



**PROJECT DEVELOPMENT FACILITY
REQUEST FOR PIPELINE ENTRY APPROVAL**

AGENCY'S PROJECT ID: P092077
GEFSEC PROJECT ID:
COUNTRY: Mongolia
PROJECT TITLE: Heating and Building Energy Efficiency
GEF AGENCY: World Bank
OTHER EXECUTING AGENCY (IES): TBD
DURATION: NA
GEF FOCAL AREA: Climate Change
GEF OPERATIONAL PROGRAM: OP5: Removal of Barriers to Energy Efficiency and Energy Conservation
GEF STRATEGIC PRIORITY: CC-1: Transformation of Markets for High Volume Products and Processes; and CC-3: Power Sector Policy Frameworks Supportive of Renewable Energy and Energy Efficiency
ESTIMATED STARTING DATE: NA
ESTIMATED WP ENTRY DATE: JUNE 2006
PIPELINE ENTRY DATE: (if applicable)

FINANCING PLAN (US\$)	
GEF ALLOCATION	
Project (<i>estimated</i>)	8,000,000
Project Co-financing (<i>estimated</i>)	32,000,000
PDF A*	NA
PDF B**	NA
PDF C	NA
<i>Sub-Total GEF PDF</i>	NA
PDF CO-FINANCING (details provided in Part II, Section E – Budget)	
IBRD/IDA/IFC	NA
Government Contribution	NA
Others	NA
<i>Sub-Total PDF Co-financing:</i>	NA
<i>Total PDF Project Financing:</i>	NA

* Indicate approval date of PDF/A:


** If supplemental, indicate amount and date of originally approved PDF:

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT:

(Enter Name, Position, Ministry)

Date: (Month, day, year)

This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for approval.

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Date: October 13, 2005

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PART I - PROJECT CONCEPT

A - SUMMARY

1. COUNTRY AND SECTOR BACKGROUND

Mongolia is one of the coldest populated countries on earth where winter temperatures can reach below -40°C. The heating season is 8-months long. It is a low income country with a high urbanization rate. About 60% of its 2.6 million people are clustered in a few urban centers, where centralized space-heating is an essential modern infrastructure and a foundation of social and economic wellbeing. The heating market in Urban settings is comprised of three main segments: about 50% of urban households have access to district heating (DH) services, another 10% or so are served by small coal-fired heat-only boiler (HOB) systems, and the rest still rely on coal or wood-burning stoves.

Urban heat supply accounts for about 40% of gross energy consumption in Mongolia. Since it is almost exclusively coal-based, it is a major contributor to urban air pollution problems and is a main source of greenhouse gas (GHG) emissions.

DH systems are the most critical part of the Mongolian heating sector, not only because they help sustain a vital and growing urban economy, but also because they are an intricate part of the national power system, which almost exclusively relies on coal-fired combined heat and power (CHP) plants. CHP plants supply all but one DH system in Mongolia. All existing DH systems were designed and built with Soviet-era technologies and supply both heat and domestic hot water (DHW). Ulaanbaatar (UB) has the country's largest DH system, which is supported by three CHP plants with primary and secondary networks (separated by group substations), supplying heat and DHW to about 100,000 households and hundreds of industrial and commercial customers. In the five other larger cities (Baganuur, Choibalsan, Dalanzadgad, Darkhan, and Erdenet) DH systems have similar configurations as in UB, the exception being HOB-based supply in Baganuur and an open system for DHW supply in Darkhan, the second largest city in Mongolia. Together, those six DH systems cover 90% of the DH business in Mongolia. The rest is scattered in 9 smaller cities.

During the last 10 years or so, bilateral and multilateral funds have helped to upgrade and renovate the CHP plants and the primary network of the UB DH system. The Asian Development Bank (ADB)'s soon-to-be-completed Ulaanbaatar Heat Efficiency Project has invested in the upgrade of the circulation pumps of the primary network and the space heating part of the group substations, resulting in a more efficient variable flow based DH supply. Metering of all customers of the UB transmission company has been accomplished with funding from ADB and the World Bank's UB Services Improvement Project. But the secondary network of the UB DH system, and more importantly, the heat exchangers and distribution network for domestic hot water (DHW) remain antiquated and are deteriorating, with heavy

energy and water losses. The distribution network and the booster pumps of the Darkhan DH system and other similar DH systems in Mongolia are highly inefficient. A critical problem with the direct supply DH system in Darkhan is that DHW is directly tapped from the network, causing serious corrosion of network pipes due to the high oxygen content of the large quantity of make-up water pumped into the systems, leading to a vicious cycle of high water and heat losses, excessive power consumption. The CHP plants in Choibalsan and Erdenet would need upgrading to improve their efficiency and reliability.

The inefficiency in the heat supply systems also extends to the buildings. Almost all apartment buildings connected to DH systems have no thermal insulation in the roof and in the exterior walls. Thermal improvements such as insulation and triple-glazed windows are now required by the national building design standards and are being implemented in new construction. New and improved buildings only account for a tiny albeit growing share of the apartment stock. The existing apartment buildings, most of them built in the past 20 years or so, in general lose at least twice as much heat as apartment buildings in Northern European regions of similar climate. The internal heating system of these old apartment buildings consist of sets of cast iron radiators vertically linked by a single pipe, which do not permit adjustment and control of heat within the individual apartment.

All CHP plants and the DH companies are state-owned, but are separate entities. DH companies buy bulk heat from CHP plants and sell to heat customers. In the case of Ulaanbaatar, where the DH business is further divided into wholesale (primary network/transmission) and retail (group substations and secondary network/distribution) operations, the DH company only owns and operates the primary network and sells to large industrial and commercial customers and municipally owned housing companies which distribute heat and DHW to apartments and small commercial customers.

The national Energy Regulatory Agency (ERA) regulates the DH sector and sets tariffs for heat and DHW which are kept artificially low for residential consumers. Heat expenditures of those consumers connected to DH systems are substantially lower, both in absolute and relative terms, than expenditures of non-connected consumers. The latter are substantially poorer and received less heat which is based on dirty fuels.

With the low DH tariffs, none of the heating companies is financially able to invest in facility improvements or expansion. Growth in population and urbanization contribute to growing heat demand, which is expected to require new heat generation facilities within the next five to seven years. Sustainable improvements in the efficiency of existing heat delivery would go a long way towards replacing such generation investment in a cost-effective way. There is, however, little money available from operational income to pay for activities beyond emergency responses and some basic maintenance of the ageing network and equipment. The current tariffs can hardly justify any investments. Service quality is low with wide-spread

overheating and underheating problems because of extensive hydraulic imbalances in the network and the inability of households to control heat consumption. For most customers, heat and DHW is still billed based on flat fees.

In summary, the Mongolian DH sector is saddled with technical inefficiency and financial instability, which in turn affects service quality, ability to meet future demand efficiently, and impedes the technical and financial performance of the power sector. The roots of these problems lie in the flawed heat tariffs, a deficient institutional framework, inefficient social policies, and the lack of technical and business know-how. Like the energy sector more generally the DH sector is essentially bankrupt and financial recovery will require addressing the root problems, starting with the implementation of cost savings through energy efficiency investments.

The Government of Mongolia is committed to address the problems facing the DH sector. The Law of Mongolia on Energy (2001) has in principle laid out a market-oriented framework for managing the DH sector, stressing cost-based tariffs, heat metering and consumption-based payment, for example. But they remain mostly principles without practice, mainly due to the lack of relevant know-how, as well as the lack of financial and technical capacity to address the necessary modernization of the DH systems. The current national energy-efficient building design standard was introduced in 1997, and the enforcement has been more rigorously pursued in recent years. But addressing the high thermal losses of the existing apartment buildings also should be an important aspect of the efforts to increase heating energy efficiency and reduce the cost of heating. Institutionally, the 2001 breakup of the power and heat monopoly (*Central Energy System*) has led to a fragmentation of ownership of and responsibilities for different parts of the DH systems which may prevent efficient operation and management and ability to realize benefits from modernization investments.

2. PROJECT RATIONALE

The technical inefficiency of the DH systems in Mongolia and the specific technical problems with networks, substations, space heating and domestic hot water supply are only symptoms of a sector with several in-born deficiencies, tracing back to its heritage as a part of the state welfare apparatus. Fundamentally, the DH sector (just as other infrastructure services in Mongolia) lacks a tried and proven business model for the efficient delivery of a basic infrastructure service. Several key underlying barriers prevent the emergence of such model(s) which would allow the realization of major energy efficiency gains and environmental benefits in Mongolia's DH sector:

- I. **The lack of regulatory and institutional capacity** to carry out comprehensive market **reforms** which are critical to the long-term financial sustainability of the DH sector. Relevant national government agencies and local authorities do not have the knowledge and experience to identify and implement ownership and management reforms that are aligned with

efficient operation of the heat supply systems, as well as to establish necessary mechanisms for managing demand, such as metering, cost-based pricing and consumption-based billing, and to introduce targeted subsidies;

- II. **The lack of technical know-how** to carry out necessary energy-efficiency renovations which are essential to reducing operational cost. The heating companies are not capable of identifying and implementing optimal DH system rehabilitation strategies and have no experience in management and optimization of demand-driven variable flow DH systems and customer services. In addition, there is no experience in identifying and implementing cost-effective energy renovation measures for the existing buildings, an undertaking which often is important to the success (cost-effectiveness) of the overall heating energy conservation strategy; and
- III. **The lack of financial resources** for any significant capital investments. Despite relatively good collection rates, the artificially low consumer tariffs for heat and DHW do not even cover the operation cost of DH heating companies, which already are subsidized by limiting the bulk heat tariff charged by CHP plants. The revenues from consumer charges can barely support the most urgent repairs of the ageing DH systems, preventing DH companies from making any investments in rehabilitation and modernization. This financial constraint will ease as tariff reform takes hold. But to get a head start on the broad energy efficiency improvements of the DH systems, some seed capital is needed for piloting promising DH rehabilitation and modernization strategies.

These fundamental issues are intricately linked and only by addressing them together will the Mongolian DH companies be able to become energy-efficient and financially sustainable businesses. Without addressing these issues, the Mongolian DH companies are likely to be entrenched in a vicious cycle of asset and service degeneration, and require that its highly inefficient operations be sustained by government subsidies and periodical capital injections.

GEF incremental barrier removal assistance is needed to (i) support international knowledge transfer to remove the regulatory and institutional barriers to competent market-oriented sector management and development; and (ii) support the identification, design and implementation of critical rehabilitation and modernization strategies and action plans that will remove the technical and engineering barriers as well as initial financing hurdles to broad replication of energy efficiency measures.

GEF resources for barrier removal will be complemented by an IDA loan and donor co-financing, which will finance the investments in scaling-up heating system rehabilitation and modernization in the DH systems of Ulaanbaatar and Darkhan, as well as cost-effective energy efficiency measures for residential buildings in these two cities. The provision of GEF co-financing is expected to catalyze additional

international financial assistance to replicate successful energy efficiency investments and DH business model(s) developed in this project to other cities in Mongolia.

3. PROJECT OBJECTIVES

The development objectives of the proposed project are to attain major energy efficiency improvements and long-term financial sustainability in Mongolia's DH sector by assisting in the implementation of market-oriented and socially sustainable regulatory and institutional reforms and by supporting technology transfer, capacity building and crucial investments in heating system modernization.

Achievement of these objectives will promote access to cleaner and highly efficient DH services by the general urban population and by the poor in particular. It will also contribute to overall efficiency improvements of Mongolia's power sector management and development. It is expected to delay the investment in new heat generation capacity in a cost-effective manner.

The global environment objective of the proposed project is to achieve large and sustained coal savings from centralized heat and DHW supply and consumption, thus significantly reducing carbon dioxide emissions from DH services.

4. PROJECT OUTPUTS

The main outputs of the proposed project include:

- a. National tariff and billing reforms for heat and DHW, including cost allocation in CHP plants and targeted subsidies for poor households;
- b. Ownership reforms and improved management and operational practices that are better aligned with the operation of a modern, customer-oriented DH sector; and
- c. Exemplary modernization and rehabilitation of DH systems, particularly the secondary networks, DHW supply systems and building internal control and metering components, and connection of HOB-based systems to integrated DH networks, in the cities of Ulaanbaatar and Darkhan.

B - COUNTRY OWNERSHIP

1. COUNTRY ELIGIBILITY

Mongolia signed the UNFCCC on June 12, 1992, and subsequently ratified it on September 30, 1993. Mongolia accepted the Kyoto Protocol on December 15, 1999.

2. COUNTRY DRIVENNESS

The project concept is consistent with priorities of the country as identified in Mongolia's initial national communication to UNFCCC (about 2000). Modernization of heat supply systems, including building insulation and internal heating equipment

has been identified among the investments with the highest priority (high CO₂ reduction potential) and the highest cost-effectiveness.

It is also consistent with the emerging finding of the Infrastructure Strategy—under development by the Government, the World Bank and other donors—that is: (i) the need to rationalize public investments in infrastructure; and (ii) the need to bring together public-private partnerships in delivery of infrastructure services such as heat; and (iii) the need to do it while balancing affordability and sustainability issues, particularly for low income consumers. Further, given the fiscal constraints and the need to implement a financial recovery plan, one of the emerging findings of this work is the need for substantial cost reductions, for example by improving the energy efficiency of heat supply and demand in main urban centers, and for addressing reform issues such as pricing and institutional systems. Focusing on energy efficiency investments first, rather than investment in new power plants for heat supply, will allow the country to focus on achieving efficiency gains of the current system first while laying the ground for a sustainable energy sector. This is an area where donor support has been lacking and needs to integrate urban and energy issues, given the high level of heat and water losses in the heat and DHW supply system.

C – PROGRAM AND POLICY CONFORMITY

1. PROGRAM DESIGNATION AND CONFORMITY

The project is proposed to the GEF under Operational Program No. 5 (OP 5): Removal of Barriers to Energy Efficiency and Energy Conservation. The specific strategic priorities and objectives supported by the proposed project in the context of the GEF Business Plans for FY04-06 and FY05-07 are: CC-1: Transformation of Markets for High Volume Products and Processes; and CC-3: Power Sector Policy Frameworks Supportive of Renewable Energy and Energy Efficiency.

The proposed project would support the following specific GEF strategic objectives:

- Promoting building energy efficiency, particularly energy efficiency in the energy-related systems used in buildings. The relevance of the proposed project is especially strong since it proposes to remove the barriers of a deficient policy environment and institutional arrangements, focusing, among others, on the reform of billing and metering systems. Interventions to facilitate efficiency investments in the sector will be promoted.
- Promoting energy-efficient appliances and equipment, particularly in the heat supply industry. Capacity building of the heat suppliers and awareness raising and information dissemination on energy efficient equipment will be the major interventions to be promoted.

2. PROJECT DESIGN

The justification for GEF participation is removal of the barriers described in section A. This section describes the baseline (without GEF) and alternative (with GEF)

scenarios, along with the corresponding local and global benefits due to the alternative scenario, and the cost-effectiveness of GHG emission reductions.

The baseline scenario is without GEF support. It is recognized that some efficiency improvements in heating systems have already taken place (see Section A). To the extent that the publicly owned heating companies, which are essentially bankrupt, can avail themselves of additional donor funding, a limited number of efficiency improvement projects will be implemented without GEF support. However, efficiency improvements that are not integrated throughout the entire supply chain and the supplied buildings, are not accompanied by financial resources for necessary operations and maintenance and by changes in improved operational and management practices, as well as changes in consumer behavior, are not expected to be successful and will not lead to lasting efficiency and service improvements and thus sustainability of benefits.

Moreover, many viable projects would not be implemented, even though they are cost-effective, because of the barriers and risks. This will inhibit investments in the secondary network of the UB DH system in particular. They are owned by the municipality, and the institutional, technical know-how and financial resource barriers are especially pronounced here.

Under the GEF alternative scenario, GEF support will remove critical barriers — focusing on those of an institutional/policy and transfer of best practices/know how nature—hence enabling the viability of subsequent efficiency improvement projects and enhancing the sustainability of such investments. Furthermore, GEF participation will also attract the participation of other financial and bilateral institutions, enabling the project to adequately address critical needs in the DH service chain and make a major impact by transforming two of the largest DH operations in Mongolia – Ulaanbaatar and Darkhan. This upstream GEF barrier removal intervention will pave the ground for subsequent sustainability of the DH sector.

GEF support is requested for several technical assistance components and targeted demonstration investment. Both are critical for barrier removal. The investments will be selected in such a way as to demonstrate best practices of heating system modernization in those parts of the DH supply system and the buildings that have been "neglected" so far. All investments will be carried out in an integrated way so as to ensure that energy savings and subsequently GHG emission reductions do actually materialize along the supply chain. Several parts of the secondary network will be selected for GEF-financed investments, and the heating companies operating them will also be the beneficiaries of TA to improve their operations and management. Scale-up of similar investments to other parts of the heat supply systems will be financed from an IDA credit and possibly contributions of other donors.

Technical assistance (estimated at US\$1.8 million, of which GEF US\$1.6 million)

- TA 1: Support to the Energy Regulatory Authority (ERA) of Mongolia, heat supply companies and heat consumers in the implementation of cost-based two-part heating tariffs, consumption-based billing systems and heat and DHW metering systems. This would complement work to be started under ESMAP (US\$200,000) in 2006 (GEF US\$300,000);
- TA 2: Support to municipalities, other owners of DH assets in the design and implementation of institutional, managerial and commercial reforms, incl. appropriate and efficient private sector participation schemes in the heating sector (GEF US\$300,000);
- TA 3: Support of Heat suppliers for piloting such market-oriented reforms (GEF US\$300,000);
- TA 4: Support for a Heating Association for dissemination of information and best practices in the design, implementation and O&M of modern and efficient demand-driven DH systems and in commercial business practices, implementation of training and capacity building for suppliers and consumers of heating services (GEF US\$500,000);
- TA 5: Monitoring and Evaluation for reporting of project results to GEF and others (GEF US\$200,000).

Investment (estimated at US\$38.2 million, of which GEF US\$6.4 million)

GEF co-financing of selected key investments in innovative new energy efficient heat supply and management technologies that are unknown and untested in Mongolian conditions is needed to overcome barriers to implementing such investments more broadly.

1. Metering for DHW at building and apartment level and heat metering and radiator control valves at apartment level (in connection with TA 1; GEF US\$1.5 million). These investments in metering equipment will also contribute to improved monitoring and evaluation (TA5) of project results.
2. Selected cost-effective thermal rehabilitation investments to the building shell such as windows (GEF US\$0.9 million)
3. Rehabilitation/Modernization of the secondary heat and DHW supply networks, including DHW heat exchangers, in UB and Darkhan (GEF US\$2.1 million)
4. Connection of small, isolated HOB-supplied networks and areas not yet supplied with central heating to the centralized DH network (GEF US\$2 million)

Global Benefits. The GHG emission reductions resulting from energy savings in the UB and Darkhan heating systems as a result of implementation of the proposed project are estimated to be about 200,000 tons CO₂/yr. The proposed project (GEF case) would result in a cumulative reduction of 4 million tons of CO₂ over a 20-year period after the completion of the project. This estimate only applies to the current DH capacity in UB and Darkhan without consideration of future demand growth. Potential energy savings from energy efficient thermal renovation of existing buildings induced by heat pricing and billing reforms are not considered, either.

Incremental Costs and cost effectiveness. Considering that GEF will contribute \$8 million, the unit abatement cost works out to US\$2.0 per ton of CO₂. Even in comparison with non-grant GEF climate change interventions, this is an outstanding relative cost-effectiveness.

Local Benefits. The local benefits include: 1. Reduction in local pollution (mainly SO₂, NO₂ and particulate emissions from coal-fired CHP and boiler plants); 2. Improved financial viability of Mongolia's DH sector; 3. Reduced government subsidies to DH sector; and 4. Facilitation of private sector development, for example, in ancillary services such as billing.

A summary of the costs and benefits is presented also in Table 1.

Table 1: GEF Incremental Cost Matrix			
	Baseline	Alternative	Increment
Domestic Benefits	Barriers to heating services EE projects contribute to local pollution from coal-fired CHP and HOB plants	Increased investment in EE improvement projects reduces local pollution.	Lower local pollution
Global Benefits	Baseline level includes a limited number of heating sector EE projects (e.g., connection of Khani Material Area to DH transmission network); some of these projects take longer to be implemented and others utilize inefficient technologies, operational and management practices to reduce costs. Benefits are not expected to be sustainable.	Modernization investments, cost-based pricing, consumption-based billing etc are estimated to lead to energy savings of 475 GWh per year compared to the baseline, resulting in annual emission reductions of 200,000 million tons of CO ₂ .	The alternative scenario (compared to the baseline) results in the reduction of 4 million tons of CO ₂ emissions over a 20-year project life.
Costs	Some EE investments under baseline scenario (estimate of US\$ 5 million between 2006 and 2010)	Investments in EE of US\$40 million over 5 years, based on the total GEF contribution of US\$8 million.	Increased investments by US\$35 million, over 5 years, result from the project. Incremental costs of implementing the project of US\$8 million.

3. SUSTAINABILITY (INCLUDING FINANCIAL SUSTAINABILITY)

The GEF project will demonstrate how to put all the necessary technical elements in place to ensure that heat supply systems and consumer facilities are modernized in an integrated way and that potential energy and other resource savings are realized. Support for the introduction of cost-based two-part heat tariffs and consumption-based billing for all end-users, and for commercial and management reforms of the heating companies will contribute to generating income of heating sector companies sufficient to ensure subsequent funding of adequate maintenance and replacement investments and repayment of loans. Accompanying social measures will ensure that

targeted social support is available for poor households so that they continue to have access to basic heat supply services. Together these elements will contribute to the development of a commercially viable heat supply industry that can provide heat in a socially and environmentally sustainable manner.

4. REPLICABILITY

The experiences and lessons from GEF supported subprojects will be used to scale-up cost-effective energy-efficiency investments in the heat and DHW supply systems in UB and other towns in Mongolia with financing from IDA and other donors. Other transition countries, particularly the smaller and poorer ones where the heating sectors are in similar circumstances as in Mongolia, would be able to use the project lessons and experiences when restructuring and upgrading their heating sectors.

5. STAKEHOLDER INVOLVEMENT/INTENDED BENEFICIARIES

The key project beneficiaries would be the heat supply companies and their customers and the final end-users of space heat and DHW in major urban areas. Other project beneficiaries and stakeholders include the Government of Mongolia, the Energy Regulatory Agency, municipal governments, NGOs such as the Supreme Council of Condominium Associations of Mongolia, and bilateral donors.

They have been consulted during project identification and are being involved in project preparation activities through various trust-funded activities.

D - FINANCING

1. FINANCING PLAN

GEF funds of US\$8 million are sought to provide financial support for key TA activities and investments, providing the necessary support to overcome the barriers identified above, hence ensuring successful implementation and long-term sustainability. The GEF funding will support sector reform activities, particularly tariff and billing reform, information dissemination and capacity building, and key investments in those areas where knowledge and capacity barriers have so far prevented the implementation of cost-effective energy saving measures (e.g., secondary network and within buildings).

2. Co-financing

After initial demonstration co-financed with GEF funds (upstream barrier removal), IDA, CDM and other donor funds will be used to replicate major energy efficiency investment on a broader scale, thus targeting financial barriers as well as implement a targeted subsidy mechanism. Subject to GEF support, bilateral donors have indicated strong willingness to provide such co-financing. The indicative amounts are as follows:

- IDA: US\$20 million
- Other donors: US\$12 million

During project preparation the team will explore other opportunities of donor financing, including from the European Union.

E - INSTITUTIONAL COORDINATION AND SUPPORT

1. CORE COMMITMENTS AND LINKAGES

The proposed project directly supports two objectives of the FY05-FY08 CAS (approved in April 2004): (i) it supports reforms to improve the efficiency and distributive impact of infrastructure investments and financial sustainability, thereby consolidating the transition (CAS Objective 1); and (ii) it contributes to reducing urban environmental threats to achieve economic growth and development goals, thereby reducing vulnerability (CAS objective 2). It also addresses Governance related issues by reinforcing check and balance mechanisms, such as participation of private sector participation under strengthened supervisory and regulatory agencies.

Aside from a MSP, there has been no major GEF intervention in the energy sector in Mongolia. The ongoing MSP has focused its attention on those heat consumers not connected to the grid, by introducing improved heating/cooking stoves through commercially based systems. Lessons learned from this project are the need to focus early on: a) the policy framework to facilitate barrier removal; and b) the need to demonstrate early on application of the proposed concept, so that main stakeholders can line-up to support the implementation; and c) the need to line-up subsequent funding for scaling-up.

2. CONSULTATION, COORDINATION AND COLLABORATION BETWEEN AND AMONG IMPLEMENTING AGENCIES, EXECUTING AGENCIES, AND THE GEF SECRETARIAT, IF APPROPRIATE.

The GEF project will follow up on the ADB-financed "Ulaanbataar Heat Efficiency Project" which is coming to a close in the fall of 2005. The investments financed by this project have lead to significant efficiency improvements in the heat transmission system of UB. Some of the biggest sources of energy and water waste are in the secondary systems and building-internal heating equipment which were addressed by the ADB project only in the form of one demonstration project. Furthermore, while heat meters for some customers were installed, consumption-based billing was not introduced for fear of resulting in a very substantial drop in revenues, thus exacerbating the precariousness of sector finances.

Based on intensive discussions with the Government, ADB project beneficiaries and other experts, the need for specific GEF-financed interventions in UB as well as in other cities in Mongolia were identified and have been discussed with the GEF Secretariat.

USAID is developing an Energy Efficiency Capacity Building Program for the construction sector, designed to provide local stakeholders in the formal housing sector with the skills and knowledge to improve building energy efficiency. This

project will complement the GEF project by addressing heating demand issues and building a network of relevant policymakers and private sector actors that the GEF project can utilize for additional outreach. USAID has participated in discussions on the GEF project and will participate in the advisory group.

3. IMPLEMENTATION/EXECUTION ARRANGEMENTS

The proposed project will need to resolve intersectoral issues in the urban, energy, and social areas. It was therefore decided to set up an intersectoral working group, which is the Mongolian counterpart to the World Bank team during project preparation. Its members include Ministry of Construction and Urban Development, Ministry of Fuel and Energy, Ministry of Nature and the Environment, State Property Commission, Energy Regulatory Agency, Ulaanbataar Municipality, UB Heat Transmission Company. The Ministry of Social Welfare and Labour will be asked to join the Working Group as well.

During project preparation implementation arrangements will be decided and designed in detail to ensure a high quality technical and financial implementation of the project.