extent to which inputs have been of suitable quality and available when required to allow the Project to achieve the expected results	Interviews	Project management staff and stakeholders
Operations are cost-effective relative to the	What are the most cost-effective areas of activities (by sector, region, or industry size)?	• Perceptions as to cost-effectiveness of program	Interviews	Project program manager(s),
		• Level of execution of program budget	Desk review	Project documents and

Judgment Criteria	Evaluation Questions	Indicator(s) proposed	Means of verification	Source of verification
outputs, and results achieved (outcomes and impacts), and their leveraging effects on investments in the targeted sectors				reviews, other relevant docs
		• Percentage of budget for management and operations (vs. other activities)	Desk review	Project documents and reviews, other relevant docs
		• Leveraging effect on investment per sector / region and large/SMEs	Desk review	Project documents and reviews, other relevant docs
Project's management structure is conducive to its objectives / Project's core management structure is effective and efficient	How appropriate and effective are Project's management structure and staffing profile in realizing a relevant, effective, and efficient Project? What changes, if any, are needed to Project's organizational structure and staffing profile to carry out its mandate?	• Evidence of clear roles and responsibilities for operational and management structure • Degree of fulfillment of goals according to results framework (over evaluation period)	Interviews	Project-selected management, including former Project managers,
			Desk review	Project documents and reviews, other relevant docs
		• Relationship between organizational structure and fulfillment of project objectives - formation or dissolution of teams or work plans in order to fulfill or drop specific business plan objectives - number of staff and time spent on administrative tasks - number of staff and time spent on knowledge or information/database management - evidence of bottlenecks or barriers to decision-making (e.g., accessibility of senior staff/managers, ease of resource management systems)	Interviews	Project-selected management, including former Project program managers,
			Desk review	Project documents and reviews, other relevant docs
		• Client/Stakeholder satisfaction with Project staff: - performance in reaching mutual goals/objectives - receptiveness/accessibility - abilities/capabilities/skills - expertise/applicable knowledge - efficiency and timeliness - other factors	Interviews	Project partners and stakeholders

Judgment Criteria	Evaluation Questions	Indicator(s) proposed	Means of verification	Source of verification
		• Perceptions of or actual levels of relative effectiveness and/or efficiency of Project's structure compared to other relevant energy sector trust funds/operational entities	Interviews	Project-selected management, including former Project program managers, partners
			Desk review	Project documents and reviews, other relevant docs
Project has an appropriate management accountability system	How effectively has Project management accountability been exercised, and how well is M&E built into programming and strategy to strengthen accountability?	• Number and type of mechanisms or systems in place for holding Project management accountable for their roles and responsibilities	Interviews	Project-selected management
		• Examples of incidents when accountability measures or systems revealed mismanagement	Interviews	Project-selected management, staff
Project's M&E system enables accountability as a part of regular programming and strategy		• Percentage of budget spent on M&E systems	Desk review	Project documents and reviews, other relevant docs
		• Evidence of use of M&E/reporting information to - make management decisions/adaptive management - inform strategy - inform programming or planning - other	Interviews	Project-selected management, including former Project program managers
		• Frequency of reporting, updating, or use of M&E systems for accountability purposes	Interviews	Project-selected management, including former Project directors,
What lessons can be drawn regarding the efficiency for the remainder of the project		• What lessons have been learned regarding achievement of outcomes • What changes could have been made (if any) to the design to improve the efficiency of the project	Interviews	Project-selected staff, managers, stakeholders
4. RESULTS **What are the current actual and potential long-term, results of activities supported by the Project?**				
Progress towards Project objectives at mid-term	What ratings does the Project achieve in terms of implementation progress	• Indicators from Project framework (planned vs expected outputs, outcomes, impacts	Document review Interviews	Project documents Key stakeholders Monitoring data

Judgment Criteria	Evaluation Questions	Indicator(s) proposed	Means of verification	Source of verification
Likelihood of meeting objectives and global environment objectives	a) Is the Project likely to meet its objectives and overall results by the end of the Program? If not, why? b) What are the main barriers, if any, for the Project to achieve its objectives? c) What is expectancy to achieve global environment objectives/development objectives?	• Indicators from Project framework	Document review Interviews	Project documents Key stakeholders Monitoring data
	Are there any unanticipated results achieved or likely to be achieved?	• Number of unexpected results	Document review Interviews	Project documents Key stakeholders Monitoring data
How can the Project build on its successes and learn from its weaknesses in order to enhance the potential for impact of the initiative?		• Lessons/future direction	Interviews	Project-selected staff, managers, stakeholders
5. SUSTAINABILITY **The likely ability of an intervention to continue to deliver benefits for an extended period of time after completion**				
Sustainability integrated into Project	Are sustainability issues integrated into the design and implementation of the Project?	• Evidence/quality of sustainability strategy • Evidence/quality of steps taken to ensure sustainability	Document review Interviews	Project documents, project management staff, beneficiaries
Financial sustainability		• Evidence of likely commitments to support sectors beyond the end of the Project	Document review Interviews	Project documents, project management staff, beneficiaries
Sustainability of impact	How sustainable will the project impact be beyond the project implementation?	• Extent to which project is likely to be sustainable beyond the project	Interviews	Beneficiaries, stakeholders
Project is effective in developing internal and external partnerships to achieve objectives	How effective is the Project in building and developing internal and external partnerships to achieve its objectives?	• Resources (time, budget) spent on coordination with - client country governments - potential clients - Project partners - other stakeholders or recipients	Interviews	Project management, staff
			Desk review	Project documents and reviews, other relevant docs
		• Evidence of local ownership	Interviews	Stakeholders
		• Degree to which and nature of how external partners rely on Project to fulfill their country or local-level objectives	Interviews	Project partners and stakeholders, regional staff
			Desk review	Project documents and reviews, other relevant docs
		• Number and quality of local partnerships developed through Project	Interviews	Project partners and stakeholders, regional staff
			Desk review	Project documents

Judgment Criteria	Evaluation Questions	Indicator(s) proposed	Means of verification	Source of verification
				other relevant docs
		• Perceptions of clients, partners, and other stakeholders as to tangible development results stemming from Project activities/involvement in the energy sector of their country/region and, their ranking	Interviews	Stakeholders
Project has learned internally from its experiences	To what extent has the program learned from its experiences? a) Are there lessons to be learnt from implementation that should inform the next phase of the Project's implementation? b) If not, are there lessons that are likely to emerge? c) In what ways may these inform the Project's next phase? d) Have steps been taken to ensure that benefits from (i) Project activities and implementation as a whole and (ii) lessons learnt from other programs, are integrated and applied to the Program as a whole? e) Were formal strategic planning and knowledge management systems designed and put in place? Have these processes been followed? With what results?	• Project internal communication and feedback loops generating information useable in decision making	Desk review	Project documents and reviews,
			Interviews	Project and staff, management
		• Examples of incidences whereby Project: - took advantage of a positive model/solution and expanded on it - avoided worsening a situation/set of activities, based on new understanding/information	Desk review	Project documents and reviews,
			Interviews	Project staff
Effectiveness of communication of lessons learnt	How effective has the communication of lessons learnt to stakeholders been? a) Have any lessons learnt during the Project's implementation to date been communicated to (i) the relevant Project stakeholders, and (ii) other related programs and Projects? b) Who have any lessons learnt been communicated to and by what means? c) Have lessons and format been appropriate for their audience? d) Have lessons learnt effectively reached their intended audience	• Extent to which lessons learnt have been communicated to project stakeholders and other related programs and projects	Interviews Document review	Project documents, project management, stakeholders
Project-initiated activities can spread to a wider set of beneficiaries	To what extent can project-initiated activities be broadened to a wider and larger beneficiary group, and be leveraged to bring about even more benefits than originally intended ?	• Amount of resources (time, budget, human resources) devoted to developing stronger links between Project activities and local beneficiary groups	Desk review	
			Interviews	Projects, staff and clients, stakeholders, and partners

Judgment Criteria	Evaluation Questions	Indicator(s) proposed	Means of verification	Source of verification
		• Evidence of stakeholder interest and capacity to identify ways to broaden the beneficiary group	Interviews	Project clients, partners, and stakeholders
			Desk review	Project documents and reviews, other relevant docs
Project activities that achieve objectives are replicable	Which activities are most effective in contributing to stated objectives, what are the characteristics of these activities, and to what extent have they been replicated, or could they be replicated, beyond this project?	• Replication of activities with high levels of achievement toward objectives in other countries/interventions	Desk review	Project documents and reviews, other relevant docs
			Interviews	Project management and relevant peers and stakeholders
		• Perceptions of clients and other partners s to the effectiveness of those activities that were replicated from previous interventions	Interviews	Project management and relevant peers and stakeholders

D.Project design analysis

This Annex provides additional details on the project design analysis undertaken as part of the MTR:

- Review of the continued relevance of barriers (Table 9); and

Review of the project results framework, including specific comments on Outcome-level and Output-level indicators (Table 10, Table 11, Table 12, Table 15, and

- Table 13) as well as comments on the original risks identified in the RCE (Table 16).

Table 9: Review of the continued relevance of barriers

Barriers to the market for EE in industry in Russia	**Comment on its relevance based on project experience as learned during the MTR**
Legislative and regulatory barriers – including need to strengthen institutional capacities	**Very relevant** Federal low #261(2009) need to be improved. There must be focus on voluntary measures. Obligatory energy audits must be considered in frame of EMS and ESCO contracts.
Distorted economic drivers due to low energy prices, easy gains from replacing old equipment and a lack of energy service providers.	**Very relevant**
Lack of availability of finance for EE investments	**Highly relevant.** There is a lack both governmental financial support and commercial finance for EE. This was highlighted by all stakeholders.
Insufficient understanding of investments to correctly assess risks and returns.	**Highly relevant**
Lack of awareness and knowledge regarding EE opportunities and inability to propose high quality investment projects to FIs. Due to low importance historically attributed to efficient use of energy there has been a corresponding lack of emphasis on training in the subject.	**Highly relevant.** This is a continued barrier recognized by the stakeholders and considered more pronounced within SMEs.

Specific comments on the project results framework

An assessment of the program's results framework is presented below analyzing the relevance of outputs, the definitions of indicators, and whether – in the Reviewers' opinion – they are appropriate.

Table 10: Review of the relevance of planned activities for addressing the barriers

Component/Activities	Comment on the relevance for addressing barriers
Component 1: Development of training materials, website and train the trainers programme	
Activity C1.1: Development and translation of training materials and tools	**Highly relevant** to address the lack of knowledge and lack of understanding of benefits; as long as training material is relevant to the Russian context and available in Russian.
Activity C1.2: Information campaign and development of a project website	**Highly Relevant**. Companies, government and other stakeholders need to be supplied with quality information and specific features need to be built in that support the energy management system activities.
Activity C1.3: Training of national expert trainers on EnMS and SO	**Highly relevant.** Although there are many skilled energy professionals in Russia there is a shortage of highly qualified personnel knowledgeable on systems optimization and EnMS ISO 50001. To take ISO 50001 forward will require many skilled knowledgeable energy professionals.
Activity C1.4: Training of loan officers in local banks and TA to banks	**Highly relevant.** To increase financing for EE projects it is important that the local banks and loan officers understand the benefits of EE projects, can appraise them and can market EE loans.
Component 2: Capacity building in large industry	
Activity C2.1: General enterprise training on EnMS	**Highly relevant.** There is a real need for EnMS and SO training in enterprises since there is still a lack of knowledge about these structured approaches to EE, and the benefits thereof, and EE still takes a low priority in enterprises' strategic investment programmes.
Activity C2.2: On-site EnMs training	
Activity C2.3: On-site SO training	
Activity C2.4: Energy audits	**Relevant.** Under the EE law there is already a need for enterprises to undertake energy audits. However within this project the aim is to go into more depth and look at SO and EnMS options, to create a baseline for EnMS and identify EE measures for investment.
Activity C2.5: Development of EE investment plans	**Highly relevant.** To address the barrier relating to the inability of enterprises to propose high quality EE projects to FIs. This part of the project is absolutely key for translating all the TA into commitment to finance.
Activity C2.6: Documented demonstration projects	**Highly relevant.** There is a real need for examples of Russian experience in EnMS and SO rather than relying on 'foreign experience'.
Activity C2.7: Recognition and peer-to peer networks	**Relevant.**
Activity C2.8: Participation of equipment manufacturers and suppliers	**Less relevant.** Although equipment suppliers could help in the further marketing of system optimization approaches the lack of knowledge within equipment suppliers is not a barrier per se.

Component/Activities	Comment on the relevance for addressing barriers
Component 3: Capacity building in SMEs	
Activity C3.1: EnMS and SO training and implementation in SMEs	**Highly relevant.** There is a real need for EnMS and SO training in SMEs since there is still a lack of knowledge about these structured approaches to EE, and the benefits thereof, and EE still takes a low priority in enterprises' strategic investment programmes. In addition there is a low interest in energy management and a lack of capacity within SMEs as well as a lack of knowledge of widely used technologies.
Activity C3.2: SO training	
Activity C3.3: Implementation of EnMs and benchmarking	**Highly relevant.** Since there are few examples of EnMS within SMEs in Russia it is very relevant to assist the first SMEs to implement it to act as examples to other SMEs. Benchmarking will help SMEs to assess their progress against others.
Activity C3.4: Energy audits	**Relevant.** Under the EE law there is already a need for some enterprises to undertake energy audits. However within this project the aim is to go into more depth and look at SO and EnMS options, provide a baseline for EnMS and identify EE measures for investment.
Activity C3.5: Technology database and certification scheme	**Relevant.** Again targeting the lack of awareness and knowledge barriers this will provide SMEs (and others) with information on modern EE technologies and equipment and can be based on other similar international data banks
Activity C3.6: Preparation of EE investment plans	**Highly relevant.** To address the barrier relating to the inability of enterprises to propose high quality EE projects to FIs. This part of the project is absolutely key for translating all the TA into commitment to finance.
Component 4: Policy Support	
Activity C4.1: Training programme for officials on industrial EE policy	**Highly relevant.** The majority of stakeholders believe that this is highly relevant to ensure that there is on-going capacity across government to help in future EE legislation and regulation.
Activity C4.2: Support to the implementation of the new law on EE	**Highly relevant.** There is a clear need for support for the further development of EE legislation and continued relevance is shown by requests from REA for assistance, particularly with voluntary certification and white certificates.

Table 11: Expected outcomes, objectively verifiable indicators, assumptions, and comments from the Reviewers on their relevance and whether the assumptions underpinning them are/were appropriate

Project Outcome	Objectively Verifiable Indicator	Assumption	Comments from the Reviewers
Outcome 1: Local trainers have the knowledge resources and skills needed to enhance capacity	Average "trainers capacity score" increased[11] – target x4 by project mid-term compared to start of project status.	Local trainers are interested in getting the information and resources and this contributes to their capacity to train others	This outcome seems appropriate, though attention needs to be made during the remainder of the Project to actually assess capacity improvements. The assumption appears to have ongoing relevance.
Outcome 2: Participating large industries make EE investments.	Investment facilitated in large industries – target USD 150 million submitted to EBRD credit lines and/or local banks for financing by end of project.	Macro economic conditions are such that investment in efficiency continues to be attractive, and banks have capital for investment. The barriers we identified are indeed the principal constraints to growth in this area. There is no major deterioration in the macro economic and political climate, and Russia emerges from the current financial crisis within the next two-three years.	This outcome seems appropriate and the target and indicator are reasonable assuming that the preparatory TA results in real investment in the second half of the project. The assumptions have ongoing relevance.
Outcome 3: Participating SMEs make EE investments	Investments facilitated in SMEs – target USD 150 million by end of project.	As above	Though the outcome seems generally appropriate, an assumption should have been included that there would be availability of finance for SME's EE projects. It is not certain that this level of investment will be reached unless additional time is added to the project.
Outcome 4: Government capacity enhanced	Government capacity to design and implement an effective industrial EE policy enhanced[12] - target x2 by project mid-term and x4 by end of project compared to start of project	Institutional and political barriers can effectively be overcome through analysis, information and co-ordination activities	This outcome seems appropriate, though attention needs to be made during the remainder of the Project to actually assess capacity improvements. Assumptions are realistic.

[11] The system for scoring trainers capacity, including weighting of factors, will be determined at project inception. Scores will be assigned based on results of the start of project survey, and compared to that in the mid-term and end-term survey. Indicators for enhanced capacity may include: knowledge of international best practice, appropriate staffing in terms of number and skills, presence of processes and procedures to facilitate industrial EE.

[12] The system for scoring government institutional capacity, including weighting of factors, will be determined at project inception. Scores will be based on expert reviews at the beginning middle and end of the project.

Table 12: Comments on indicators for Component 1: Development of training materials, website and train-the-trainers programme

Objectively verifiable indicator	Commentary from the Reviewers
Fully developed set of training materials for energy management system implementation and systems optimisation training, including build-up of systems optimisation library	The indicator is appropriate but it should state number of training materials, target groups and language of material (Russian). Sources of verification should also include proof of use of SO library.
Information campaign implemented	This indicator seems appropriate. However, it is not specific in terms of the methods for information campaign implementation or the end-recipient of information
Fully functional Russian-English language web site	This indicator seems appropriate, though we do not see a great need for a fully functioning English version of the website.
Discussion forum and Peer-to-Peer Network established and operational	This indicator seems appropriate as is its measurement through discussion archives. It is still unclear how this network will develop and therefore who is likely to be the target audience.
Up to 120 national trainers fully trained in EMS and systems optimisation	This indicator seems appropriate. At the same time, there is no indicator for how much their capacity will be built.
Enhanced capacity of local banks to identify and process loans for industrial EE	This indicator seems appropriate as is the indirect means of verification through deal flow at the banks.

Table 13: Comments on indicators for Component 2: Energy management system capacity building programme for large energy-intensive industries

Objectively verifiable indicator	Commentary from the Reviewers
½-day introductory training sessions to 100 managers in 50 large enterprises delivered;	This indicator is appropriate.
Formal classroom training in energy management systems and systems optimisation to 100 managers in 20 large enterprises delivered that are additional to the core 10 enterprises;	All these indicators are appropriate in that this technical assistance and these services are envisaged but the targets are too prescriptive for the approach of the project. The design of the project assumed a certain level of interest and made assumptions on the number of enterprises and the support they would require. However the reality is that a customized approach makes more sense so the enterprise chooses the type of support they think is most appropriate for them. Therefore the specifics are likely to be different than those outlined by these indicators.
2-day training sessions to participating large enterprises staff delivered;	
Extensive on-site EMS training for 10 large enterprises	
Implementation of EMS in 10 large enterprises;	
Full energy audits for the 10 large enterprises carried out;	
40-60 enterprise staff trained in systems optimisation at the 10 core enterprises (a total of 30 three-day workshops);	
40 system assessments prepared at the 10 core enterprises ;	

Objectively verifiable indicator	Commentary from the Reviewers
40 system assessments prepared at the 20 additional enterprises;	
35 full case studies developed;	This indicator seems appropriate although the target of 35 studies is over-ambitious since fewer projects are likely to be implemented.
Recognition programme established and participants registered in the peer-to-peer network;	This indicator seems appropriate.
10 complete company EE investment plans developed;	This indicator seems appropriate if definition expanded to include due diligence studies and financial analysis.
40 Russian EE equipment suppliers trained in optimisation of six types of systems (twelve three-day workshops)	If there is demand for this activity then the indicator is appropriate although the number of systems would depend on the demand.

Table 14: Comments on indicators for Component 3: Capacity building in SMEs / Introduction and implementation of an energy management system in selected SMEs

Objectively verifiable indicator	Commentary from the Reviewers
100 SMEs trained in energy management systems	The training indicators seem appropriate. The approach for the SMEs is to offer capacity building in EnMS and investment package or/and SO and investment package. Therefore the actual figures will depend on what the SMEs are interested in. This SO assessment indicator seems appropriate but depending on the interest this could also include gap analysis/advice on implementation of EnMS.
25 large SMEs trained in systems optimisation;	
25 systems optimisation assessments completed in large SMEs;	
Russian benchmarking developed and introduced in 2-3 SME-sectors and 50 SMEs;	This indicator seems appropriate although the target of 50 SMEs is overly ambitious. There is no clear indicator on the use of the benchmarking – use statistics of the benchmarking website could be included.
50 quick audits carried out by national experts and audit companies;	This indicator seems fairly appropriate since a number of different audits can be carried out at a single enterprise. Note that these are called “quick audits” so there is no concept of how detailed they are.
Data bank on EE technologies developed;	This indicator seems appropriate but could also include use statistics of such a databank.
Voluntary certification scheme prepared;	This is appropriate but included in Component 4.
50 EE investment plans prepared;	This indicator seems appropriate since a number of different investment plans are likely at a single enterprise. This is linked to the first indicators in this component.

Table 15: Comments on indicators for Component 4: Policy support / Government capacity building and support programme

Objectively verifiable indicator	Commentary from the Reviewers
80 government officials trained in industrial EE policy preparation;	This indicator seems appropriate although as discussed it is proposed that the target should also include agency and

Objectively verifiable indicator	Commentary from the Reviewers
	regional agency staff since it will not be possible to reach 80 government officials.
Proposals for selection and approval of projects submitted to the new federal target programme delivered;	At project design this indicator seemed to be appropriate, however since then this work was already completed by REA prior to the project start so is no longer relevant.
Monitoring and evaluation procedures for the federal target programme developed;	At project design this indicator seemed to be appropriate, however since then this work was already completed by REA prior to the project start so is no longer relevant.
Experts of the energy agency trained in information campaigns and the use of the web site and its tools;	This indicator seems appropriate although it is not clear how their increased capacity is measured.
Proposals delivered to REA on data collection and analysis structure;	This indicator seems appropriate. AT the mid-point the focus and format of further research work is under discussion with REA so the outputs may change.
Proposals delivered for the introduction of a Russian Energy Management Standard and road map for long-term agreements with industry;	This indicator does not seem appropriate to the new activities as required by REA. Now proposals will be delivered to REA on a voluntary certification scheme for EnMS and ISO 50001. As yet no work has been agreed on the long-term agreements with industry.
Recommendations prepared for certification scheme of industrial EE equipment;	This indicator seems appropriate assuming REA still believe this is a priority. At the mid-point no work has been done relating to this activity so it is still up for discussion.
	Work on White Certificates is underway which will deliver proposals to REA. This can be added to the indicators for this component.

Risk identification

Four significant risks were identified in the RCE document that might prevent the project objectives from being achieved. The table below shows the risk related to this component identified during the project design phase and comments on the appropriateness of the risks identified. Overall, the Reviewers believe that the risks were generally reasonably well-identified, but with a few risks not accounted for.

Table 16: Risks identified during project design and comments on their appropriateness

Risks	Mitigation approach in the project design	Comments regarding the appropriateness of the risks identified and mitigation approach
Failure to achieve outcomes after successful delivery of outputs (long-term sustainability)	The project makes use of tried and tested energy management and systems optimization approaches which aim to ensure that proper and efficient operation of industrial energy systems is maintained and becomes part of each firm's operating culture. The combination of a supportive national policy (the subject of component 4) with tools and training (components 2 and 3) at the 'output' level will allow companies to "hardwire" industrial EE projects/investments into management structures such as ISO that provide for documentation, independent verification, and continuous improvement thus ensuring change at the 'outcome' level.	This was appropriately identified. To date a number of outputs have been delivered (energy audits, training etc) but as yet there has been no commitment to investment in EE as a result of these outputs (with the exception of one organisation certifying ISO 50001). However a number of potential projects look likely to move ahead. The mitigation approach is still appropriate.

Risks	Mitigation approach in the project design	Comments regarding the appropriateness of the risks identified and mitigation approach
Low government commitment to EE	This is a *low risk*. The federal government has an ongoing interest to enhance industrial EE as reported to UNIDO and the EBRD in recent high-level discussions in the federal government. Component 4 specifically aims to address government motivation and commitment through capacity building and technical support, and close co-operation with government has been agreed. Government interest in this sector has been confirmed through discussions and is evident in the creation of the EE Law and the Energy Agency.	This risk was appropriately identified, and since the project start the Government commitment to EE has remained high. Since the project design progress has been made on EE policy development and implementation, including new legislation passed and greater institutional capacity. Discussions with REA, MoE and MIT confirmed this.
Market risk	It seems clear that the drivers for industrial EE programmes exist (i.e. high energy intensity, increasing energy prices and large industrial sector) and potential has been confirmed during project preparation. Intensive on the ground work with industries will be carried out during components 2 and 3, thus ensuring that the work is firmly grounded in the market realities in Russian businesses. .	The project was designed with an expectation of increasing energy prices as announced by the Government in 2007. However energy prices have remained lower than expected, partly due to the economic slowdown. Despite this all stakeholders confirm that there is still significant potential and interest from the industrial sector. Despite the initial difficulties encountered by the project in partnering with large enterprises and SMEs, it is believed that any immediate market risk resulting from the low interest of industry can be mitigated and managed through more effective communication, marketing and engagement strategies. At project design the element of “engagement strategy” was under-estimated.
Implementation Risk	UNIDO and the EBRD have significant industrial EE experience in the Russian Federation and neighbouring countries. The implementation risk will be mitigated by close cooperation with in-country partners and with professional organizations in the areas of EE and industry through each project component. A thorough stakeholder consultation was conducted in the context of finalizing the scope of the project during the implementation of the PPG resulting in local buy-in to the project approach.	This risk was appropriately identified, although it was underestimated since the relationships with in-country partners still had to be built. This has resulted in the delays experienced in certain activities. In the most part this risk can be mitigated against through strong local partnerships and through the hiring of strong project teams and consultants. UNIDO, EBRD and their consultants have already developed some good working relationships with industrial stakeholders (enterprises and RSPP), institutes and government and now must build on this to up-scale. They have the appropriate expertise and experience in place so this risk is expected to be mitigated further.

E. Terms of reference for the MTR

F. Project Results Framework for GEF Project #3593

G. Ratings for overall project implementation

Implementation Progress Ratings

Rating	Description
Highly Satisfactory (HS):	Implementation of **all** components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as "good practice".
Satisfactory (S):	Implementation of **most** components is in substantial compliance with the original/formally revised plan except for only a few that are subject to remedial action.
Moderately Satisfactory (MS):	Implementation of **some** components is in substantial compliance with the original/formally revised plan with **some** components requiring remedial action.
Moderately Unsatisfactory (MU):	Implementation of **some** components is not in substantial compliance with the original/formally revised plan with **most** components requiring remedial action.
Unsatisfactory (U):	Implementation of **most** components is not in substantial compliance with the original/formally revised plan.
Highly Unsatisfactory (HU):	Implementation of **none** of the components is in substantial compliance with the original/formally revised plan.

Development Objective Ratings

Rating	Description
Highly Satisfactory (HS):	Project is expected to **achieve or exceed all** its major objectives, and yield substantial benefits, without major shortcomings. The project can be presented as "good practice".
Satisfactory (S):	Project is expected to **achieve most** of its major objectives, and yield satisfactory benefits, with only minor shortcomings.
Moderately Satisfactory (MS):	Project is expected to **achieve most** of its major relevant objectives but with **either significant shortcomings or modest overall relevance**. Project is expected not to achieve some of its major objectives or yield some of the expected benefits.
Moderately Unsatisfactory (MU):	Project is expected to achieve its major objectives with major shortcomings or is expected to achieve only some of its major objectives.
Unsatisfactory (U):	Project is expected not to achieve most of its major objectives or to yield any satisfactory benefits.
Highly Unsatisfactory (HU):	The project has failed to achieve, and is not expected to achieve, any of its major objectives with no worthwhile benefits.