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**AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C.**

**RUSSIA ENERGY AND ENVIRONMENTAL
COMMODITY IMPORT PROGRAM
PROJECT NO. 118-0013
PAAD NO. 118-K-601**

Approved: December 14, 1993



U.S. AGENCY FOR
INTERNATIONAL
DEVELOPMENT

DEC 14 1993

ACTION MEMORANDUM FOR THE DIRECTOR, ENI BUREAU

FROM: Carlos Pascual, ENI/NIS/PAC *CP*
SUBJECT: Authorization Request for the Russia Energy and
Environmental Commodity Import Program, 118-0013

PROPOSED ACTION: Your approval is required to authorize a two year, \$125 million Commodity Import Program (CIP) for Russia, which will provide U.S. equipment and related services for the energy and environment sectors. It is expected that a grant agreement for initial funding of \$10 million will be signed during Vice President Gore's visit to Moscow in mid-December.

BACKGROUND: The CIP is an outgrowth of high level internal USG dialogue earlier this year concerning the need to help expand Russia's export of oil and gas for badly needed foreign exchange, while at the same time reducing the energy sector-induced global warming emissions of methane and carbon dioxide. During the subsequent Vancouver Summit, both President Clinton and President Yeltsin emphasized the importance of addressing these problems. As a result of the July G-7 Tokyo Summit, the CIP became an important element of new U.S. assistance to Russia. It has since become a feature of the Vice President Gore - Prime Minister Chernomyrdin Commission on Joint Technological Cooperation, representing a quick mechanism to tangibly demonstrate the benefits of U.S. technology to meet critical energy and environmental needs.

Russia's excessive emphasis on physical production targets, the operation of inefficient equipment, and uneconomic pricing has left a legacy of pollution and unabated resource exploitation. The country suffers from massive waste in the distribution of heat by district heating plants; use of inefficient electric motors and lighting; annual flaring of an estimated 13 billion cubic meters of gases in the course of oil production; low productivity and dangerous conditions in the coal mines; and a wide range of environmental problems that include major nuclear accidents, polluted air and water, and large lake-like

accumulations of oil from pipeline leakages. Consistent with a number of important US foreign policy goals, the underlying purpose of the CIP is to demonstrate immediate and visible support to the democratic and economic reform process underway in Russia. Because this is the first USG bilateral assistance agreement to be signed with the GOR, there are many unknowns with respect to the institutional impacts on the various Russian entities with which the activity will operate. Thus, there may be a greater element of risk with respect to this CIP than might be the case with more established programs.

PROGRAM DESCRIPTION: To address these problems, a two-year \$125 million grant will be made to the GOR to provide Russian public sector and privatizing entities with U.S. equipment designed to improve the efficiency of energy use and enhance environmental quality, primarily in the energy sector. A small amount of the CIP (up to 3%) will be used to finance management of the program through contracted technical assistance and to assure accountability through independent audits. Depending on decisions made with regard to local currency monitoring (see issue below), additional funds for financial monitoring by a U.S. CPA firm may be required.

A number of significant benefits are expected to flow from this program:

- The introduction and demonstration of U.S. equipment and technology, with the potential for stimulating exports to Russia;
- At a demonstration level: more efficient energy production, reduction of energy waste and pollution, and improve the safety of coal miners;
- Strengthened monitoring capacity of Russia's environmental protection agencies.

Commodity procurements will be targeted in the following five major energy subsectors and the environment sector:

1. Natural Gas: The natural gas sector is dominated by GAZPROM and ROSGAS which control production, transmission and distribution of natural gas. GAZPROM supplies the international as well as the domestic market, it is a major earner of foreign exchange. Equipment procured under the CIP would likely be used to improve the efficiency of transmission and distribution, and reduce methane emissions.
2. Oil: The oil sector is more fragmented, with over 40 "production associations", and long distance distribution by TRANSNEFT (a parastatal). The oil sector is particularly important to the CIP because large quantities of gas in the oil fields is flared, resulting in energy wastage and increased greenhouse emissions. Loss of oil from the pipelines is also reported to be very high. The CIP would likely finance equipment for the use of flared gas, pipeline repair and environmental enhancement.

3. District Heating Systems: The district heating systems service almost all buildings in urban areas and smaller towns, usually with natural gas as the energy source. Audits show significant opportunities for improving efficiency levels. Possible procurements include meters, insulation, and equipment to reduce leakages and improve controls and insulation.

4. Power: Russia has a large, well developed power network, and manufactures all necessary electric power generation equipment. Opportunities for commodity imports would include environmental control equipment for power plants, computer-based energy management systems, equipment designed for higher efficiency of generation and transmission systems and improved dispatch capability.

5. Coal Mining: The coal mining industry suffers from antiquated equipment resulting in poor productivity and unsafe conditions. Equipment procurement would emphasize health and safety equipment for miners, as well as equipment required for methane recovery and use.

6. Environmental Protection: Environmental monitoring of air, water and solid wastes is severely hampered by the lack of modern technologies and equipment. Opportunities for commodity procurement include measurement and monitoring equipment, and items that would increase the effectiveness of Russia's environmental protection agencies.

GOR Program Management Procedures:

The Commission on International Aid and Technical Assistance of the Russian Federation (CIATA) will be the primary counterpart for the program, and oversee the operations of a Secretariat, which will carry out day-to-day implementation duties. A Joint U.S. - Russian Steering Committee, with inter-ministerial representation, will be responsible for allocation of grant funds and oversight of the CIP. It should be stressed that an adequate equipment arrival, disposition and end-use monitoring system has not yet been agreed with CIATA. The grant agreement contains a condition precedent to disbursement of funds for commodity imports which requires USAID and the GOR to agree upon the procedures and documentation to be used for monitoring the arrival and end use of commodity imports. No disbursement will be made for commodities until such a system is established.

The Secretariat will be staffed and assisted by the technical services contractor, and will be responsible for arrival accounting and end use monitoring of commodities. It will also review equipment requests and forward them to the Steering Committee, review technical specifications and provide general CIP support.

ISSUES AND RISKS:

A. Local Currency Generations: USAID policy requires that local currency generations be deposited in a special account, that they be programmed to agreed uses and that these uses be monitored and audited by USAID to assure accountability. As with the equipment monitoring and accountability system, we have not yet reached agreement with our Russian counterparts on an acceptable local currency generation and monitoring system. Consequently, we have included a condition precedent to the disbursement of funds for commodity imports which requires USAID and CIATA to agree upon a local currency generation and management plan. Key issues and options are outlined below:

- Management of and accountability for local currency generations will impose an extensive management burden on both Russian counterparts and the USAID Mission. The local currency management plan must be within the capacity of both USAID and its Russian counterparts to implement effectively.

- A key concern in managing local currency under the program is to ensure that all expenditures are reflected in the Russian budget. This is essential for both budgetary transparency and to reinforce sound monetary management. In initial discussions, the Ministries of Environment and Energy had advocated creating an off-budget local currency fund to finance energy efficiency and environmental improvement projects. Such an "off-budget" fund is the least desirable programming option. It would, in effect, constitute additional government spending outside the budget that could prove inflationary. It would also require substantial monitoring and tracking for "projectized" activities that would impose a major management burden on USAID and Russian counterpart. The option of using local currency generations for general budget support of the Ministries of Energy and/or Environment, which would be on-budget and consistent with the sectors addressed in the CIP, has Russian support, but raised question of possible additionality on the part of USAID.

- It is AID's position that local currency be generated and used for retirement of GOR national debt. Such debt payments would be reflected in the national budget and would support debt repayment schedules agreed upon with the international financial institutions. Payment terms for importers would be commensurate with the type of equipment to be imported and the status of the importing entity, with enterprises engaged in commercial activities generally required to pay an appropriate portion. In order to assure accountability and to limit the USAID management burden, USAID/Moscow will explore negotiating an arrangement with the Russian Ministry of Finance in which local currencies would be deposited in a special account in advance by the Ministry, and would be used immediately to liquidate debt of the Government of Russia. This approach has been discussed with the USAID Office

of the Inspector General, which has agreed that it meets USAID's standards for local currency management. Alternatively, local currency may be deposited into the special account upon payment by the importers, and then used to retire GOR debt as mutually agreed with USAID.

- A less favored, but acceptable alternative would be administering the CIP as an all grant program, in which no local currency payments from the end users would be required. There would be no local currency generations. This option is not preferred by AID because it obviates the policy that commercial beneficiaries should pay an appropriate portion for the cost of the CIP equipment.

Given the complexity of this issue, the need to negotiate it with the GOR, and the need to assess the administrative capabilities of the cooperating agencies managing the special account and commodity procurement, the USAID/Moscow Mission Director will be delegated authority to determine appropriate procedures for generation, uses, monitoring and auditing of local currency. However, any use of local currency other than for debt retirement will require Washington concurrence. The Director of USAID/Moscow has primary responsibility for ensuring that the condition precedent on local currency management, to the extent local currency is generated, is met prior to disbursing funds for implementation of commodity procurement.

B. Program Management: USAID management of the project will require staff in addition to the Mission Energy Officer and the Mission Environmental Officer. The Mission plans to hire two FSN assistants and one FSN secretary. A resident USDH Commodity Management Officer is proposed, but if this position is not approved under NSDD 38, other options to assure adequate management capacity include: USAID/W USDH Commodity Management Officers rotating on a TDY basis to provide equivalent coverage (requiring approximately \$100,000/year in OE funds); or an experienced commodity management expert hired as a program-funded PSC. In any case, OE-funded TDY support will have to be made available by FA/OP until alternative arrangements are made, to permit quick startup of the program. Upon completion of negotiations regarding local currency generations, the Mission will review overall management requirements that take these arrangements and their staffing implications into consideration.

C. Corruption: Corruption is a risk in any procurement. This will be the first bilateral grant obligation by USAID with the GOR, which is unfamiliar with our standard requirements and procedures. Technical assistance and oversight of procurement and installation processes, funded by the grant, will help mitigate this risk. This will include retention of a U.S. CPA firm to closely monitor local currency transactions (if local currencies are generated).

In addition, the use of AID Regulation 1 procedures will help assure a transparent process and reduce risks. Payments to suppliers will be made through AID-issued direct letters of commitment. At such time as U.S. banks establish operations in Moscow, consideration may be given to using bank letters of credit under bank letters of commitment.

FUNDING: This program is expected to be funded from FY 1993 supplemental funds appropriated to the Department of Defense, which are expected to be transferred to USAID. These funds are not yet available. Therefore \$10 million of USAID's appropriated FY 1994 NIS funds will be advanced to permit initiation of the grant and signature during the Vice President's visit to Moscow in mid December. The balance of \$115 million is expected to be provided from the DoD transfer of funds. The grant agreement will indicate that provision of additional funds beyond the initial \$10 million is subject to the availability of funds. Upon receipt of the DoD transfer funds, USAID will apply \$10 million to other USAID activities to compensate for the advance of funds for this program.

LEGISLATION: The Freedom Support Act and the FY 1994 Appropriations Act contain several provisions that limit assistance or require the Executive Branch to take into consideration certain factors in providing assistance. Section 498(A) of the FAA of 1961, as amended, sets forth a number of matters that are to be taken into account in providing assistance to NIS countries, such as progress toward democracy and economic reform, human rights, peaceful resolution of ethnic disputes and restraining arms transfers. State has taken or will take these matters into consideration in approving this memorandum. Section 498(A) also prohibits aid to any NIS country that violates any of a number of restrictions relating to matters such as human rights, arms control, nuclear proliferation and, with respect to Russia, withdrawal from the Baltics and territorial integrity requirements. Again, State will advise if any such matters would prohibit assistance to an NIS country.

The Congressional hold on the Congressional Notification has been lifted, and the 15 day waiting period expired.

RECOMMENDATION: That you sign the attached documents authorizing: (1) the \$125 million Commodity Import Program for Russia and obligation of \$10 million; and (2) the delegation of authority to the Vice President and/or the Ambassador to Russia and/or the Mission Director, USAID/Russia to negotiate and execute an agreement with the Government of Russia, and to the Mission Director, USAID/Russia, to negotiate implementation arrangements as necessary and to issue appropriate implementation letters.

cipmem.2:12/6/93

Clear:

DAA/ENI/NIS: LCrandall (~~DRIFT~~) 12/14

DAA/ENI/NIS: BTurner ~~Bo~~ 12/14

ENI/NIS/PAC: PMatheson (draft)

ENI/NIS/EET: JBever (draft) ~~JMB~~

ENI/NIS/EET: RBeckman ~~JMB for~~

GC/NIS: TGeiger ~~TG~~

ENI/NIS/CONT: RLawrence ~~RL~~

FA/OP/CC: RRichardson ~~RR~~

S/NIS: CRufenacht (~~DRIFT~~) 12/14
~~PHONE~~

CLASSIFICATION:

AGENCY FOR INTERNATIONAL DEVELOPMENT		1. PAAD Number 118-K-601 Project No. 118-0013	
PROGRAM ASSISTANCE APPROVAL DOCUMENT		2. Country Russia	
(PAAD)		3. Category Commodity Import Program	
		4. Date December 13, 1993	
5. To Government of Russian Federation		6. OYB Change Number	
7. From ENI Bureau		8. OYB Increase: To be taken from:	
9. Approval Requested for Commitment of \$10 Million		10. Appropriation Budget Plan Code 72-11X-1093 WNIX-94-36118-KG32	
11. Type Funding <input type="checkbox"/> Loan <input checked="" type="checkbox"/> Grant	12. Local Currency Arrangement <input checked="" type="checkbox"/> Informal <input type="checkbox"/> Formal <input type="checkbox"/> None	13. Estimated Delivery Period 12/93 - 12/95	14. Transaction Eligibility Date Authorization Date

15. Commodities Financed Energy and environment-related U.S. commodities, equipment and related services.

16. Permitted Source U.S. only \$10 Million	17. Estimated Source U.S. \$10 Million
Limited F.W.	Industrialized Countries
Free World	Local
Cash	Other

18. Summary Description The purpose of the Russia Energy and Environmental Commodity Import Program is to introduce into Russia U.S. equipment designed to improve the efficiency of energy use and improve environmental quality, primarily in the energy sector. Equipment designed to improve environmental monitoring and coal miners' health and safety will also be demonstrated. A small portion of the CIP (approximately 3%) will finance technical assistance for management and monitoring of the program.

The planned life of project total for the Russia CIP is \$125 million, subject to availability of funds. The initial tranche, financed under this authorization, is \$10 million.

Conditions precedent to initial disbursement include the standard provisions on evidence of a duly authorized agreement and designation of an official grantee representative, plus evidence of the establishment of a Joint Russian-American Steering Committee and its Secretariat.

Conditions precedent for disbursement for commodity procurement are: (1) the criteria, procedures and documentation to be used for the allocation of grant funds to importers; (2) procedures and documentation to be used for the monitoring of the arrival disposition and end use of CIP commodities; and (3) terms and procedures for the deposit, use, management and accounting for any local currency generations.

19. Clearances	ENI/NIS:CPascual <i>CP</i> 12/14/93	20. Action <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED
ENI/NIS:RBeckman <i>R</i>	12/14/93	
ENI/NIS:LCrandall <i>LC</i>	12/14/93	Authorization Signature <i>Maledon Bonita</i>
ENI/NIS:Wynn <i>W</i>	12/14/93	
ENI/NIS:SHudec <i>SH</i>	12/14 -	Date 12/14/93
GC/NIS:TGeiger <i>T</i>	12/14	Title Acting Assistant Administrator Bureau for Europe and New Independent States
FM:MUernick <i>M</i>	12/14/93	

PAAD

RUSSIA ENERGY & ENVIRONMENTAL COMMODITY IMPORT PROGRAM

118-0013

1.0 SUMMARY

The Russia Energy & Environmental Commodity Import Program (CIP) is a two year, \$125 million public sector grant program under the U.S. Tokyo G-7 initiative of 1993 to introduce to Russia U.S. equipment designed to improve the efficiency of energy use and improve environmental quality, primarily in the energy sector itself. Equipment designed to improve environmental monitoring and coal miners' health and safety will also be demonstrated. The equipment and related services will be provided to public sector and privatizing entities, some of which are in the process of privatizing. A small portion of the CIP (approximately 3%) will finance technical assistance for management of the program.

Consistent with important US foreign policy goals, an underlying purpose of the CIP is to demonstrate immediate and visible support to the democratic and economic reform process underway in Russia. Because this is the first USG bilateral assistance agreement to be signed with the GOR, there are many unknowns with respect to the institutional impacts on the various Russian entities with which the activity will operate. Thus, there may be a greater element of risk with respect to this CIP than might be the case with more established programs.

Significant benefits are expected from this program, including:

- Introduction of U.S. technology and the potential stimulation of U.S. exports to Russia.
- At a demonstration level, more efficient production or reduction of energy waste and pollution; and equipment to improve the safety of coal miners.
- Strengthened monitoring capacity of Russia's environmental protection agencies.

The Commission on International Aid and Technical Assistance of the Russian Federation (CIATA) will be USAID's primary counterpart for the program. A Joint Russian-American Steering Committee comprised of representatives from Russian Government

agencies (Ministries of Fuels & Energy, Environment and Finance and the State Customs Committee) and representatives of USAID will be established to oversee implementation of the program. A Secretariat will be established to provide administrative, technical, and monitoring support for implementation of the CIP.

2.0 BACKGROUND AND RATIONALE.

2.1 Background. The CIP is an outgrowth of the March 1993 high level internal USG dialogue (just prior to the Vancouver Summit) of how to simultaneously address the need to help expand Russia's export of oil and gas for badly needed foreign exchange while at the same time reducing the energy sector-induced global warming emissions of methane and CO₂. During the Vancouver Summit, both President Clinton and President Yeltsin emphasized the importance of addressing these problems. As a result of the subsequent April 1993 G-7 Foreign & Finance Ministers' Meeting in Tokyo and the July G-7 Tokyo Summit, the CIP became an important element of new U.S. assistance to Russia. It has since become a feature of the Vice President Gore-Prime Minister Chernomyrdin Commission on Joint Technological Cooperation, representing a quick mechanism to tangibly demonstrate the benefits of U.S. technology to meet critical energy and environmental needs arising from the circumstances described below.

Under the Soviet command economy, there was a drive to maximize production without regard for efficient use of energy or environmental impact. State-imposed low, fixed energy prices exacerbated the uneconomic development and inefficient use of energy resources. A major result of this policy was an inefficient, outdated energy industry which is one of the largest contributors to global warming gases, especially methane and carbon dioxide. In contrast, the development of equipment and technology in western countries has been driven by the need to conserve energy in face of high world prices, and requirements to reduce emissions in accordance with stiff local and federal regulations. To date, neither of these stimuli has been operating effectively in Russia, although multiple donor resources (including USAID's) are beginning to focus on this. It is expected that the CIP will provide equipment to tangibly demonstrate to Russian decision makers the benefits that can accrue on a wider scale as policy and regulatory reforms evolve.

The legacy of problems resulting from excessive emphasis being placed on physical production targets, the operation of inefficient equipment and uneconomic pricing is enormous. The country suffers from massive waste in the distribution of heat by district heating plants supplying the cities; use of inefficient electric motors and lighting; flaring of gases associated with oil production in excess of 13 billion cubic meters annually; low

productivity in Russia's coal mines and dangerous conditions, such as excessive methane in the mine shafts; and a wide range of environmental problems that include polluted air and water bodies, and large lake-like accumulations of oil from pipeline leakages.

Most of the problems, as well as the potential for energy savings and environmental improvement, have been verified as a result of studies carried out over the last 18 months by USAID under its Energy Efficiency and Market Reform Project. The CIP program design is based largely on the findings of the work done under that project.

2.2 Rationale. The potential for enhancing Russia's export earnings through new production and reducing waste in existing production has come to the attention of foreign investors and international banks. Investment missions have focussed on exploitation of Russia's oil and gas resources. For example, the Russian government has entered into a framework agreement with the Ex-Im Bank providing a \$2 billion line of credit in the energy sector and the World Bank has prepared a \$600 million oil well workover project loan for Western Siberia, pending final GOR approval.

Nevertheless, there are many activities and elements of the energy sector which such loans and investments may not reach in the foreseeable future. These have to do with control of environmental pollution and the use of high efficiency equipment by enterprises whose revenues are largely derived from low domestic prices fixed by the government. In addition, Russian energy sector organizations or users are not fully familiar with many modern energy saving technologies, and are therefore reluctant to invest in such technologies, particularly given the uncertain and somewhat chaotic economic conditions in Russia. Hence, the CIP will finance equipment for environmental enhancement and energy efficiency improvement which are otherwise unlikely to be available in the foreseeable future in the absence of the CIP.

The data and experience gained as a result of this program will enable the energy sector decision-makers in particular, and the Russian policy makers in general, to see for themselves the benefits of applying energy efficient and pollution control technologies. The CIP program will significantly enhance the familiarity of the Russian energy sector with U.S. suppliers of equipment and related services.

3.0 PROGRAM DESCRIPTION

The purpose of the Russia CIP is to introduce U.S. equipment designed to improve the efficiency of energy use and improve environmental quality, primarily in the energy sector.

3.1 Objectives. Specific objectives of the CIP are to:

- a. Introduce new technology into Russia which, if effectively used, would:
 - i) improve the efficiency of energy use in the energy sector and
 - ii) reduce environmental pollution primarily from the energy sector, in particular greenhouse gases such as methane and CO₂;
- b. Provide equipment, primarily to the environmental protection agencies in Russia, for environmental monitoring and other essential functions; and
- c. Provide equipment designed to improve health and safety of coal miners.

3.2 Equipment Eligibility Criteria. Equipment and materials to be imported under the CIP must meet the following criteria:

- (i) Must be designed to enhance the efficiency of energy production, transport or use primarily in the energy sector; OR lower harmful environmental emissions primarily resulting from the operation of Russia's energy sector enterprises; OR enhance the capability of Russia's environmental protection agencies; OR improve health and safety of Russia's coal miners; AND
- (ii) Should not be in general use or widely available in Russia at the present time, except for commodities intended for the environmental protection entities or the coal mines.

Consideration will also be given to the potential market for future export sales of similar equipment (or licensing agreements or joint ventures) from the U.S. when selecting the commodities to be imported under the program.

Annex A describes the categories of activities and illustrative commodities/equipment that may be covered by the CIP utilizing the above criteria.

Annex B shows illustrative lists of equipment and recommended allocations in selected categories meeting the prescribed

criteria. (These categories and allocations, which are subject to adjustment during program implementation, have been developed based on USAID field work.)

3.3 Major Subsectors and Equipment Categories to be Targeted.

The opportunity to import U.S. commodities will be made available to both privatizing commercial enterprises and public sector agencies. However, in view of the large potential equipment needs of the Russian energy sector, which is only second in the world to the U.S. energy sector in magnitude, the \$125 million CIP must be carefully targeted to meet the objectives of the program.

To focus these resources most effectively, assistance to the following five major energy subsectors and environment sector will be emphasized (the activities for which equipment imports will likely meet the above mentioned criteria based on the work done so far are also given in parentheses) :

- i) Natural gas transmission, distribution and use (e.g. especially equipment designed to improve the efficiency of transmission and distribution and reduce methane emissions) ;
- ii) Oil production and transportation (e.g. use of flared gas, pipeline repair and environmental enhancement equipment);
- iii) District heating systems (e.g. efficiency improvement through metering, reduced leakages and better controls and insulation);
- iv) Power generation, transmission and use (e.g. environmental control equipment for power plants, computer-based energy management systems, equipment designed for higher efficiency of generation and transmission systems and improved dispatch capability);
- v) Environmental agencies (e.g. measurement and monitoring equipment, as well as other equipment that could increase the effectiveness of the environmental protection agencies and limited quantities of pollution control equipment);
- vi) Coal mining (e.g. health and safety equipment for miners, as well as equipment required for methane recovery and use).

Equipment meeting the criteria defined earlier may also be considered for other subsectors, depending upon demand for use of the available funds in the subsectors, relative importance of that equipment in terms of potential for energy savings or

environmental enhancement, and other administrative and management considerations.

3.4 Allocation of Funds. The following factors will be taken into consideration when allocating funds for the importation of equipment and materials under the program:

- The three major energy subsectors that have been identified a priori with the most significant potential for improvement in the efficiency of energy use (natural gas transmission and distribution, power and district heating, and oil production) should each receive approximately 25% of the total funds available under the CIP;
- Environmental protection agencies should receive approximate 25% of the total funds available under the CIP.
- To reduce the administrative costs of the program, no transaction in an amount less than \$100,000 will be financed, unless specifically approved by USAID. Therefore, the minimum size of any allocation will be \$100,000.
- It is feasible to complete the procurement and initiate use of the equipment within the 24-month time frame of the CIP.

It is anticipated that all funds for commodity procurement will be allocated as soon as possible following satisfaction of the conditions precedent to disbursement.

3.5 Demonstration Activities. Benefits from the use of a selected sample of energy efficient equipment and pollution reduction will be measured. "Before" and "after" readings of appropriate variables and performance indicators will be taken by the TA contractor to show the effects of more efficient production or environmental enhancement. The use of such data can: (1) demonstrate to energy sector entities the benefits and long-term cost savings that can be gained from using energy-efficient systems; and (2) establish a data base of actual energy savings (to the extent they occur) and environmental improvement that may help in planning for future investments in these areas. These, as well as any negative results, will also be useful for GOR and enterprise planning. (Since the recipients of the equipment are to be primarily state enterprises, unreformed privatizing enterprises, and government ministries who have little or no experience or capability of working in an efficient market environment, there is no assurance that the use of the equipment, by itself, will increase efficiency or improve environmental quality or safety.)

The Ministry of Environmental Protection and Natural Resources (MEPNR) intends to establish monitoring stations and mobile monitoring units to prepare environmental baseline studies. Concentrations of CO₂, methane, and NO_x will be measured as well as other pollutants. It is hoped that some of these data will be of use in demonstrating the effects of the environment related equipment to be financed under the CIP. Commodities to support these measurements will be an early priority in the CIP.

USAID will also encourage the Secretariat to make contact with the U.S.-Russia Business Council for the purpose of keeping them informed as to whom contracts are being awarded, as well as to encourage contractors to register with the Council. The U.S.-Russia Business Council, with headquarters in Washington, D.C., is made up of U.S. organizations. The objectives of the Council are the promotion of trade and investment between the U.S. and Russia.

3.6 Payment Terms. Under present conditions (which are likely to prevail for some time) the recipients of the equipment to be financed under the CIP will not necessarily be the sole or even primary beneficiaries of either the energy savings or environmental enhancement resulting from the equipment's use. In most cases, it is expected that the Russian Federation and the rest of the world will also benefit from the improvements in energy efficiency and measures to protect the environment, especially those related to global warming gases. Nonetheless, a majority of the importers will be expected to pay some part of the value of most of the commodities to be imported. This is to help ensure a sense of ownership and commitment to the stated purpose of use.

All payments will be in rubles prior to the issuance of a payment document to a U.S. supplier, at an exchange rate prevailing at the time a Financing Request is signed, or the contract is approved for financing, by the GOR.

The payment terms would be established based on the objectives of the CIP, the special characteristics of Russia's energy sector and the prevalent economic conditions (such as ruble-dollar exchange rate, which according to many economists heavily undervalues the ruble at the present time). The terms would also depend on a) the type of commodities to be imported and b) the status of the importing entity.

Enterprises likely to receive equipment may be divided into the following categories:

- **Category A** will be those enterprises with export earnings, such as GAZPROM, who will be able to use most of the equipment to achieve enhanced revenues at prices beginning to approach world levels.

- **Category B** will be those enterprises, such as RAO ESS ROSSI and ROSGAS, with domestic ruble earnings based on fixed energy prices.
- **Category C** will be those public service enterprises, government organizations and nonprofit institutions who earn no significant revenues on their activities, such as the Ministry of Environmental Protection and Natural Resources, or the Moscow Center for Energy Efficiency.

It is expected that Category C entities may receive equipment on a grant basis. Similarly, certain kinds of equipment which do not contribute directly to revenue earning (for environmental monitoring, energy audits and coal miners' health/safety) may also be provided on a grant basis regardless of the category type.

Category A entities may be expected to pay a substantial share of the equipment value, e.g., 70%. In case of Category B entities a similar level of payment would be proposed. (It is recognized that many Category B enterprises have begun the process of privatizing, but have not yet adopted the management systems or market oriented objectives basic to commercial enterprises and are still only able to charge generally government controlled prices for their revenue base.)

Since the primary purpose of the CIP is to demonstrate the use of American technology that is not in general use in Russia today, the payment terms defined above may be adjusted further by the Director, USAID/Moscow, based on the response of potential beneficiaries, or under other special circumstances.

3.7 Local Currency: USAID policy requires that local currency generations be deposited in a separate, special account, that they be programmed to agreed uses and that these uses be monitored and audited by USAID to assure accountability. As with the equipment monitoring and accountability system, we have not yet reached agreement with our Russian counterparts on an acceptable local currency generation and monitoring system. Consequently, we have included a condition precedent to the disbursement of funds for commodity imports which requires USAID and the GOR to agree upon a local currency generation and management plan, including terms and procedures for depositing, operating, managing and accounting for the local currency. Per AID policy, the Mission will assess the capability of the designated GOR entity to manage the special account. Key issues and options are outlined below:

- Management of and accountability for local currency generations will impose an extensive management burden on both Russian counterparts and the USAID Mission. The local currency

management plan must be within the capacity of both USAID and its Russian counterparts to implement effectively.

- A key concern in managing local currency under the program is to ensure that all expenditures are reflected in the Russian budget. This is essential for both budgetary transparency and to reinforce sound monetary management. In initial discussions, the Ministries of Environment and Energy had advocated creating an off-budget local currency fund to finance energy efficiency and environmental improvement projects. Such an "off-budget" fund is the least desirable programming option. It would, in effect, constitute additional government spending outside the budget that could prove inflationary. It would also require substantial monitoring and tracking for "projectized" activities that would impose a major management burden on USAID and Russian counterpart. The option of using local currency generations for general budget support of the Ministries of Energy and/or Environment, which would be on-budget and consistent with the sectors addressed in the CIP, has Russian support, but raised question of possible additionality on the part of USAID.

- It is AID's position that local currency be generated and used for retirement of GOR national debt. Such debt payments would be reflected in the national budget and would support debt repayment schedules agreed upon with the international financial institutions. Payment terms for importers would be commensurate with the type of equipment to be imported and the status of the importing entity, with enterprises engaged in commercial activities generally required to pay an appropriate portion. In order to assure accountability and to limit the USAID management burden, USAID/Moscow will explore negotiating an arrangement with the Russian Ministry of Finance in which local currencies would be deposited in a special account in advance by the Ministry, and would be used immediately to liquidate debt of the Government of Russia. This approach has been discussed with the USAID Office of the Inspector General, which has agreed that it meets USAID's standards for local currency management. Alternatively, local currency may be deposited into the special account upon payment by the importers, and then used to retire GOR debt as mutually agreed with USAID.

- A less favored, but acceptable alternative would be administering the CIP as an all grant program, in which no local currency payments from the end users would be required. There would be no local currency generations. This option is not preferred by AID because it obviates the policy that commercial beneficiaries should pay an appropriate portion for the cost of the CIP equipment.

Given the complexity of this issue, the need to negotiate it with the GOR, and the need to assess the administrative capabilities of the cooperating agencies managing the special account and

commodity procurement, the USAID/Moscow Mission Director will be delegated authority to determine appropriate procedures for generation, uses, monitoring and auditing of local currency. However, any use of local currency other than for debt retirement will require Washington concurrence. The Director of USAID/Moscow has primary responsibility for ensuring that the condition precedent on local currency management, to the extent local currency is generated, is met prior to disbursing funds for implementation of commodity procurement.

4.0 PROGRAM MANAGEMENT AND IMPLEMENTATION

4.1 USAID/Moscow. Primary responsibility for the technical aspects of the program will be assigned to the USAID/Moscow Energy Office, with environmental technical support from the USAID/Moscow Environment and Health Office. The day-to-day responsibility for the procurement-related implementation of the program will be assigned to the Commodity Management Officer. In the event the Mission is unable to get NSDD 38 approval for bringing on board a full-time USDH Commodity Management Officer, the Mission will consider alternative arrangements. These include rotation of USDH CMO's from the AID/W office, or contracting a commodity management expert under a PSC. The Mission Commodity Management Officer will be supported by two locally hired professional staff and one secretary. While the Mission will have implementation responsibility, the official accounting station for the program will be in AID/W.

Extensive arrival accounting, equipment disposition and end use monitoring will be required under this program (see section 4.11), and systems established to ensure that these take place. The establishment of such system(s) will be a condition precedent for disbursement for commodity procurement. Since the labor-intensive nature of these functions is far beyond the capacity of the Mission to provide, and the GOR has no experience in this area, approximately 3% of the CIP has been budgeted to provide the technical assistance necessary to perform these tasks. (See Annex C.) The TA contractor will work in close coordination with the Mission CMO and form the core of the Secretariat.

4.2 Commission on International Aid and Technical Assistance of the Russian Federation (CIATA). USAID's primary contact within the GOR for all program management and implementation issues will be CIATA. The Commission will be responsible for the establishment of a Russian/American Committee to oversee the management and implementation of the CIP, and will sign financing requests for submission to USAID.

4.3 Russian-American Steering Committee. The Steering Committee will consist of representatives from the Commission, the Ministry of Fuels and Energy, the Ministry of Environmental Protection and

Natural Resources, the Ministry of Finance, the State Customs Committee, and USAID. (USAID representation, as necessary, will involve personnel from AID/W.) The meetings will be co-chaired by the GOR and USAID nominees. It is expected that the Steering Committee will meet bi-monthly, or as frequently as necessary, to determine allocations of CIP funds. All decisions taken by the Committee on the implementation and management of the program will be by agreement of the two co-chairmen.

4.4 Secretariat for Management and Administrative Support. Day-to-day implementation of the CIP will be carried out by the Secretariat to the Joint Russian-American Steering Committee. The responsibilities of the Secretariat include, *inter alia*:

- Arrival accounting,
- Equipment disposition and end use monitoring,
- Receipt and review of equipment proposals
- Technical functions (e.g. equipment specifications, procurement actions),
- General administrative support to the Steering Committee.

It is anticipated that staffing and funding for the Secretariat will initially be provided by AID through an existing technical assistance contract, which now covers implementation matters related to the CIP in its statement of work. However, to the extent possible, all costs related to funding the Secretariat will be provided from the CIP. An illustrative budget for management support of the CIP is included as Annex C.

The Secretariat will be responsible to AID and the Joint Steering Committee for the implementation of the CIP, commencing with the receipt of proposals for equipment to be financed, to carrying out end-use checks on equipment so as to confirm that it is being used for purposes consistent with the objectives of the program. Since the Secretariat will have certain technical responsibilities, part of the staff will have the relevant technical backgrounds. The Secretariat will also have access to additional technical support from the home office of the TA contractor, e.g. preparation or review of equipment specifications, assistance in reviewing justifications for sole source procurement requests, etc.

On the U.S. side, USAID's Commodity Management Officer will maintain oversight of the work of the Secretariat; on the Russian side, CIATA will maintain oversight of the Secretariat's work.

4.5 Allocation of the CIP Funds. The responsibility for the allocation of all funds under the CIP will rest with the Russian-American Joint Steering Committee. The Committee will formally notify appropriate entities of the program and invite requests for funding. All proposals will be received by the Secretariat, which will carry out a preliminary review and clarify any issues

with the organization submitting the proposal. The proposals will then be submitted to the Russian/American Committee for consideration and final decision on the allocations. In making its decisions, the Committee will use the criteria discussed in Section 3.2, above. The Secretariat will keep minutes of the meetings of the Committee and notify the successful applicants of their allocations and the requirements and procedures concerning the use of the AID funds.

4.6 Authorized Source of Procurement. The authorized source for all commodities and commodity related services to be financed under the CIP will be AID Geographic Code 000 (USA), with the exception of inland transport costs in Russia so as to assure timely and safe arrival of the equipment and materials at their final destinations.

4.7 Procurement Procedures. All procurements under the CIP will be carried out in accordance with AID Regulation 1. Additionally, all procurements will be carried out using the "public sector" procedures as set forth in section 201.22 of Regulation 1, even though some of the users might be commercial enterprises. These procedures provide for maximum competition and transparency for the program.

Preparation of equipment specifications will be done by the end-users; however, if needed, assistance in the preparation of the specifications will be available from the Secretariat. Based on the type of equipment involved, requirements concerning warranties, local service support, spare parts, supervision of installation, training, etc., will be included in the procurement.

The Secretariat will turn the final specifications over to the Commodity Management Officer, who will review them and forward them to AID/W, Office of Procurement (OP/CC). This office will attach all the standard terms and conditions and complete the preparation of the procurement document. OP/CC will arrange to have the procurement publicized in the Commerce Business Daily, by AID's Office of Small and Disadvantaged Business Utilization in a Procurement Information Bulletin, and in trade journals or other publications so that it is disseminated as widely as possible. Distribution of the procurement documents will be the responsibility of the Russian Embassy in Washington. (This has been discussed with the Commission on International Aid and Technical Assistance of the Russian Federation, which will coordinate the arrangements with the Embassy in Washington.) In some cases, it might be necessary to translate all procurement documents that form a part of the contract into Russian. This will be the responsibility of the Secretariat.

All bids or offers will be received in Russia by the purchasing entity. For those procurements being carried out under formal

competitive procedures, there will be public openings of the bids. The Mission's Commodity Management Officer will monitor this process. The purchasing entity will evaluate the offers received and propose the contract award(s). Once USAID has issued a letter of no objection regarding the proposed award, the purchaser may finalize the contract award.

The cost of pre-shipment inspection of equipment and materials, so as to assure that they meet the requirements of the contract, will be eligible for funding under the program. The need for pre-shipment inspection will be considered on a case-by-case basis, based on the advice from the importer, the Secretariat personnel and the Mission Commodity Management Officer.

4.8 Shipping. The cargo preference rules, as set forth in A.I.D. Regulation 1 will apply to the CIP. For ocean or air freight costs under the program to be eligible for financing, the shipments must be on U.S. flag carriers, unless otherwise authorized by A.I.D. If there are shipments on non-U.S. flag ocean vessels, it will be the responsibility of the Secretariat to maintain records and advise the GOR regarding compliance with the cargo preference rules.

At this time, it is anticipated that all shipments will be by through bills of lading to inland final destinations in Russia. There are U.S. flag carriers that now provide this service to Russia.

4.9 Payments to Suppliers. It is anticipated that at the beginning of the program, all payments to suppliers will be effected through AID issued direct letters of commitment. There are currently two U.S. banks that have representative offices in Moscow, which are planning to commence providing full service banking in early 1994. By using either these banks or other correspondents of U.S. banks in Russia, it may become possible to shift to using letters of credit, issued under AID bank letters of commitment, as another method of payment.

With regard to payments to be effected under AID direct letters of commitment, USAID will be provided a Financing Request (FR), signed by a designated official in the Commission on International Aid and Technical Assistance, or its designee (e.g., the Ministry of Finance). This FR will only be signed after the importer has deposited the required ruble amount (including customs costs) in the special account of the designated bank. USAID will forward the FR, along with a copy of the relevant contract, to the Office of Financial Management in AID/Washington, which will issue the direct letter of commitment to the designated supplier.

If the payment is to be effected under a bank letter of credit, the Moscow bank that will be opening the letter of credit must

receive an approved instruction from the Commission on International Aid and Technical Assistance, to open the letter of credit. This instruction would only be issued after the importer had deposited the required amount of rubles in the special account of the designated bank.

Methods of Implementation and Financing		
<u>Method of Implementation</u>	<u>Method of Financing</u>	<u>Approximate Amount (000's)</u>
TA - Institutional Contractors(1)	Direct Pay	\$ 3,217
TA - Personal Service Contractors	Direct Pay	313
Audit/Assessments-USAID Contracts	Direct Pay	220
CIP Commodity Procurement	Direct or Bank L/Com	<u>121,250</u>
Total Project		\$125,000

(1) Includes funding for pre-shipment inspection, management and financial support, and end-use monitoring and inspection.

4.10 Insurance. Under a CIP, marine insurance on commodity shipments is normally at the option of the importer. However, due to the nature of this program, all shipments must be covered by marine insurance. AID requires that importers who receive loss payments under AID-financed insurance policies use the proceeds to repair damaged equipment or procure other eligible commodities, and that the grantee refund to AID an equivalent amount in U.S. dollars if the proceeds are not used within a reasonable period of time. It will be the responsibility of the Secretariat to monitor the use of loss proceeds resulting from insurance claims, and reporting any violations to the USAID for appropriate action.

4.11 Arrival Accounting and End-Use Monitoring. AID requires that commodities financed be effectively used, which means: 1) the prompt processing of commodity imports through customs and removal from customs and bonded warehouses by the importer within 90 days, and 2) consumption or use by the importer or transfer by the importer for consumption or use within one year from the date the commodities are removed from customs.

To assure that these requirements are met, AID must satisfy itself that accounting systems to accomplish the above, as well as to assure that commodities are received in the quantities and condition for which payment was made, are in place. (See Condition Precedent \$5.2ii.) The Commodity Management Officer assigned to this activity will review arrival accounting and

end-use monitoring issues and requirements with the GOR counterparts, and approve a system for keeping proper records and preparing reports sufficient to account for the use of the funds made available under the Grant. The CMO will apply current Handbook 15 guidance and coordinate his/her activities with the Mission Controller. Any additional input that may be required will be provided by the Office of Procurement and GC/CCM.

It will be the responsibility of the Secretariat with the support of the TA contractor to carry out arrival accounting, disposition and end-use monitoring functions for major pieces of equipment (others on a sample basis), and report any irregularities to USAID and the Joint Committee for resolution.

4.12 Taxation and Customs Clearance. The bilateral agreement between the United States and Russia precludes technical assistance contractors providing services under the CIP from having to pay taxes in Russia. However, all commodity imports financed under the CIP will be subject to any customs duties in effect in Russia at the time of their entry into the country, and payment of these duties will be the responsibility of the importers. The grant agreement will preclude the use of grant funds for the payment of any taxes or duties. The grant agreement will also require that items be cleared from Customs within 90 days from the time of their arrival at the port of entry into Russia. It will be the responsibility of the Secretariat to monitor the arrival of goods in Russia, and report to the USAID any shipments which are not cleared from Customs within the 90-day period so that appropriate action can be taken.

5.0 CONDITIONS PRECEDENT TO DISBURSEMENT AND COVENANTS

Although the Mission will negotiate and decide on the final conditions precedent and covenants, the gist of these provisions will be the following:

5.1 Conditions Precedent to Disbursement. Prior to any disbursement under the Grant, or to the issuance by AID of any documentation against which disbursement will be made, the Grantee will, except as the parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

(i) An opinion of counsel acceptable to A.I.D. that the agreement has been duly authorized and/or ratified by, and executed on behalf of, the Grantee, and that it constitutes a valid and legally binding obligation of the Grantee in accordance with all of its terms;

(ii) A statement of the name or names of persons designated as representative of the Grantee pursuant to Section 7.2 of this agreement, together with a specimen signature of each such person; and

(iii) Evidence of the establishment of a Joint Russian-American Steering Committee and its secretariat, including the names of all Russian government personnel assigned to those organizations.

5.2 Conditions Precedent to Disbursement for Commodity Procurement. Prior to any disbursement for the procurement of commodities under the Grant, or to the issuance by AID of any documentation against which disbursement for the procurement of commodities will be made, the Grantee will, except as the parties may otherwise agree in writing, furnish to AID in form and substance satisfactory to AID:

(i) The criteria, procedures and documentation to be used for the allocation of Grant funds to importers;

(ii) Procedures and documentation to be used for monitoring of the arrival, disposition and end use of commodities financed under the Grant; and

(iii) The terms and procedures for the deposit, use, management and accounting for any local currencies generated under this program.

5.2 Covenants. It is expected that the Grant Agreement will include the following general covenants:

(i) The Agreement and its documentation, as well as the Grant funds, will be free from any taxation or fees under laws in effect in the GOR. No Grant funds may be used to pay taxes or other fees related to the importation of commodities funded under the Grant Agreement.

(ii) The Grantee will require entities receiving financing under this grant to pre-pay all customs costs.

(iii) The Grantee will advise entities receiving financing under this grant to maintain books and records as prescribed in Implementation Letters. Such books and records shall remain available for at least three years after the last disbursement under this Grant.

(iv) The Grantee will require entities receiving financing under this grant to permit inspection of the commodities financed under this Grant at all reasonable times.

(v) The Grantee will affirm that no payments have been or will be received by any officials of the GOR in connection with the procurement of goods or services financed under the Grant.

(vi) The Grantee will agree to obtain assurances from importers that proper end use will be made of all commodities imported under the program, that importers will assure end use inspection by Grantee and AID representatives, and that refunds are sought in the event commodities are not used within the required time periods.

5.3 Status of Negotiations. USAID/Moscow and USAID/Washington staff have held a series of meetings with CIATA during the period September–November 1993. The general CIP concept and main features of the proposed CIP, including the major implementation procedures, have been explained to CIATA. CIATA has obtained the appropriate approvals within the GOR to act as the primary point of contact.

with USAID on this program. After an understanding of the major steps that will have to be taken by both sides before a formal agreement can be signed between the two governments, copies of a draft grant agreement, along with its Russian translation, have been given to CIATA. With the approval of the Prime Minister, the draft agreement is to be sent for review by the various sections of the Russian Government, and a senior committee comprising the First Deputy Chairman of CIATA, deputy ministers from the Ministries of Fuels and Energy, Environment and Finance, and a senior representative of the State Customs Committee will formally negotiate the details of the CIP with USAID. There remains some GOR hesitation about its ability to complete all the steps leading to a signed Grant Agreement by mid-December.

6.0 IMPLEMENTATION SCHEDULE

The following is an illustrative implementation schedule:

- 12/15/93 CIP Agreement signed.
- 12/30/93 Implementation Letter No. 1 is issued.
- 01/15/94 - Initial CPs satisfied .
- Secretariat formed.
- 01/31/93 - GOR agencies notified of CIP program and proposals solicited.
- CIP-funded TA contract begins.
- 02/14/94 Joint Steering Committee meets to endorse subsequent CPs for disbursement of commodities.
- 02/15/94 CPs subsequent satisfied.
- 02/21/94 GOR proposals received by Secretariat, and review of equipment requests begins.
- 03/04/94 Joint Steering Committee makes allocations to importers.
- 03/25/94 Procurement documents (equipment/materials specifications) are prepared for initial allocations and forwarded to AID/W for review and advertising simultaneously in U.S. and in Russia.
- 04/04/94 Procurements advertised in the U.S. in OSDBU Procurement Information Bulletin and Commerce Business Daily and in Russia in appropriate daily/journal(s). (FA/OP/CC and Secretariat)
- 04/11/94 RFQs/IFBs distributed to suppliers (GOR Embassy, with assistance by FA/OP/CC and Joint Secretariat in Moscow).
- 06/10/94 Offers received and evaluations commence (GOR entities involved).
- 06/30/94 Contracts awarded (GOR entities).

- 06/10/94 Payment documents (direct letters of commitment) issued to U.S. suppliers. (USAID, AID/W Controller).
- 09/15/94 Commodities commence arriving in Russia; Secretariat begins arrival accounting.
- 10/15/94 Begin commodity disposition/end use spot checks
- 06/95 Final shipment of commodities arrive in Russia.
- 12/95 Final end-use survey/evaluation and AID/IG report.

7.0 PROGRAM RISKS

The start-up and implementation of any new program in Russia automatically entails significant levels of program risk. Nevertheless, the importance of Russia and the importance of energy efficiency and environmental quality improvement in Russia merit proceeding with implementation of this program, while building into the program design as many steps as possible to minimize or eliminate risks. The most outstanding of these risks and means to address them are described below:

7.1 Adequacy of USAID/Moscow Staff Level to Implement CIP. At present, the number of direct hire staff at USAID/Moscow is insufficient to responsibly implement the CIP, given other ongoing and continuing commitments. Therefore, it is mandatory that USAID/Moscow bring on board for a full year the services of a senior USDH Commodity Management Officer with procurement officer authorities and seasoned experience. Strong preference is for one officer to fill this position on a continuing basis. If it is not possible to add an FTE, then rotating TDY USDH CMOs (without break) will be necessary to cover this function throughout the year. Two full-time Russian CIP assistants and one full-time Russian secretary will also be needed to help the CMO, within the Mission.

The Mission Energy Office has the primary responsibility for managing the technical aspects of the CIP. At present, the Energy Office is substantially understaffed even with respect to its existing heavy workload. USAID is awaiting the assignment of a full time permanent Energy Officer and a number of FSN positions are in the process of being filled. Special arrangements will have to be made to ensure that continuous direct hire coverage is available to the Energy Office through TDY assignments from Washington, (or possibly other Missions) to cover the gap between grant signing and arrival of the new Energy Officer. Similarly, the US PSC and FSN slots in the Energy Office will have to be filled on a priority basis.

If this staffing cannot be provided, and other staff assistance cannot be obtained, then the feasibility of the CIP is called into question. USAID will also need to engage the services of its Energy Technology Services Contractor, Burns & Roe, to provide full-time American and Russian technical and other procurement and administrative support to the Joint Secretariat, for

implementation, monitoring, and end-use checking, so as to assure accountability.

In addition, in order to adequately administer and monitor programmed uses of local currency generations, financial management services will be contracted. The level of effort required will be determined by the Mission.

7.2 Institutional Capabilities of Key CIP Organizations. CIATA has had some experience over the past year in the implementation of the USDA food aid program for Russia, which has given it considerable familiarity with some of the issues which will be encountered with the CIP. CIATA also appears to have access to the Prime Minister's Office and staff and apparent authority to bring key implementation matters to that office's attention. Nonetheless, it remains to be seen how this will work out in practice and how well CIATA officers will deal vis a vis senior officials of such line ministries as M/o Fuel & Energy or such powerful entities as M/o Finance or State Customs Committee. While there is not as yet in Russia the heritage of enforcement of commercial or administrative law and regulation in the environmental area, which would provide environmental agencies the political force required to be fully effective, this CIP will provide environmental agencies with monitoring and other equipment which will enhance their data base, pollution monitoring capabilities, and technical capability. As for the M/o Fuels & Energy, it certainly commands respect within the GOR; however, in recent months some of its best senior staff have been hired away by operating agencies which can afford to pay more. How this will affect the ability and judgement of the ministry's representative on the Joint Steering Committee remains to be seen. Finally, the Joint Secretariat and the Joint Steering Committee are themselves new, untried entities yet to be established. Both of these organizations will benefit from institutional strengthening by USAID staff and contractors who will work with CIATA to establish, equip, train, and execute the functions of these new entities.

7.3 Overlap/Duplication/Inappropriateness of Equipment Selected. Some equipment could be procured which overlaps with other donors' procurements, duplicates equipment to be procured under other USG mechanisms such as the Ex-Im Bank Framework Agreement for Oil & Gas, or is inappropriate for the Russian entity involved. USAID has coordinated extensively with the World Bank and its rehabilitation and petroleum sector loans, as well as with the Ex-Im Bank. The Energy Technology Service Contractor Burns & Roe, will assist in assuring the appropriateness of equipment selected.

7.4 Corruption. Corruption is a risk in any government procurement; however, establishment of CIP and Regulation 1 procedures and their close monitoring, including key points of the procurement process, will minimize this risk. Adequate staffing of both USAID/Moscow and the Secretariat, participation by USAID in both the Secretariat and the Joint Steering Committee, engagement of Burns & Roe for CIP implementation assistance (including technical specification analysis for competitiveness and arrival/end-use checks), elimination of generating local currency, and funding transport to the final point of destination, should help to alleviate this risk. However, the nature of GOR, especially its lack of adequate financial controls, and other Russian participating entity accounting and other record-keeping and inventory control

practices may still render it difficult to adequately audit records and detect cases of corruption. In order to help detect any possible problems at an early stage, spot checks will be performed. Should problems be encountered, the information will be used to make implementation adjustments that would forestall reoccurrences.

7.5 First USAID Bilateral Grant Agreement. This will be the first formal bilateral assistance agreement signed between the two governments where significant financial flows are involved. This will entail a considerable effort by both sides to learn and, to the extent possible, accommodate to the other's laws, procedures and bureaucratic cultures. It seems likely that at least in the early days of implementation some misunderstandings will occur which will slow progress.

ANNEX A

ILLUSTRATIVE ACTIVITIES AND CATEGORIES OF EQUIPMENT MEETING THE CRITERIA OF THE CIP

In light of the objectives, rationale and strategy for the CIP, the following six major activities and categories of equipment that may be covered under the CIP are described below.

1. Gas Production, Transmission and Distribution

The natural gas sector is dominated by GAZPROM and ROSGAS. GAZPROM controls both the production and transmission of natural gas both domestically and, most importantly, internationally. As a result of the latter activity GAZPROM is the major earner of foreign exchange in Russia. The organization deals extensively with foreign suppliers and is the focus of ongoing World Bank Ex-Im Bank, and EBRD programs. It is one of the few organizations in Russia which can pay for equipment under normal (or close thereto) commercial terms.

In view of the size of the organization, its large equipment needs, and the fact that it has access to foreign exchange on its own, equipment needs of the organization would have to be carefully reviewed to assure that CIP funds are used to finance only those categories of equipment which meet CIP criteria. This essentially would cover equipment aimed at (i) enhancing the efficiency of energy use in its operations or continuing waste of energy, that has not been imported by GAZPROM to any significant degree in the past, or (ii) reducing emissions harmful to the environment.

2. Oil Production

The oil sector is more fragmented with over 40 "Production Associations" producing oil. Long distance transmission of oil via pipelines is undertaken by TRANSNEFT. Oil production is decreasing and losses of oil in the pipelines are reported to be very high. The oil industry deals mostly with domestic markets which reduces its access to foreign exchange and little capital is available for equipment improvements - particularly as compared to GAZPROM in the natural gas sector. The oil sector is particularly important to the CIP because large quantities of associated gas in the oil fields is flared resulting in energy wastage and increased greenhouse emissions. Also, the decreasing production levels are further limiting the export potential and associated economic benefits. Preliminary discussions with U.S. companies indicate requirements in several areas:

- Equipment to use flared gas for power generation to service local needs. Equipment in this category includes packaged natural gas generation units and associated gas treatment systems.

- Gas reinjection and enhanced oil recovery systems. Equipment in this category includes compressors and packaged boilers.
- Pipeline maintenance and upgrade equipment needed to repair oil pipelines. Equipment in this category includes excavators, cranes, and ultrasonic diagnostic systems

3. District Heating

The district heating systems serve almost all buildings in urban areas and smaller towns. The heat is provided by a combination of dedicated boilers and waste heat from power plants. The system represents a remarkable national asset for potentially efficient provision of both electricity and thermal services-- particularly given the high space heating loads in the Russian climate. Most of the energy for the district heating systems is provided by natural gas (for example over 90% in the huge Moscow system). Improving the efficiency of the district heating systems would, therefore, contribute to all the objectives of the CIP since doing so would reduce emissions and free up gas for export. Recent and ongoing audits of several of the district heating systems have identified significant opportunities for improving efficiency levels by such means as improved controls and metering. U.S. companies, including Honeywell and Johnson Controls, believe that there could be major opportunities for U.S. companies in this field. The major difficulty is that the low internal energy prices result in:

- A payback period of the equipment stretching over 10 years. Based on border prices for gas, the payback periods could be under 2 years which would be highly attractive
- The District Heating authorities have limited funds. Since they do not deal at all with foreign markets, they do not have access to foreign exchange

Consistent with its rationale of providing funds for activities that are otherwise unlikely to be undertaken, CIP funds can be used to import equipment aimed at increasing efficiency levels of a selected number of district heating systems. The number of such systems would have to be kept small to minimize administrative burdens.

4. Power Generation

Russia has a large and well developed power network with a total generation capacity of over 210,000 MW. Russia manufactures all necessary electric power generation equipment. Much of the generation capacity also provides heat for the district heating systems. The electric tariffs have been increased significantly over the last few years. Nevertheless, they are still generally less than \$0.01/kwh. This complicates justifying end use efficiency measures and results in insufficient income to the utilities for needed equipment upgrades. In all cases the utilities are dealing with the internal ruble economy and have no direct access to foreign exchange earnings. Discussions with the Ministry of Fuels and Power, MOSENERGO (the utility serving Moscow), and selected U.S. companies attempting to initiate sales in this potentially

huge market suggest that near term opportunities might be centered in three areas:

- Environmental control equipment for both coal and gas fired power plants. Such equipment is generally not available in Russia since the focus on environmental issues is relatively recent. Equipment in this category could include controls/monitors, scrubbers, soot blowers, and catalytic gas cleanup systems.
- Advanced, computer based, energy management systems for both internal power plant operations and for system level control (economic dispatch, etc)
- Modern high efficiency, increased capacity, reduced emission equipment such as gas turbines and associated controls in order to "combine cycle" existing steam powered units.

U.S. companies have leading positions worldwide in the above equipment categories. In most cases the equipment is consistent with relatively rapid purchase and installation once projects have been identified.

5. Coal Mining

The coal mining industry is in considerable difficulty due to a combination of antiquated equipment resulting in poor productivity, over staffing, poor safety conditions, weak transportation infrastructure, and low prices (about one fifth of world prices). The latter problem leads to a lack of capital to address the other problems--particularly in foreign exchange required to purchase foreign equipment. Many of the mines are very "gassy" which results in unsafe mining conditions and in the release of methane into the atmosphere during mining operations.

Opportunities identified for CIP funding fall into broad categories:

- Safety equipment such as methane detectors and respirators.
- Equipment needed for methane recovery such as drilling rigs and packaged power units.

6. Energy/Environmental Monitoring and Audits, and Pollution reduction

Environmental monitoring of air, water, and hazardous wastes in Russia is severely hampered by the lack of modern technologies and equipment. This is especially true in the energy sector, but also true in monitoring of airborne particulates (especially dusts, heavy metals, and chemicals); in the monitoring of water contamination from chemicals (including pesticides) and biologics); and in the monitoring of hazardous wastes including nuclear, chemical, and biological wastes.

A key requirement for identification of energy conservation opportunities is the ability to measure current energy usage. Over the last two decades a great deal of effort has been extended in the United States in developing specialized

equipment to facilitate measuring energy flows in buildings, industrial processes, and other activities. This equipment is used by specialized companies in undertaking "energy audits" in order to characterize the current status of energy use and identify the most cost effective measures for improving efficiency. Similar packages of equipment have been developed to measure pollutants caused by energy use in both combustion gas flows and ambient air. For the most part, this class of equipment is not available in Russia. The USAID technical assistance program has already demonstrated the utility of such equipment via its support of audits of a small sample of district heating systems. The EPA environmental programs have identified urgently needed equipment to allow Russia to implement environmental monitoring. In summary, the equipment needs fall into two broadly based categories:

- Laboratory equipment for monitoring drinking water and measuring waste water, including equipment for monitoring of biologicals, organic and inorganic chemicals, heavy metals and nuclear particles.
- Ambient air monitoring and emission testing equipment, including gas analyzers, calibration gases, data loggers, etc.
- Solid, hazardous, and biological hazardous waste equipment.
- Energy audit equipment and vans which include gas analyzers, flow meters, electric meters, temperature probes, etc.
- Computer support for establishing national data network.

The cost of such equipment will be relatively low and it could have significant impacts in developing energy efficiency improvement and environmental pollution control programs.

ANNEX B

ILLUSTRATIVE LISTS OF EQUIPMENT AND RECOMMENDED ALLOCATIONS

POWER SECTOR EQUIPMENT

Recommended Allocation: \$25 - 30 Million

Illustrative List of Equipment:

1. Components for circulating fluidized bed combustion of coal module.
2. Components for gas-fired combined cycle module.
3. Reverse osmosis water treatment system for power plants.
4. CAD PAD computer hardware and software for RAO ESS ROSI.
5. Power plant digital control systems/power plant monitoring work stations
6. Thermal/electrical energy cogeneration optimizer.
7. Software for optimal power flow and power system steady-state and dynamic problem solving.
8. Series capacitors for transmission lines.
9. SCADA/EMS for economic dispatch and energy control.
10. Energy audit kits for power generation systems.
11. Electric power demand analyzers.
12. Automatic systems for the operation of HV substations and repair of repair of HV lines without disconnection.

OIL PRODUCTION AND TRANSPORTATION EQUIPMENT

Recommended Allocation: \$25 - 30 Million

Illustrative List of Equipment:

1. Natural Gas Liquids Separation:
 - Modular processing and separation equipment;
 - Controls;
 - Monitors.
2. Associated Gas Use:
 - Packaged power units;
 - Skid-mounted internal combustion engine generator sets;
 - Controls.
3. Capture of Gas Liquids from Storage Tanks:
 - Compressors and accessories;
 - Control systems.
4. Pipeline Transport of Oil:
 - Ultrasonic diagnostic systems;
 - Leak detectors and other audit equipment;
 - Automatic control systems.
5. Enhanced Oil Recovery:
 - Packaged boiler units;
 - Compressors.

NATURAL GAS PRODUCTION, TRANSMISSION AND DISTRIBUTION

Recommended Allocation: \$25 - 30 Million

Illustrative List of Equipment:

1. Environmental:

- Mobile laboratories for environmental inspection;
- Stationary units for environmental measurements, and other equipment for GAZPROM environmental units;
- Gas compression measurement equipment;
- Systems for testing hydrosulfide wells, without contaminating emissions;
- Equipment for production of catalyst for gas cleaning/sulfur recovery;
- Equipment for soil investigation (ecological) in Arctic regions;
- Equipment for processing drilling mud and slime.

2. Efficiency Monitoring/Improvement and Automation:

- Devices for smooth start of eclectic drive compressors at compressed gas filling stations;
- Equipment for accurate gas flow measurement on the trunk/large diameter pipelines;
- Automatic instruments for gas dew point determination;
- Condensate and oil measuring equipment;
- Mobile complex for pipe insulation and re-insulation;
- Equipment and materials for the restoration of tightness of valves;
- Selected computer software and hardware to improve the efficiency of gas transmission, and automatic control systems;
- Modular electric generators (not currently available in Russia);
- Meters and other efficiency improvement equipment for gas distribution;
- SCADA control systems and automatic control systems.

DISTRICT HEATING/MUNICIPAL ENERGY USE

Recommended Allocation: \$10 - 15 Million

Illustrative List of Equipment:

1. Infrared thermal imaging devices.
2. Combustion analyzers.
3. Thermocouples.
4. Ultrasonic leak detectors.
5. Boiler water testers.
6. Industrial multimeters, with power factor.
7. Heating flowmeters for buildings and networks.
8. Building envelope insulation.
9. Steam trap replacements.
10. District heating substation controls.
11. Energy efficient city street lighting (high pressure sodium lamps) and water supply pumps.
12. Automatic energy management systems.

COAL MINES

Recommended Allocation: \$5 - 10 Million

Illustrative List of Equipment and Supplies:

1. Rubber work boots.
2. Safety glasses.
3. Personal respirators with filters.
4. Disposable hearing protection.
5. Helmet-mounted hearing protection.
6. Canvas work gloves.
7. Reflective tape.
8. Personal methane detectors.
9. Combination 4-gas detectors.
10. Computerized mine-monitoring systems.
11. Air filter helmets for mining machine operators.
12. Mine rescue apparatus and first aid equipment for mine rescue teams.
13. Drilling equipment (in-mine and surface).
14. In-mine equipment, including cementing systems for standpipes, control systems and vacuum pumps and compressors.
15. Surface gathering systems.
16. Compression equipment.
17. Utilization equipment.

ENVIRONMENTAL AGENCIES

Recommended Allocation: \$25 - 30 Million

Illustrative List of Equipment:

1. General laboratory equipment for monitoring drinking water and measuring waste water, including ovens, autoclaves, analytical balances, water purification systems, dish washers for lab equipment, laboratory refrigerators and centrifuges.
2. Personal computer work stations, file servers, LAN hardware, modems, work station clusters and facsimile machines.
3. Equipment for establishing a permanent air monitoring network.
4. Permanent air monitoring laboratory equipment sets.
5. Data analysis, reporting and coordination equipment.
6. Mobile air monitoring equipment.
7. Mobile air monitoring laboratory equipment.
8. Enterprise emission testing systems.
9. Supplemental air monitoring equipment for 20 Russian cities.
10. Central water and waste-water monitoring laboratory equipment (general lab equipment, sanitary and microbiology lab equipment, equipment for organic parameters and metals lab equipment).
11. Pollution control equipment (limited quantities).

ANNEX C

ILLUSTRATIVE COSTS FOR MANAGEMENT SUPPORT
12 MONTH ESTIMATES¹

A. Technical Assistance for Secretariat

This contract will provide the core technical assistance for the Secretariat and day-to-day implementation of the CIP, including review of equipment requests and technical specifications, arrival accounting, establishment and implementation of spot check/end use monitoring system, and general administrative/technical support to the Steering Committee.

1 long-term Procurement/Logistics Officer @\$500,000	
1 long-term Equipment Specialist @\$500,000	
(Both including salaries, allowances, housing, intl travel & overhead)	\$1,000,000
- Short-term technical support in Contractor home office (U.S.) @ 54 person months	1,000,000
- U.S. travel & other direct costs (phone, fax, printing, etc.)	85,000
- International travel (30 trips)	150,000
- Local hire personnel (4 professional, 2 clerical)	205,000
- Office space rental, Moscow	95,000
- Communications (fax, phone)	50,000
- Vehicle rental	30,000
- In country travel	<u>35,000</u>
Sub-total	2,650,000

¹It is expected that most technical assistance services will be required for one year; however, they may be particular support services that will be required for longer periods of time.

B. Financial Management

This contract would provide for management and accounting services related to the special account.²

- Personnel (3 professionals, 1 clerical)	85,000
- ODC and overhead	90,000
- Audit	<u>20,000</u>
Sub-total	195,000

C. Mission Support

- Capability Assessment Team	20,000
- Commodity Management Specialist ³	250,000
- Local hire staff (2 professionals & 1 clerical)	63,000
- Program Audit	200,000

Contingency⁴ 372,000

TOTAL \$3,750,000

²In the event that local currency is not generated under the CIP, TA for management of the special account will not be required.

³The Mission's first preference is the assignment of a USDH CMO to USAID/Moscow, or alternatively, rotating CMOs from the AID/W Commodity Office. If these arrangements are not possible, a PSC will be hired.

⁴This provides for the costs of TA that will be required beyond 12 months.