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Annex II

Business Plan

for Production Technology and Product Marketing Consortium

Energy Conservation & Greenhouse Gas Emission Reduction in Chinese Township & Village Enterprises



**Production Technology and Product Marketing Consortium –
*Business Plan***

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Energy Conservation & Greenhouse Gas Emission Reduction in Chinese Township & Village Enterprises

Production Technology and Product Marketing Consortium – *Business Plan*

1. INTRODUCTION

This Business Plan is intended to serve as an internal document to assist the Production Technology and Product Marketing Consortium (PTPMC), now formally registered as the HongYuan Energy And Environmental Protection Company Limited, in its decision making and to indicate a range of services that PTPMC can offer its clients, and to highlight possible revenue models for these services.

Most importantly, the Business Plan will investigate a number of scenarios aimed at 'growing' PTPMC as a sustainable business entity in the medium to long term. In this context 'sustainable' implies that, after a start-up period of 3 years, income from the provision of services to clients will be sufficient to support the business without the need for additional support from UNIDO or other agencies.

2. SUMMARY

Township-Village Enterprises (TVEs) constitute a significant share of Chinese economic production and social welfare, accounting for over 30 % of China's Gross Domestic Product, 47.3 % of Chinese industry 'Added Value', and employing almost 130 million people. TVEs also contribute significantly to local and global environmental problems, accounting for a quarter of the entire Chinese demand for conventional energy sources. Within the TVE sector as a whole, brick manufacture, cement production, metal casting and coking industries account for over 58 % of the TVE energy consumption, but contribute less than 14 % of the TVEs added value. Furthermore, these four sub-sectors typically utilise 37 % to 57 % more energy per unit of production than is required for international state-of-the-art production.

In early 1999, UNDP/GEF approved the project 'Energy Conservation and Greenhouse Gas (GHG) Emissions Reduction in Chinese TVEs'. This project aims to reduce GHG emissions in China from the four TVE sectors previously mentioned by increasing the utilisation of energy efficient technologies and products. The project removes key market, policy, technological, and financial barriers to the production, marketing and utilization of energy efficient technologies and products in these industries.

Foundation support from the project implementing agency, UNIDO, as well as from the TVE Centre and the Agriculture Science and & Technology Development Centre, aims to establish PTPMC as a mechanism for enabling energy efficiency projects within the four TVE sub-sectors. PTPMC has been established with key shareholders IE Energy and Environmental Protection Company and ZhongNong Company and is called Hongyuan Energy And Environmental Protection Company Limited, with registered address at 41 Maizidian Street, Chaoyang District, Beijing, China 100026 (tel: +86 (0) 10 65929549, fax: +86 (0) 10 65929549, website: www.ptpmc.com)

This business plan presents a financial model and implementation strategy aimed at maintaining PTPMC as the commercial hub of TVE Energy Efficiency product and service flows beyond the foundation support period, based on services that it can provide to a range of customers, notably the target sector TVEs, energy related service providers and product manufacturers from China and internationally, business service providers, the finance sector, Government of China and its ministries and international development agencies.

Our vision of PTPMC is one organisation consisting of two complementary service groups:

- PTPMCS Core Services group will provide a variety of services to the subscribing consortium members, notably project identification services and inward business development assistance (such as product promotion, advice on policy and business environment and intermediary support such as technical translation assistance). The core services group will also provide essential business development assistance (training, workshops and accreditation), energy efficiency project formulation and tender evaluation and co-finance identification functions for Township and Village Enterprises from the key sub-sectors of brick making, cement production and metal casting, as well as coking production. The business development assistance may be provided on behalf of development agencies or concerned government departments, and in the longer term will be self-financing.
- PTPMCS Consulting Services group will be an independent private-sector focussed group providing fee-for-service activities, such as energy audits for TVEs, project feasibility studies to determine whether projects qualify for international support such as the Clean Development Mechanism, pre and post project implementation due-diligence for TVEs and the finance sector, and policy support functions (e.g. resource assessments) for GoC and others, as well as product development cooperation with other PTPMC Members. Please note: It is intended that, during the Project Period, this group will provide technical support to the PTPMC Core Services Group and carry out only limited private sector work, where there is no conflict of interests with the members. After the Project Period, if conflicts of interest arise then PTPMC must weigh up the likelihood of this being a regular versus a one-off occurrence and consider to either withdraw from the service or spin the functions of as a new PTPMC member.

Delivering this service portfolio relies upon strong marketing to the potential clients and the creation of a team with excellent managerial and technical capabilities. The existing PTPMC Senior Management brings

essential understanding of and links to the TVE Sector from previous long-term experience within the TVE Centre. Additional key staff, possibly including international expertise, must be recruited/contracted during the first six months of establishment of PTPMC as a legal entity.

Within the broader UNDP/GEF Project, 8 pilot energy efficiency projects will be implemented to demonstrate the potential for energy savings and emissions reductions and related process and competitiveness improvements. These will be leveraged by PTPMC as a marketing tool, but establishment of PTPMC capabilities in the proposed new service fields would be greatly enhanced by PTPMC participation in the pilot project implementation phase and in the service contracts also outlined under the umbrella project; the projects require many of the services that PTPMC later hopes to provide for commercial customers. PTPMC should seek to capture additional support from UNIDO to undertake 'learning by doing' activities during the pilot phase.

The financial model base case suggests that PTPMC can potentially realise the objective of financial self-sustainability within four years. To achieve this:

- PTPMC should initially attract at least 100 members, 80% of which are commercial organisations paying a membership fee averaging USD 150 (differentiated between international and national members). Membership needs to grow at 10 % per annum
- PTPMC will be the sole supplier of services for a contract with UNIDO with exact Terms of Reference to be decided between UNIDO and PTPMC with value approximately US254,000 in Year 1, US147,000 in Year 2 and US66,000 in Year 3. A draft version of this TOR is included in Annex 6.
- PTPMC manages the service contracts and the procurement of equipment on behalf of the TVEs
- PTPMC enters revenue share agreements with the PTPMC Members for energy savings and CDM of the pilot projects
- The 'opportunity portal' service which brokers projects between TVEs and PTPMC members and helps them to access RCF finance becomes a major revenue driver.

Achieving the sustainability objective is also heavily contingent therefore upon PTPMC:

- developing a strong relationship with the Agricultural Bank of China to whom it will provide external management services for screening and delivering projects to the RCF pipeline
- Securing additional co-finance in the order of USD 2.5 to 3 .5 million in years 2 and 3 for RCF-type projects, and continued additional RCF investment into the future to finance increasing numbers of TVE EE projects.
- addressing key staffing issues by recruiting additional high-level staff to manage delivery of the envisaged technical services

Failure to address these issues will prevent PTPMC from growing its commercial business and is likely to see the Secretariat playing a marginal role as a resource centre providing information products to TVEs and to its (limited) members.

3. BACKGROUND

Township-Village Enterprises (TVEs) constitute a significant share of Chinese economic production and social welfare, accounting for over 30% of China's Gross Domestic Product, 47.3% of Chinese industry 'Added Value', and employing almost 130 million people. TVEs also contribute significantly to local and global environmental problems, accounting for a quarter of the entire Chinese demand for conventional energy sources. Within the TVE sector as a whole, brick manufacture, cement production, metal casting and coking industries account for over 58% of the TVE energy consumption, but contribute less than 14% of the TVEs added value. Furthermore, these four sub-sectors typically utilise 37 % to 57 % more energy per unit of production than is required for international state-of-the-art production.

In early 1999, UNDP/GEF approved the project 'Energy Conservation and Greenhouse Gas (GHG) Emissions Reduction in Chinese TVEs'. This project aims to reduce GHG emissions in China from the four TVE sectors previously mentioned by increasing the utilisation of energy efficient technologies and products. The project removes key market, policy, technological, and financial barriers to the production, marketing and utilization of energy efficient technologies and products in these industries.

The project objectives include: a) creating institutional mechanisms for the removal of barriers acting against the more widespread introduction of energy efficiency measures at the national, county and enterprise level; b) establishing incentives and monitoring systems to strengthen existing regulatory programmes at the county level; c) building technical capacity for energy efficiency and product quality improvement in TVEs; d) creating access to commercial financing for TVEs in the four industries; e) commercialising the financing of TVE energy conservation projects; f) expanding the application of best practices for local regulatory reform to the national level.

One of the important catalysts for building technical capacity for energy efficiency and product quality improvements within the four industries, and an important supporting tool for the other objectives is the Production Technology and Product Marketing Consortium. PTPMC will consist of a Secretariat and member organisations. The PTPMC Secretariat is to be set up with initial support from the UNIDO project to develop the supply and demand for business development services and equipment for industrial TVEs in the four sub-sectors.

The PTPMC will initially be composed of the following institutions and enterprises:

- Selected service institutions or centres on energy-efficient technology;
- Design unit and manufacturer of energy-efficient technology;
- Training centres;
- Information centers;
- Pre-selected enterprises for eight pilot demonstration projects.

The main function of PTPMC is to implement energy-efficiency projects and disseminate energy-efficient technologies to the TVEs. The design units and manufacturers of energy-efficient technology will provide technologies fit for the TVEs, and the service institutions or centres of energy-efficient technology will implement the energy-efficient projects. The training centres will be responsible for providing relevant training for the technicians and operating workers of TVEs, providing business administration training and competing experience for TVE managers, providing training on environmental protection laws and relevant national policies for the relevant TVE and local government personnel. The information centres will collect information on advanced energy-efficient technologies, product marketing, financing, national industry policies, and energy conservation and environment protection, for dissemination to the TVEs, local government and financing institutions.

In short, PTPMC will combine the development of a market for energy-efficient technology with the development of products for that market, and effectively promote the dissemination of energy-efficient technologies to Chinese TVEs.

However, PTPMC is envisaged as an independent economic entity that must become self-sufficient in order that it can continue to disseminate energy-efficient technologies to the TVEs, beyond the term of the UNIDO project support. This Business Plan establishes the structure, services and mechanisms by which PTPMC can achieve this objective.

4. MISSION AND STRATEGIC OBJECTIVES

4.1. Vision

Our vision of PTPMC is one organisation consisting of two complementary service groups, satisfying the needs of a broad range of clients including TVEs, energy related service providers and product manufacturers from China and internationally, business service providers (legal, training etc), the finance sector, Government of China and its ministries and international development agencies.

- PTPMCS Core Services group will provide a variety of services to the subscribing consortium members, notably project identification services and inward business development assistance (such as product promotion, advice on policy and business environment and intermediary support such as technical translation assistance). The core services group will also provide essential business development assistance (training, workshops and accreditation), energy efficiency project formulation and tender evaluation and co-finance identification functions for Township and Village Enterprises from the key sub-sectors of brick making, cement production and metal casting, as well as coking production. The business development assistance may be provided on behalf of development agencies or concerned government departments, and in the longer term will be self-financing.
- PTPMCS Consulting Services group will be an independent private-sector focussed group providing fee-for-service activities, such as energy audits for TVEs, project feasibility studies to determine whether projects qualify for international support such as the Clean Development Mechanism, pre and post project implementation due-diligence for TVEs and the finance sector, and policy support functions (e.g. resource assessments) for GoC and others, as well as product development cooperation with other PTPMC Members. Please note: It is intended that, during the Project Period, this group will provide technical support to the PTPMC Core Services Group and carry out only limited private sector work, where there is no conflict of interests with the members. After the Project Period, if conflicts of interest arise then PTPMC must weigh up the likelihood of this being a regular versus a one-off occurrence and consider to either withdraw from the service or spin the functions of as a new PTPMC member.

In the longer term, these services will be extended beyond the four sub-sectors to enterprises from the State-Ownership sector, and small and medium-sized businesses. Furthermore these services may expand beyond energy efficiency to include other environmental management issues such as water, waste etc.

To deliver these services will require, initially, in the order of a dozen key staff as indicated in the PTPMC Organogram (see Figure 2, section 8.2).

We expect the Consortium as a whole to consist of all the main international (including Chinese) energy sector service companies and many key product manufacturers and suppliers. In the near term (to 2005) there will be in the order of 200 PTPMC members, rising towards 500 members in ten years' time. Approximately 80% will be fee-paying via an annual subscription fee, the remaining associate members maintaining a 'watching brief' but receiving slightly less direct membership benefits.

4.2. Mission

To provide business development assistance to Township and Village Enterprises (TVEs) and facilitate relevant national and international product/service providers to target TVEs, and thereby to promote and assist implementation of energy efficiency best practices in Chinese TVEs initially and thereafter the broader Chinese economy.

4.3. Values

PTPMC is envisaged as an independent commercial venture, but with a charter that reflects its strong commitment to promoting energy efficiency best practices. The Organisation will provide a sound,

professional service for its clients, based on impartiality and adherence to International best practices. In all cases it will operate with due respect for the natural environment.

4.4. Objectives

Reflecting the priorities of the UNIDO Energy Conservation and GHG Emissions Reduction in Chinese TVEs Project, PTPMC has the following objectives:

- To support investigation and implementation of energy efficiency measures within TVEs, notably within the Brick-making, Cement, Coking and Metal-casting sectors
- To improve the long-term business management skills of its clients within the TVE industry and thereby promote greater recognition of the long-term economic and environmental value of implementing energy efficiency measures
- To identify needs for new energy efficiency measures and/or technologies among TVEs, and assist their development in co-operation with PTPMC Members from the energy efficiency industry.
- To support and facilitate national and international PTPMC members to target the TVE sector effectively

4.5. Strategies

PTPMC (Secretariat's) broad strategy is to establish itself as the commercial hub of activity to bring energy efficiency, production process and business development improvements to the identified TVE sectors by facilitating service flows between the key stakeholders (TVEs, EE product & service providers, finance sector. and donors) as outlined in Table 1 and summarised in Figure 1.

PTPMC will aggressively market its services to the identified stakeholder groups, drawing fees - either simple fee for service or via value-share arrangements - from the facilitation services it provides for the various stakeholders.

Delivering this service portfolio relies upon the creation of a team with excellent managerial and technical capabilities. Key staff, possibly including international expertise, will be recruited during the first six months of establishment of PTPMC as a legal entity. Appropriate staff will have a detailed understanding of the TVE sector and awareness of social and economic development priorities - including specific regional issues; detailed knowledge of relevant international energy efficiency initiatives and their application for broader business development purposes within the identified TVE sectors; strong capacity for evaluating customers' needs and identifying appropriate responses to these, together with financial evaluation capacity; excellent marketing skills; well-developed understanding of the Chinese legal and regulatory framework.

Table 1: Overview of stakeholder needs and PTPMC response strategies

Stakeholder	Need/Want	Barriers	PTPMC Facilitator Role
TVEs from Brick, Cement, Metal casting, Coking Sectors	To improve profitability / reduce costs; develop/expand market for its products;	Unaware of the potential for reducing costs / wastage, or for bettering product through energy efficiency and process improvements; no idea who could help deliver such improvements; limited knowledge of wider market potential or of market product requirements; difficulty or hesitancy to obtain finance	Education & training services; marketing and linkage to service providers; market development assistance; linkage to willing and affordable finance

Stakeholder	Need/Want	Barriers	PTPMC Facilitator Role
Providers of EE products and services (potential PTPMC Members)	Develop/expand market for its products; identify good project opportunities; better understanding of Chinese legal / regulatory structure	Unaware of large potential market for products/services within the Chinese TVE sector; unfamiliarity with / hesitancy to engage in contracts in Chinese market; lack of resources or no concept of how to market to TVEs; clients cannot finance services.	Provision of market information and project opportunities; knowledge of legal and regulatory conditions; linkage to potential clients; linkage to (client) finance
Lenders (e.g. RCF)	Expand lending portfolio; Technical evaluation of viability/security of loan	Limited pipeline of good (bankable) projects; high costs of identifying new projects; insufficient in-house understanding of technical viability	Project identification and delivery of supportable loan applications; due-diligence
Donors, GoC	Realise social and economic development; reduce GHG emissions and material consumption; invest in sound initiatives; develop appropriate support policies	Limited pipeline of good investment opportunities; high costs of developing new projects; 'remoteness' from beneficiaries	Stream of Investment opportunities; Capacity building services (for TVEs); Policy development assistance

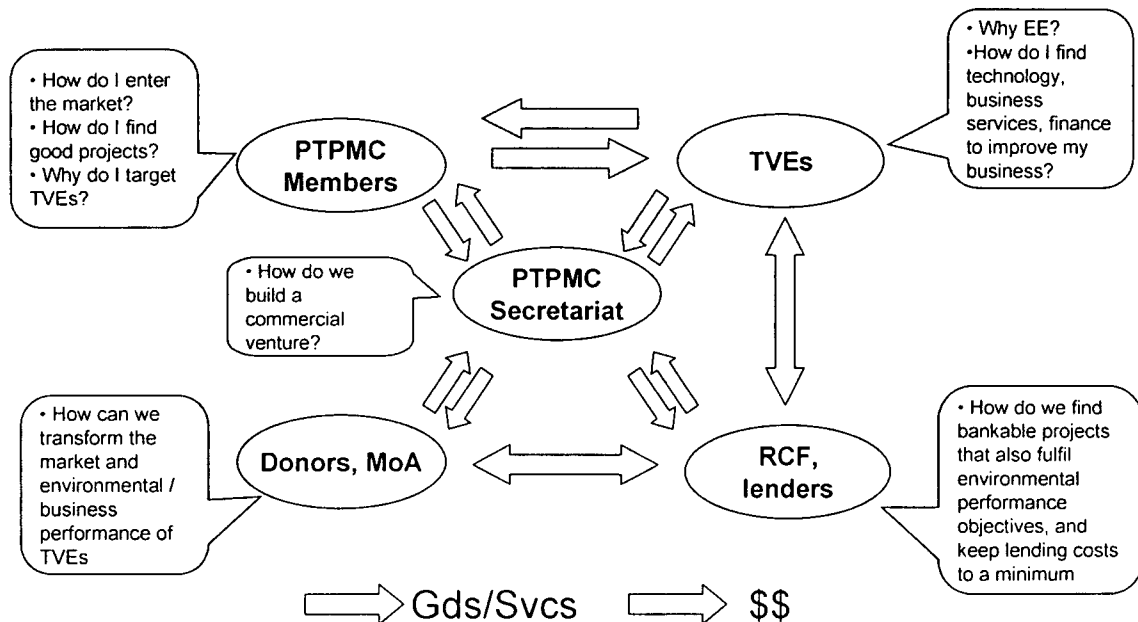


Figure 1: PTPMC – the commercial hub of TVE Energy Efficiency product and service flows

These strategic objectives will be achieved through the following specific measures:

- During the foundation phase by charging an equivalent service fee to contracts issued under the UNIDO project, e.g. for service and equipment contracts brokered to PTPMC Members, and by leveraging the budget lines of the UNIDO Project to maximise the capacity building of PTPMC – this is outlined in more detail in Section 5.1
- By compiling a list of potential national and international members and marketing to them a range of member services for which they will pay an annual membership fee. This activity will be supported by the PTPMC website and opportunity portal therein.

- By charging a “finders fee” and management charge for products and services successfully brokered through the ‘opportunity portal’.
- By providing, for charge, consulting projects for inward market advice to international members and outward market advice to National members
- By closely supporting a Revolving Capital Fund (RCF) which will enable a proportion of the economic benefits resulting from the implementation of energy efficiency measures within the TVE sector to be re-invested in future initiatives. This close support includes assisting TVEs to access the Fund, managing the project flow for the Fund, providing pre- and post loan due diligence services, providing loan performance monitoring and reporting support to the Fund and assisting the Fund to attract co-finance and other investment to grow. The support could be paid for via a support contract or in a value share arrangement for funded projects.
- By drawing management fees for successfully brokering energy efficiency project finance initiatives
- By drawing consultancy fees and value share arrangements for any projects that receive Clean Development Mechanism Support
- By providing, for charge, consultancy and specific business assistance to support individual TVEs business development plans. This may be in conjunction with multi-lateral funding.
- By providing other services, such as policy development assistance to GoC, on a consultancy basis
- PTPMC will develop internal capabilities where external service providers do not exist or the market is in its infancy and gradually remove or spin-off these capabilities when the market is established. PTPMC needs to evaluate where conflicts of interest arise and avoid them where practicable.

4.6. Goals

Short-term goals (Remainder of UNIDO Project i.e. to 2004)

- Break even by 2004 and in a good position to introduce strategic investor for post-project growth
- Core staff of 11-13 employees across the three main groups – corporate executive, core service group and PTPMC consulting – recruited and trained to international standards
- Over 50 TVE’s received business development assistance
- 8 pilot projects underway successfully and contracts in place to support PTPMC future revenue and revenue secured in service fees
- Over 120 members signed up
- Member services to top US120,000 in 2004
- Secured additional financing of US2.5m for RCF
- Secured 1 CDM projects from 8 initial projects
- Brokered energy savings contracts for each of the Pilot Projects
- Secured recognition for in-house quality, human resource and environmental management systems

Medium-term (2004-2008)

- Operating profit Margin of over 58% on revenues of over US1.3m per annum as the opportunity portal, RCF services, member services and CDM/Energy savings revenue build up
- Brokered over 50 EE projects, and running at about 13 projects per year
- Over 150 members
- Business development assistance being brokered to over 100 TVE’s per annum
- Secured financing for RCF so that capital employed tops US37.5m
- Core staff now expanded to over 25 with additional senior recruits to increase Human Resources and Legal roles and also to increase the number of senior technical staff from 2 to four.
- Begun to dividend retained profit to shareholders and to use the profit to promote energy efficiency to a broader audience, even potentially seed financing innovative technology providers or sponsoring some projects directly

- Expanded project scope into at least one new technology field and to one new market/customer group

Long-term (2008+)

- Continued business development
- Potential Overseas expansion
- Secured recognition for efforts in the past ten years
- Within ten years, revenue to have topped US2.5m per annum, operating profits of over US1.7m, staff employed to be over 40

4.7. Current Status

PTPMC has been established with key shareholders IE Energy and Environmental Protection Company and ZhongNong Company and is called Hongyuan Energy And Environmental Protection Company Limited, with registered address at 41 Maizidian Street, Chaoyang District, Beijing, China 100026 (tel: +86 (0) 10 65929549, fax: +86 (0) 10 65929549, website: www.ptpmc.com)

Key staff have been recruited:

- Ms Yao Xiangjun, President

- Mr Wang Hai, General Manager

as well as others who have transferred from the PTPMC secretariat who's salaries are supported by UNIDO until the end of 2004 and key administration staff. Offices have been set up and a website and mailserver developed.

5. PTPMC SERVICES

5.1. Foundation measures during the Project Period

During the Project Period, PTPMC has a range of foundation services it can perform and thereby build its internal capacity to be self sustaining after the end of the Project Period. These measures include the following as well as those outlined in the TOR in Annex 6:

1. Business management support / business development assistance to help TVEs to adopt an environmental / quality management approach and long-term strategic investment approach to their business operations. This will stimulate demand among the TVEs for the services offered by the PTPMC members (energy/environmental service providers). The detailed descriptions for some of these services are outlined in Annex 1 in terms of customer definition for the service, the service to be provided, the delivery mechanism for the service, the controls required, the income route, the internal needs to deliver the service, the costs incurred and the success factors for the service.
 - Business management workshops / seminars / tutorials, paid for or supported by UNIDO (and other agencies to be identified)
 - Training for TVEs in how to develop bankable projects and use the services offered by PTPMC to tap into domestic and international service providers and sources of funds for their projects, including via the RCF
 - This is catered for in part by the Regulatory Reform service group, Market and Management Service Group and Finance Management Service Group contracts in the UNIDO Project.
2. Project Management of 8 UNIDO demonstration projects
The 8 pilot projects could provide 'experience' (training) for staff on what will become several of PTPMC's core functions. Furthermore they provide the initial demand for the PTPMC Opportunity portal, Energy Service Company service and also the Clean Development Mechanism services (via the Engineering Service Group contracts and PTPMC structuring the pilot projects accordingly), provided that PTPMC can secure an equivalent service fee on the contract value.

In discussions with PTPMC, the Project Management Office, Hong Yuan company and UNIDO a draft Terms of Reference for what PTPMC could contractually do as foundation measures has been developed – see Annex 6. This has been developed in line with the principles and budget lines contained in the Project Document and is used as the basis for "learning by doing" by PTPMC in preparation for its sustainable operation from Year 3.

Nevertheless, these foundation measures alone are unlikely to be adequate for growth of the PTPMC business. Rather this will need rapid parallel development of similar services to other TVEs and some additional contract work to supplement income.

5.2. Growth Services

3. PTPMC Members services
 - Identification of new energy efficiency products or services (niche opportunities) to be developed in association with PTPMC members
 - 'Finders' service for equipment suppliers (PTPMC Members). *This is effectively built in to the PTPMC Membership fee. To be effective this needs to have RCF only approve loans to PTPMC Members (i.e. one eligibility criterion for RCF funding is that work is undertaken by PTPMC member. This allows PTPMC to define 'quality' terms in membership requirements.*
 - Finders service for overseas investors (Investment brokers)
 - Other services for Members ('shop-window', broker service)
 - Other services (e.g. training videos, best practice / business practice case-studies and factsheets, website, etc.)
4. Interaction with the Revolving Capital Fund

- Project design assistance for TVEs – provision of advice to TVEs on current international best practice, assistance with funding applications. Also to include energy audits leading to evaluation / prioritisation of energy efficiency measures. Preparation of TORs for TVE Energy Efficiency Projects
- Project implementation assistance service to RCF (i.e. ABC) – PTPMC Sec undertakes due-diligence of projects submitted for funding. Approves draw-downs and 'loan' disbursements.

As Section 6.3.3. outlines, these services may be constrained by the size of the RCF. PTPMC therefore needs to develop strong links to other banks / financiers to offer TVEs a broader range of alternative finance options, and/or to leverage co-finance for the RCF.

5. Other Consultancy Services

PTPMC is well positioned to provide a range of consulting services to government agencies, private sector firms, and international organizations. These can include project preparation support and project pipeline development for organizations like the World Bank, Asian Development Bank, UN and others; policy impact studies for government agencies; and conference and event planning for others, etc. Care will need to be exercised to avoid conflict of interest situations.

5.3. Summary of PTPMC Services

PTPMC's range of potential services is summarised in Table 2. More detailed descriptions of what are seen as the key near-term growth services, together with sample workflows for the Product Identification & Formulation service and the Due Diligence Service are included in annex 1. The remaining workflows and associated operating procedures will need to be established by PTPMC for each of the services during its first year of operation.

Table 2: Overview of PTPMC Secretariat Services

Client Type	Typical Client Needs	Service Features	Benefits to Customer	Benefits to PTPMC	Internal Capabilities required
Members (EE product and service providers)	Rapid information on opportunities for selling their products/services	Website Tender Notification – see Annex 1.1 and flow chart	<ul style="list-style-type: none"> - Saves time searching for potential project opportunities / clients - Reduces upfront costs 	High – This is critical content to draw members to PTPMC so PTPMC earn membership fees	<ul style="list-style-type: none"> - Carried out by Core Services - Requires Website and Information Management System - Key staff involved: International Member Services Director; National Member Service Director; Chief Information Officer
	Rapid information on opportunities for selling their products/services	Email Tender Alert– see Annex 1.2	<ul style="list-style-type: none"> - Saves time searching for potential project opportunities / clients - Reduces upfront costs 	High – This is critical content to draw members to PTPMC so PTPMC earn membership fees	<ul style="list-style-type: none"> - Carried out by Core Services - Requires Information Management System (and website) - Key staff involved: International Member Services Director; National Member Service Director; Chief Information Officer
	Rapid information on opportunities for selling their products/services	Tenders Bulletin Fax Service– see Annex 1.3	<ul style="list-style-type: none"> - Saves time searching for potential project opportunities / clients - Reduces upfront costs 	Medium to Low – complements Web and Email services, but likely to be limited uptake. Little additional effort required, however.	<ul style="list-style-type: none"> - Carried out by Core Services - Requires Information Management System - Key staff involved: International Member Services Director; National Member Service Director; Chief Information Officer

Client Type	Typical Client Needs	Service Features	Benefits to Customer	Benefits to PTPMC	Internal Capabilities required
	Rapid information on opportunities for selling their products/services	Project Identification Service– see Annex 1.4 & 1.12	Saves time/staff resources developing client contacts,	High –critical for drawing members to PTPMC (income from membership / finders fees)	Carried out by Core Services - Requires Information Management System - Key staff involved: International Member Services Director; National Member Service Director ; Chief Information Officer marketing staff; evaluator / energy auditor; credit checker; contracts officer;
	Advice / assistance in preparing bankable projects	(RCF) Loans Application Advisor– see Annex 1.5	Improves prospects for realising TVE project finance, and so increases likelihood of project progressing	High –critical for drawing members to PTPMC (income from membership / finders fees)	Carried out by Core Services - Requires Information Management System - Key staff involved: RCF loan advisor technical/engineer project administrator
	Introduction to Chinese market and particularities of China business environment	Inward Investment Advice	PTPMC has technical understanding and knowledge of the specific market sector. 'One-stop-shop' – saves time and staff resources	High – this service is likely to be limited to companies with serious intention of establishing local presence. However, the market analysis required is likely to be detailed and time consuming, generating large revenue.	Core
Members (EE product and service providers)	Convenient means of demonstrating capabilities to potential clients	'Shop Window' (via website & case studies)	Client-focused web-presence can be achieved with little effort	Medium-Low. May result in bypassing PTPMC	- Carried out by Core Services - Requires Website - Key staff involved: Chief Information Officer

Client Type	Typical Client Needs	Service Features	Benefits to Customer	Benefits to PTPMC	Internal Capabilities required
	Technical language (translation) and 'tame representative'	Liaison services for non CN members	PTPMC has technical understanding and knowledge of the specific market sector. Avoids need for premature establishment of local office / reduces need for in-country missions	Medium – establishes profile with both Members and TVEs, but requirement diminishes as Members' China experience grows	Core
	Opportunity for focused meetings with numbers of potential clients	Inward Trade Missions	Cost-effective means of locating / meeting potential customers	Medium	Core
	Information on potential niche product or service applications that may form new business stream	New Product Development / Identification	Reduces market research / market validation needs and helps identify potential customers for these products	Medium-Low – products may take time to come to market	Core / Consulting
TVEs	Assistance to identify possible Energy Savings and measures to realise these	Project Preparation / formulation– see Annex 1.8	Ensures product/service needs are accurately identified and suitably presented to enable supplier to bid for service. Establishes guide bid-price.	High – provides the reason for Members' participation and route for value-share income	Carried out by Core Services - Requires Information Management System - Key staff involved: marketing mgr; project evaluator; CFO; contracts officer; project administrator
	Technical competence to assess providers' proposals and capability to deliver services	Bid evaluation and clients' due diligence (pre-implementation) – see Annex 1.9	Confidence that proposal is fit-for purpose and best value is achieved	High – provides the reason for Members' participation and route for value-share income	Carried out by Core Services - Requires Information Management System Project evaluator; project administrator; CFO; Legal advisor

Client Type	Typical Client Needs	Service Features	Benefits to Customer	Benefits to PTPMC	Internal Capabilities required
TVEs	Advice / assistance in preparing bankable projects	Loans Application Advisor– see Annex 1.5	Improves prospects for realising TVE project finance, and so increases likelihood of project progressing	High –critical for drawing TVE and members to PTPMC (income from membership / finders fees)	Carried out by Core Services - Requires Information Management System - Key staff involved: RCF Services Mgr; technical/engineer; project administrator
	Assistance to assess current energy performance and comparison to expectations / best practice	Energy Auditor– see Annex 1.11	Establishes whether there is potential for introducing energy savings and prioritises actions	High	Carried out by Consulting Services - Requires Information Management System - Key staff involved: ESCO Director; Energy Auditor; CFO; Project Administrator; Marketing
	Assistance to assess business administration capabilities and identify improved working practices	Total Quality Management Auditor	Can lead to better internal tracking, reduced administration costs and increased customer confidence	Low – other dedicated services exist for this purpose	Consulting
	Help in identifying new product opportunities, new markets, new clients	Business Development Advisor	Avoided marketing search and low-cost market validation.	Low -	Consulting
	Evaluation of actual energy savings being delivered post implementation	Post implementation monitoring / due diligence– see Annex 1.10	Confidence of independent confirmation of level of savings being achieved – establishes required payment for service provider if value-share arrangement.	High	Carried out by Consulting Services - Requires Information Management System; ISO Accreditation - Key staff involved: ESCO Director; Energy Auditor; CFO; Project Administrator Marketing

Client Type	Typical Client Needs	Service Features	Benefits to Customer	Benefits to PTPMC	Internal Capabilities required
TVEs	International partner(s) to provide investment for business development Help to build in-house capacity to monitor / implement energy savings initiatives	Inward Investment Broker Energy Efficiency best practice training provider	Reduced marketing requirement and well-targeted resource usage ('serious' potential) Ongoing appreciation of energy implications for business operation costs and understanding of initiatives to minimise these.	Medium Medium	Core Core
	Assistance to introduce quality management tools Help to identify financial resources to enable EE projects to be implemented	TQM best practice training provider Co-finance location assistance (including CDM bundling) – see Annex 1.13	May identify innovative (lower-cost) devices to overcome finance shortfall and enable long-term benefits to be realised	Low High	Core Carried out by Core Services - Requires Information Management System - Key staff involved: CDM Analyst; project administrator; Marketing
Banks/RCF	Confidence that lending is likely to be repaid	Loan Application Screening (pre-loan due-diligence) – see Annex 1.6	Reduced administrative costs. Avoided need for in-house technical staff. Independent appraisal of value-realisation	High	Carried out by Consulting Services - Requires Information Management System - Key staff involved: RCF Services Mgr; technical/engineer; project administrator; Marketing
	Confidence that loan has been used for intended purpose and will be repaid	Post-loan due-diligence and post implementation monitoring/reporting – see Annex 1.7	Reduced administrative costs. Avoided need for in-house technical staff. Independent appraisal of value-realisation	High	Carried out by Consulting Services - Requires Information Management System - Key staff involved: RCF Services Mgr; technical/engineer; project administrator; Marketing

Client Type	Typical Client Needs	Service Features	Benefits to Customer	Benefits to PTPMC	Internal Capabilities required
	Minimise risk and costs of lending to unfamiliar sector, while expanding lending streams	External Fund Management and Fund Replenishment	Reduced administrative costs. Avoided need for in-house technical staff. Independent appraisal of value-realisation	High	Consulting
International EE service providers (Non-Members)	Introduction to Chinese market and particularities of China business environment. New client or partner development. Detailed picture of market opportunities	Inward Market advice (market studies, regulations, JV Partnerships, etc)	PTPMC has technical understanding and knowledge of the specific market sector. 'One-stop-shop' – saves time and staff resources	Low	Core
Chinese EE service providers (Non-Members)	Assistance to identify new international markets for (Chinese) products	Outward market advice	PTPMC is aware of international state-of-the-art and has highly competent analytical and market development staff. Saves time and development of internal staff resources for client.	Low	Consulting
Organisations in need of EE products/services	To identify competent international suppliers of EE products/services	Shop Window on service providers (for Overseas 'TVE Equivalents')	'Guaranteed' competence – quality products and services. Minimal 'research' costs	Low – little direct revenue generation, but extra 'bait' for PTPMC Members (i.e. justifies Membership fees)	Core
Development Organisations (e.g. UNIDO, WB, GoC)	To identify appropriate use of funds to realise broad social and/or environmental development objectives	Project Formulation	PTPMC has technical understanding, knowledge, independence and competence in the specific market sector, which avoids 'cold-start'. Client can be confident that advice is sound. Formulation time and costs can be minimised.	Medium	Core / Consulting

Client Type	Typical Client Needs	Service Features	Benefits to Customer	Benefits to PTPMC	Internal Capabilities required
Development Organisations	Competent personnel to deliver (technical) training / raise level of capability both within the client organisation and/or to broad recipient sector	Capacity Building Services	Excellent technical and management competence, sound local knowledge	Medium	Core
GoC (plus e.g. UNIDO, WB, etc.)	To identify appropriate policies and direction of (government) funds to realise industry or social development objectives	Policy Development Assistance / Resource Assessments	Excellent technical and management competence, sound local knowledge	Medium	Consulting
International EE service providers (Non-Members)	Opportunity for focused meetings with numbers of potential clients	Inward Trade Missions (JV Partnerships)	Cost-effective means of locating / meeting potential customers	Low	Core

These services are described in more detail in Annex 1.

It should be noted that the majority of these services would benefit from carefully designed project management tracking tools, together with integration to the website. Additionally, from a 'leadership' perspective, PTPMC should at the earliest opportunity seek to gain ISO 9001 accreditation, and should require this or equivalent as a criterion for Consortium membership.

6. MARKET PROFILE

6.1. Market Analysis

Although PTPMC is offering services to several stakeholder groups as outlined in the strategy overview (Section 4.5), the ultimate driver for PTPMC services is the latent demand within the TVE sector to improve competitiveness and profitability. It is evident that the gap between TVE energy consumption and international state-of-art (and indeed the gap between TVE and local state-of-art) as summarised in Table 3, presents considerable scope for energy savings.

Table 3: Overview of scope for energy efficiency improvements in Chinese TVEs within the four target sectors

Sector	Energy consumption in Mtce	Projected production growth rate	Energy efficiency gap compared to [in %]		Share of TVE in total sector energy consumption [% p.a.]
			Local state-of-art	International state-of-art	
	1995				
Brick	79	2-5%	28	37	58% across the board
Cement	27	2-5%	40	57	
Coking	54	2%	28	48	
Metal-casting	3.4	2%	16	45	

Estimates of the number of TVE's per sector have been provided by the CTA and the Bureau of Township Enterprises. There is some uncertainty surrounding precise figures, but in summary it appears that the minimum number of TVEs per sector are:

- Brick Making 60-80,000
- Cement 3800
- Steel 6000
- Coking 800

[In practice, the number of TVEs does not have a major impact on the business plan financial model, other than as a check (upper limit) of the number of potential projects that the PTPMC could aspire to.]

Based on a coal price of 112 RMB/tonne, the value of these energy savings - if international state of the art practices are introduced within the TVE sector - range on average from 16500 RMB /yr in the metal casting sector to 23700 RMB /yr in the brick sector, 263000RMB/Yr in the cement sector and an estimated 2 million RMB / yr in the coking sector.

The value of savings within the two largest sectors (metal casting and brick making) on first inspection seem rather small. Ideally, it would be useful to undertake a 'cherry picking' analysis through a sub-sector segmentation of energy expenditure and divergence from international best practice as % of turnover – to identify where can 'easy' savings be made. However, data on energy expenditure by TVE sectors is apparently not available, and certainly further segmentation data within sectors does not exist. (This suggests that the marketing plan for PTPMC is crucial to its success as there are few existing multipliers.)

In fact, the financial model itself refers to the potential for PTPMC to realise revenue from contracts replicating specific energy efficiency measure as determined under Phase I of the Energy Efficiency & Greenhouse Gas Emission Reduction in Chinese TVEs project; some analysis was made of the energy savings and CO₂ emissions abatement arising from the implementation of various process and technology improvements in the four target TVE sectors.

Feasibility studies were made of seven exemplar projects. The results of this small study, summarised in Table 4 indicate a very large potential market for PTPMC services, particularly in the brick manufacturing sector, and also in the cement production sector. The other sectors also offer opportunities, though the energy and emissions savings potential per unit investment appear greatest in the brick and cement industries.

Table 4: Potential energy and emissions savings in the target TVE sectors based on the implementation of various process and technology improvements

Sector	Energy Savings	Investment Cost	TCE Savings /MUSD	CO2 abatement	CO2 / MUSD	Replication potential	Replication
	TCE/yr	MUSD		¹ tonnes/yr		¹ tonnes CO2/yr	Approx No. Units
Coking	7428	2.85	39094.74	16130	84894.74	5430000	337
Casting	455	1.35	5055.56	1173	13033.33	205773	175
Casting	530	0.83	9578.31	1356	24506.02	237893	175
Brick	2869	0.81	53129.63	10072	186518.52	21300000	2115
Brick	1975	0.44	67329.55	3865	131761.36	10600000	2743
Cement	5665	1.02	83308.82	18311	269279.41	7700000	421
Cement	4687	1.2	58587.50	16400	205000.00	7700000	470

¹ assumes 15yr project life

The financial model scenarios assume that only a small proportion of the replication potential will actually develop into realisable projects (under the aggressive scenario this equates to 7.5% of the replication units - other scenarios assume lower project realisation levels). Clearly the replication potential does not approach the upper limit of available TVEs, but further investigation is required to validate both the likely uptake of projects within the TVE sector and the share of project contract value that may be realised by PTPMC.

It must also be emphasised that the *process* improvements identified within the Phase 1 reports invariably resulted in additional value to the TVE other than simple energy savings. Internal Rates of Return were in the order of 17 to 19% for the brick and cement sectors, and up to almost 36% in the coke sector, though for the casting sector the IRR tended to be slightly under 12%. The PTPMC financial model only draws revenue from the energy savings and related emissions reduction value through the Clean Development Mechanism, NOT from the overall process value.

It should also be acknowledged that PTPMC knowledge will be transferrable to projects in the State-Owned-Enterprises sector and to SMEs from these same industry groups. The underlying Energy Efficiency principles of PTPMC may also be translated to other industrial sectors in the longer term and could be expanded with the recruitment of additional appropriately qualified staff to include other environmental / resource management aspects (e.g. water, waste, etc.). However, these possibilities are not considered for the purposes of this business plan.

6.2. Competition

The apparent losers, should PTPMC succeed in assisting TVEs to reduce their energy consumption, are the energy suppliers, particularly the coal industry. Nevertheless, in the short to medium-term at least it is unlikely that PTPMC alone will have such an impact on the sector as to warrant or elicit a targeted response from the traditional energy suppliers. The general rate of development in China is likely to see their 'loss' of custom absorbed elsewhere.

The main competition in respect of client base and potentially also sources of funds are existing multipliers e.g. trade associations, trading companies, other donor projects and existing green capital funds that might compete with PTPMC for their position as the route to TVE's. A key potential competitor (or useful partner) is the Green Capital Environment Investment Management Company (www.greencapital-eimc.com) that has access to USD 1Bn in funds for Environmental projects. This fund recognises that capacity building must go in tandem with financing and is therefore setting up a similar range of services to PTPMC. PTPMC's advantage is likely to be that it is clearly focused on a specific industry sector and it has excellent links to key representative bodies for its market group, so should be in a strong position to accurately focus its marketing activities. Additionally, given the size of Green Capital's investment fund, it may have less interest in the relatively small loans (typically in the order of USD 800,000) that PTPMC is targeting. Indeed, PTPMC should investigate

possibilities of servicing Green Capital through identification of larger investment opportunities or through presenting a bundled portfolio of projects for investment.

Other potential partners/competitors include organisations like Centre for Environmental Sustainable Technology Transfer under the administrative centre for China's Agenda 21 (CESTT). This is an existing not for profit organisation that is funded by Ministry of Science and Technology (MOST) and is attracting funds from the likes of Asian Development Bank (ADB) to look at technology transfer and CDM for small and medium size enterprises like TVEs. This reduces PTPMC's ability to tap the same source for funds. CESTT is also producing a lot of energy efficiency literature that PTPMC could leverage.

6.3. Customers/Users

Four main customer groups have been identified in the strategy and services descriptions above.

6.3.1. TVEs

The 4 identified TVE Sectors provide the major justification for PTPMC operation and will eventually be the 'bait' for attracting other customer groups to PTPMC.

The potential TVE customer 'pool' has been described in section 6.1. Initially, though, uptake by this group is likely to be small and will require a strong marketing commitment and development of good links with TVE representative bodies to generate interest in PTPMC's services. In order to attract TVE interest, PTPMC must effectively present the potential business development and profitability case for long-term investment in energy efficiency measures, highlight the low risk to TVE's, and demonstrate that it can deliver access to low-cost finance for improving competitive edge.

PTPMC will also need to adapt the services it offers to the types of TVE customers it is dealing with, for instance by region and size of TVE. In entrepreneurial provinces like Guangdong, the services required are more to understand the potential opportunities that new technologies or products offer as TVE owners can usually access sufficient "friends and family" type financing. Whereas in Shanxi it is access to funds that TVE owners require as they already understand coking technology and their market. The experience of the current PTPMC team is sufficient to understand how to match the PTPMC services to the TVEs.

Subsequently the TVE customer base may expand to other sectors, and eventually PTPMC may be able to export its expertise to other (developing) countries.

6.3.2. Suppliers of Energy Efficient Products and Services (PTPMC Members)

Although the TVEs are an important customer for PTPMC, it is actually the Members which provide the stable revenue platform upon which PTPMC's sustainability will be founded. Membership fees provide a solid annual base income, while in the medium to longer term, services to Members such as inward investment advice and new product identification are expected to be important earners for the Secretariat. It is critical therefore that PTPMC is able to transmit to potential members the value of Membership; the pilot projects will be the main mechanism for establishing PTPMC's reputation as a portal to valuable new business opportunities.

During the business planning phase, over 200 potential members have been identified and undergone initial screening. The current list of potential members can be seen in Annex 3 and in the associated database. The methodology for obtaining these names was as follows:

- **Sources include:** international procurement sites such as TGRNET.com, industry publishing databases, e.g. James and James, and other industry specific sources like www.greentie.org etc
- **Classification:** The following segmentation is used to identify potential members:
 - Brick Making equipment manufacturer
 - Cement equipment manufacturer
 - Steel equipment manufacturer
 - Coking equipment manufacturer
 - Training Providers

- Energy Service Co's
- CDM Consultants
- Business development Service Consultants
- Quality management consultants
- Environmental Management Consultants
- Engineering design consultants
- Financial institutions
- Legal institutions
- Donors/NGO's
- Credit Investigators
- Investment advisory companies
- Regulatory advisory companies
- **Initial Selection Criteria:** In the initial screening it is important to keep the population of potential members quite large. Once they have indicated a willingness to join then further selection is possible. The initial criteria are:
 - Ability to provide technology/services in the four key sectors
 - Willingness and capacity to target China
 - Internationally recognised
- **The following information has been collected in a MS Access database:**
 - Company name, Web site, Region, Country, Type of Company, Area of speciality 1, Area of speciality 2, Ability to work in China, Address, Phone, Fax, Email, Name of contact, Contact's position, Comments, First emailed for more information, Response to first email, Other contact, Additional comments

6.3.3. Financial Sector (RCF & Other Lenders)

Within China reportedly there is limited demand for independent due diligence services at the present time. However, experience with such models is increasing, for instance in relation to wind energy developments, and could be extended to lending for EE projects in the TVE Sector.

In any event, initially this service will be limited to supporting the RCF, i.e. removing the need for ABC to maintain in-house expertise for what will be a very small part of its business in the short to medium term. The modalities of, and indeed confirmation of the need for this service need to be agreed with ABC, which will require further 'marketing'.

In the medium term, if PTPMC is to support more than a handful of projects, it is critical that additional co-finance is attracted to supplement the RCF. This also needs strong marketing, and persistent cultivation of this sector, but so doing will extend the need for services that support such specialist lending.

6.3.4. Donors, GoC, etc.

China is a rapidly emerging economy with a huge thirst for further development. This presents tremendous opportunities for social improvements, but also introduces the possibility of, for instance, regional and gender inequalities, and potential environmental issues. Many multi- and bi-lateral donors are keen to assist China's sustainable development and are already actively supporting programmes nationwide. The TVEs contribution to the national economy and the potential implications for environmental improvements resulting from implementation of EE initiatives within the sector will be of concern to many other agencies like UNIDO, as well as to the Government of China. There is therefore considerable scope for provision of policy formulation / responses, programme/project monitoring and evaluation, capacity building services etc. within the PTPMC's scope, to assist development agenda goals.

PTPMC will not only need to demonstrate strong capability to deliver such services, but - as with the Finance Sector - will also need to cultivate relationships with key personnel to maintain profile for future opportunities.

7. MARKETING & PROMOTION STRATEGIES

Many of PTPMCS services are reliant upon rather aggressive marketing to TVE's to the potential Consortium Members, to Banks and other financial institutions. This is an urgent need, the staffing implications for which have not yet been catered for within the UNIDO funded positions. PTPMC may consider seconding staff from an appropriate international organisation to assist this initial establishment function.

7.1. Marketing to PTPMC Members

Marketing information to attract potential members to join PTPMC will emphasise the benefits of Participation in the Consortium:

- Inexpensive, low-risk access to notification of potential product and service contracts worth typically in the order of USD 1 million – opportunities that are **only** open to PTPMC Members.
- Real business development oriented service – the Secretariat will only pull-forward projects with a strong chance of proceeding to the implementation phase.
- PTPMC provides recourse to low-cost project finance which overcomes one of the major barriers to implementation.
- Professional, (to be) quality accredited approach to business development.
- Access to a wide customer base through government-supported enterprise centres.
- Inclusion in service providers listing on PTPMC website.
- Effective in-country representation (for international members).
- Information service providing key information critical for EE providers doing business in China.

Until PTPMC has a website up and running the main route to market to these potential members will be direct marketing, managed by the National Marketing Manager and International Marketing Director. This will require the following marketing material to be created:

- Letter of introduction to send to prospective members
- Physical and electronic introductory brochure to PTPMC in English and Chinese outlining its origins, purpose, value proposition to its customers, value proposition to being a member and contact details
- Membership form and account for receiving membership dues
- Database to track progress of obtaining members (modelled on the existing database supplied with this business plan)

During the project period, a key bait for members to join PTPMC will be the 8 pilot projects and the service group contracts. These should be leveraged for maximum effect.

It is proposed that an annual yearbook is created towards the end of Year 1 for which members pay additional fees to advertise and that regular e-newsletters are sent out to both members and prospective members.

PTPMC should also forge alliances with similar multipliers e.g. Centre for Environmentally Sound Technology Transfer (CESTT), and International Technology Transfer Centre (ITTC), Tsinghua University, who may jointly host/co-sponsor workshops to attract national and international members.

7.1.1. PTPMC Membership options

PTPMC has considered several membership options and the consensus mechanism is now outlined:

- Most members should pay (except those who are not commercial like multilateral agencies and certain exceptional cases). So it is assumed that 80% of members will pay.
- International members will pay a higher fee (US300) than national members (US100) initially as this reflects their better ability to pay (and more use from the services provided in breaking into the market in China)

- There should not be a membership fee holiday in Year 1, but if required to attract members there might be some discounting scheme against PTPMC performance – e.g. giving members money back guarantees on project leads being identified.
- There may be Founder members who pay more and receive benefits (i.e. discounts on the yearbook, better placed advertising on the website) but these benefits should not lead to preferential notification of project leads as PTPMC is supposed to be an independent broker.
- As the services develop PTPMC can consider a multi-level membership approach e.g. gold, silver, bronze corporate memberships and even individual memberships and for each level of membership additional services are provided.

7.2. Marketing to TVEs and other customers

Marketing to the 70-90,000 potential TVE clients and then after the project, the subsequent expansion of the business scope to include other customers such as SMEs and other sectors will require considerable effort. This effort must be targeted to be effective. Furthermore the channels to market provided by stakeholders, the Agricultural Bank of China (national and local branches) and the Ministry of Agriculture (in particular the national and provincial Chinese Township Enterprise Development Centre and Scientific & Educational Centres) must be leveraged fully. This marketing effort will be carried out during the project period by the National Marketing/TVE manager who will then build up his team as business volume grows.

The TVE market, although large, is not a mass market as every TVEs situation will be slightly different and so the equipment and services are typically sold as projects and not products. Therefore this suggest more of an “integrated account and project management” marketing strategy rather than a product-push approach to engage with TVEs. Having said this it is critical for PTPMC to leverage technology to ensure it can get “service provision with product economics, i.e. repeatability and easy management.

The marketing channels and possible approach are now outlined:

7.2.1. Possible Marketing Channels

- Direct marketing from PTPMC – includes mailshots, workshops and seminars
- PTPMC website – 24x7 facility but unlikely to be accessed by most TVEs who lack basic internet access
- ABC – local branches, carrying PTPMC marketing materials
- MoA – national and provincial Chinese Township Enterprise Development Centre and Scientific & Educational Centres holding marketing materials
- SETC – local branches of the ETC have an energy efficiency department which have very good links with the local ESCO’s and local companies
- Other multipliers e.g. national and local trade associations
- Other lending institutions – could be approached and carry out similar role to ABC
- Members such as ESCOs and training institutions like BECon could also identify opportunities – this would require collaborative marketing agreements
- Other donor funded projects – like World Bank ESCO project may be able to provide leads

7.2.2. Marketing Process

PTPMC already has 8 pilot projects and is identifying a deal stream of a further 100 pipeline projects. Thus it makes sense that the marketing process starts from here. Furthermore a distinction needs to be made between active marketing and passive marketing.

Active Marketing Strategy

- For each of the pilot project counties (about 2000 in total in China, of which 600 designated as poverty counties, so TVEs in the 4 sectors per county is approximately 45):
 - Contact the local ABC (and other banks if they have a branch), ETC, MOA, ESCO to recommend names of TVEs in the county and the surrounding counties.
 - Invite the leaders of the identified TVEs, and local representatives of ABC, ETC, MOA, ESCO to a seminar and lunch with a focus on introducing PTPMC and also to identify opportunities and

potential barriers – a quick calculation assuming 5 counties are invited gives a potential audience of 200 on average, of which hopefully 30-40 can show up

- Enter attendees in contacts database
- Prioritise and follow-up most likely leads with a posting on the website
- Repeat the above process at the provincial level in the provinces where the pilots are located, scheduled to follow immediately before or after the county level seminar
- Depending on the success of this outreach program, repeat in new counties and provinces, starting with eastern seaboard provinces.
- Carry out one high profile workshop per year (first year in Beijing and subsequently in provinces where successful pilots are located for field trips)
- Funding support for these activities should be sought from donors/members with the remainder being paid for by PTPMC

Passive Marketing Strategy

- PTPMC should join and advertise in national trade journals and existing trade associations and seek to advertise at relevant events such as the National Energy Efficiency Week Exhibition.
- A good journal is the nationally distributed "China Energy Efficiency Magazine", also SETC published "Energy Of China" magazine, "Energy Engineering"
- ESCO Members should be canvassed to ask what journals they receive and then articles should be contributed to them.
- Obviously the website is available 24x7.
- PTPMC should also integrate with existing on-line channels like www.energy-china.com, www.65.com.cn, www.china-energy-conservation.com,

If the active marketing fails then contributing articles to the "local evening dailys" could be considered as most people read these popular sheets.

7.2.3. Marketing Material

- Marketing brochures defining services should be developed for the initial 8 pilot projects and the services brokered under the service group contracts.
 - Best practice formats can be obtained by looking at the PTPMC international members websites and websites such as www.greentie.org, cadet for guidance.
 - Each brochure should contain:
 - Introduction to PTPMC
 - What type of customer the service is appropriate to and why
 - Customer benefits of the service
 - Features of the service
 - Example case studies that demonstrate the service in practice and the cost/benefit
- Subsequently if a new type of project is initiated and the service is likely to be repeated then additional brochures can be created
- PTPMC should leverage the materials produced under other donor assisted projects e.g. ADB and CESTT have co-operated to translate the UK government's "envirowise" best practice programme into Chinese. The programme is also available from the JEMU website – <http://www.dti.gov.uk/jemu/> and www.envirowise.gov.uk/international
- Website – initially content, then developing transactional capabilities as the projects increase – see 7.3
- Training / publicity videos can be made if funded by donors or as a joint undertaking with members or TV stations.

7.3. Marketing to RCF and other Lenders

The key to engaging the traditionally risk-averse finance sector – aside from demonstrating value for money (i.e. to be able to deliver a service at less cost than could be achieved in-house) - must be to engender confidence in PTPMC's ability to deliver robust technical and financial analysis (i.e. good track-record).

Clearly as PTPMC as an organisation has no such track-record at the present time, confidence in its ability to deliver such services is dependent upon the capability and track-record of its staff. It is essential therefore that

key recruitments bring such capability into the organisation. This may imply recruitment of one or more international staff if such capacity is not available locally.

In terms of 'selling' relevant services to the lending sector, direct marketing is expected to be by far the most effective tool, i.e. the development of good personal contacts within lending sector. This function will largely be the responsibility of the Director and RCF Manager, though the key marketing staff and technical directors will also have a role.

Beyond the ABC – looking to expand this service to other lenders and hopefully expand the RCF or identify co-finance - PTPMC needs to identify potential new business contacts within other finance organisations. A database of lenders, relevant staff, lending criteria etc. should be built-up and prioritised for contacting. Prioritisation criteria should include previous investments in TVE sector or energy / environment focus or small-scale loans (1-10mUSD). Initial contact should be made by telephone to arrange face-to-face appointments.

Tailored information products, i.e. introducing possible services and highlighting relevant previous experience of PTPMC staff, should also be developed. (The same information should be included on the PTPMC website, though it is not expected that many leads will result from this route).

7.4. Marketing to Donors and other agencies

As with the finance sector, the development of good personal contacts within the development / donor sector and relevant State, Province and Local government departments is likely to be the most effective marketing approach. This should include (literal) door knocking, extension of invitations to visit PTPMC Office and Pilot projects when implemented. Again a prioritised list of potential clients should be established, based on China focus, assistance to SMEs, energy / environment focus, and calls should be made to identified contacts to set up meetings.

Although many relevant agencies have offices established in China, it is highly likely that some overseas travel may be required, for instance to ADB in Philippines, WB, UNDP and GEF in USA, AUSAID in Australia, JICA in Japan, etc. It would be beneficial for one or more key staff to participate in relevant events such as WB Energy Week.

PTPMC should also aim to get registered with appropriate Agencies' Consultants Services databases such as ADB DACON register to simplify the recruitment process.

Again, tailored information products, i.e. introducing possible services and highlighting relevant previous experience of PTPMC staff, should also be developed. (The same information should be included on the PTPMC website, though it is not expected that many leads will result from this route).

7.5. Website

In Year 1 it is proposed to create a content based website to front end the database designed during the business planning phase as an important 24x7 channel to the market. This database and website is described in Annex 4. This website will provide content to entice potential members to join (sign up to be fulfilled off-line) and as a means for existing members to post their details to the site and any case studies.

In Year 2 it is proposed to expand this content and membership capture website into a more dynamic site with transactional capabilities – the "opportunity portal". The key element of this will be to implement a business to business opportunity portal, with associated workflows and internationally accepted data standards (e.g. XML) to ensure that it can smoothly integrate with the procurements systems of the TVEs and the contract/financial/project reporting systems of the equipment/service providers. The rationale for such a website is to provide a way to streamline project development and thereby capture value from the contracts being signed. Furthermore the website will be automated so membership payments can be captured on-line. Based on the experience of Year 1, additional community building features could also be implemented such as Bulletin Boards and Members project collaboration areas to improve the utility and "stickiness" of the site to its

users. Finally polling facilities, data mining and web monitoring will be incorporated into the site to enable the site to be improved based on users usage habits and requirements.

8. MANAGEMENT & ORGANISATIONAL STRUCTURE

8.1. Management

Currently the PTPMC Secretariat has four key staff paid for by the UNIDO project:

- PTPMC Director, Mme Wang Guiling, who has many years experience from the TVE sector
- PTPMC Contracts Manager, Mr Song Dongfeng, who is fluent in English and experience in managing contracts for international and national companies
- PTPMC Chief Information Officer, Ms Liu Hui, who has good cross sectoral experience and is in charge of the database
- PTPMC Administrative Assistant, Ms Jing Jing, provides administrative support to the team.

Additionally PTPMC has recruited several key staff –

Ms Yao Xiangjun – President

Mr Wang Hai – General Manager

and additional support staff e.g. for administration and bookkeeping.

It is clear that PTPMC's senior management has a strong understanding of the needs of the TVE Sector, coming from the Township Enterprises Centre established under the MoA. This should prove useful in developing the key routes to market for the TVEs – via the TVE Enterprise Development Centres and Scientific Educational Centres.

Nevertheless, currently the general business experience, marketing capacity and technical expertise in the EE field is limited. Attracting clients from any of the customer groups will require rather aggressive marketing (as described in section 7), while delivery of the proposed services requires strong experience of energy efficiency best practice, technical and financial evaluation skills and an understanding of the needs of commercial businesses and of the finance sector.

It is of critical importance to the success of PTPMC as a commercial venture and to realisation of the base case business plan that additional staff with the requisite qualifications are recruited as a matter of urgency (once funding shortfall has been addressed). An outline of the additional staffing needs is presented in Section 9.1 and Terms of Reference for the key staff are presented in annex 2.

PTPMC should consider hiring a local full time international hire (possibly an experienced graduate or intern from the Tsinghua/EU Managers program) or consultant to work with them in Year 1 and 2 on a part time basis to ensure that they can reach international best practice. This is necessary to build PTPMC's brand and will be the easiest way to facilitate adoption of best practice and forge links with the international energy efficiency community

8.2. Organisational Structure

The organisational structure of PTPMC is represented in the Organogram,

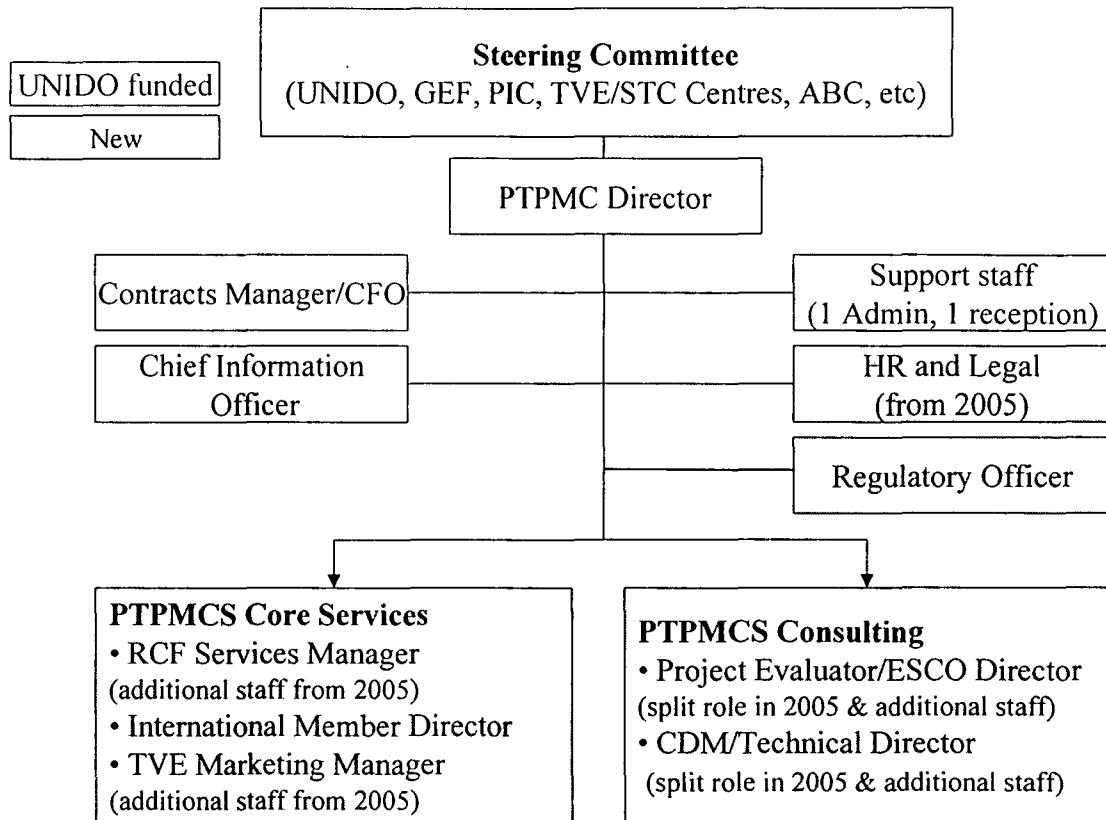


Figure 2: PTPMC Structural Organogram

During the Project period, it is anticipated that the PTPMCS Consulting should be viewed as Technical Support.

9. OPERATIONAL ADMINISTRATION

9.1. General Staffing levels and costs

The initial staff requirements for 2003/4 are as follows:

Corporate Office:

One Director (Total cost of employment US2000 per month), Chief Information Officer (US1500 per month), Contracts Manager (US1500 per month) and One Personal Assistant (US500 per month). These are currently paid for under the UNIDO project. It is assumed that the current Contracts Officer can also double up as accountant to the office.

In addition one more admin staff at US500 per month will be recruited to the Corporate Office.

Core services and PTPMC Consulting teams:

In addition to the above the following key foundation staff members will be recruited

For the Core Services team, one RCF Services Manager (US2000 per month) and one TVE marketing Director (US1000 per month). This team will report to the PTPMC Director.

For the PTPMC Consulting team, One Projects/Energy Efficiency Director (US2000 per month) will be recruited as technical support. UNIDO propose the main focus for Year 1 should be marketing and contracts management with external technical support provided by UNIDO and short-term technical consultants (budget line 11-050).

The ideal candidates for these roles should be managers who can work effectively alone and develop business but who can also recruit and develop their own teams as the business grows. TORS are included in Annex 2 for all the key senior recruits.

The total Year 1 staff costs will be around US66,000 with an additional support of US53,600 for UNIDO contracted staff (this assumes that staff are recruited in a phased manner as suggested in the TORs)

Subsequent staffing level growth

Corporate Executive Office

It is anticipated that a HR Manager and Chief Legal Officer will be required by 2005/6 (US2000 per month)

Core Services and PTPMC Consulting

The ten year growth in employees can be seen in the Table below. The bulk of the recruits are to support the RCF services and Engineers to support PTPMC Consulting.

	2004	2005	2006	2007	2008
Number of Employees	8	11	14	20	24
Corporate	5	5	7	8	8
Core Svcs	2	5	5	7	9
Consulting	1	1	2	5	7

It is anticipated that the per-annum staff costs will increase by 5%.

9.2. Offices & equipment needs and costs

It is expected that the office will initially be sized for 15 people and be 150m² – this is the size of the current office and the costs of which are incurred by the Chinese government during the project period. Additionally it is assumed that the key staff will receive laptops (at US2500 per laptop) and the rest will receive desktops (at US1500 per laptop). Furthermore the office will need to be kitted out (at a cost to PTPMC of no more than US3,000). A summary of the additional costs is shown in Annex 4 which summarises the financial model.

10. FINANCIAL ASSESSMENT

Three scenarios for future operation of the PTPMC have been developed based on the assumptions as indicated in the Table in section 10.2. The base case model indicates that there is a slight cashflow deficiency in the early years but then PTPMC becomes profitable (highly so) in later years. Based on this model the high priority services that PTPMC should focus on are given in Annex 4, section 4.3.

10.1. Base Case Scenario

The following gives a high level summary of the base case scenario with the following sections outlining the assumptions and resulting financials in more detail

10.1.1. Year 1 Scenario

- PTPMC registered in 3Q03 with RMB200,000 in share capital (of which 100,000 is accessible funds) and begins full operation in 1Q04.
- PTPMC recruits additional key staff in 4Q03.
- PTPMC enters into a sole supplier contract with UNIDO subject to a defined Terms Of Reference – see Annex 6 for draft TOR – to develop its internal capabilities and avoid costs it would otherwise have incurred (above existing salary costs/office/in-kinds) and carry out activities relevant to the project – this provides approximately US255,000 of contract value in Year 1. Furthermore equivalent service fees to the contracts PTPMC manages and project equipment contracts can be charged. The final TOR is to be agreed between PTPMC/PMO/UNIDO and is assumed to begin at the start of 1Q04.
- PTPMC lobbies donors to secure the funds (US60k) to register one of the pilot projects as a CDM project – potentially from the UNF/UNDP CDM project or FCO Climate challenge Fund
- PTPMC manages the service contracts and the procurement of equipment on behalf of the TVEs
- PTPMC enters revenue share agreements with the PTPMC Members for energy savings and CDM of the pilot projects
- PTPMC carries out membership drive to attract 100 members and carries out marketing campaign as outlined in section 7.
- PTPMC earns US25k in ad-hoc member services

10.1.2. Year 2 Scenario

- PTPMC carries out the Year 2 services as required by the contract with UNIDO (approximately US146,500 is anticipated) in addition to staff costs paid for by the UNIDO.
- TVE service revenue from brokering business development services to TVEs starts to make a significant contribution
- RCF bank service revenue builds from the Year 1 grant assisted work as the RCF/Co-finance funds grow.
- PTPMC breaks even in Year 2

10.1.3. Year 3

- PTPMC carries out the Year 3 services as envisaged in the contract with UNIDO and concludes the contract.
- There is a slight deficiency in cashflow in Year 3 but this is covered for by the slight positive cashflow in years 1 and 2.
- Thereafter PTPMC is self sustaining

10.2. Key Assumptions

The following assumptions are used to drive a financial model (see Annex 4 for a detailed breakdown). The figures have been obtained from analysis of the market and in discussions with PTPMC on what is considered realistic. Two further scenarios – a conservative case and an aggressive case have been modelled. These are discussed in the sensitivity analysis.

Table 5: PTPMC Operation Summary Financial Model Assumptions

Scenario Assumptions	Conservative	Base Case	Aggressive
Total number of potential members	4000	6000	8000
Initial % Number of Members	1.5%	1.7%	1.8%
Initial number of members (2003)	60	100	140
Growth rate per annum	5%	10%	15%
Average annual membership fee (US\$)	100	150	500
% paying members	50%	80%	90%
% service fee for consulting contracts	2%	4%	4%
% of Energy Savings Contract for three years	2.250%	4.500%	6.75%
% hit rate of CDM projects	10.000%	20.000%	30.00%
% of CDM Revenues for five years	2.50%	5%	10%
Initial CDM price t/CO2	3	4	5
Growth in CDM strike price	5%	10%	15%
% Service fee for opportunity portal	1%	1%	2%
PTPMC initial Projects	8	8	8
Max market share (within ten years out of 6857 replicable units)	1.75%	2.5%	3.25%

The base case scenario assumes the following membership growth and project growth (where project is defined as an Energy Efficiency Capital Project):

	Year 1 (2004)	Year 2	Year 3	Year 4	Year 5
Number of Members	100	110	121	133	146
Projects per year	4	4	4	9	13
Business Development Assistance Projects	24	30	37	46	58

10.3. Income Statements

The income for the first five years of operation can be seen in the Table below.

Revenue Source	1 st Year (2004)	2 nd Year	3 rd Year	4 th Year	5 th Year
Project derived support*	381,355	210,158	84,342	18,092	9,258
Of which					
Salaries	53,600	53,600			
Payment for services under the TOR	254,605	146,540	66,250		
Equivalent service fees from Opportunity Portal	47,150	47,150			
CDM registration (maybe funds from FCO, UNF)	26,000	26,000			
CDM/Energy share	0	9,200	18,092	18,092	9,258
Member Services	25,500	59,748	105,562	186,496	237,266
TVE Services	2,006	2608	15,906	27,547	37,316
RCF/Bank Services	Too early to earn from RCF	39,606	43,324	68,080	119,547
Opportunity Portal	-	-	54639	113,649	177293
CDM Contracts	-	-	4,043	10,083	18,130
Energy Services	-	-	21,362	55,080	102,533
Other Services (e.g. grants)	-	-	-	-	-
Total Revenue	408,861	384,511	329,180	479,027	701,343

*Notes: Project derived support refers to the income PTPMC receives as support from UNIDO for Project staff, the fees for service under the contract between PTPMC and UNIDO (see Annex 6) and service fees PTPMC can obtain from the market for its facilitation services for the pilot projects.

10.4. Costs

The costs for the first five years of operation can be seen below (a detailed breakdown of the assumptions is shown in Annex 4)

Costs	1 st Year (2004)	2 nd Year	3 rd Year	4 th Year	5 th Year
UNIDO Project derived costs (flights, venues etc)	228,405	116,200	19,000	0	0
Other Salaries	66000	94500	209900	338619	399308
Rent	0	0	25200	25200	25200
Website + Support	36750	71820	1893	1969	2047
Other Admin costs	37256	31265	32179	37549	35876
Equipment & facilities	11000	6000	26000	37000	8000
Marketing Costs (seminars etc)	0	0	25000	25000	25000
Total	379,411	319,785	339,172	465,337	495,432

10.5. Cash Flow Projections

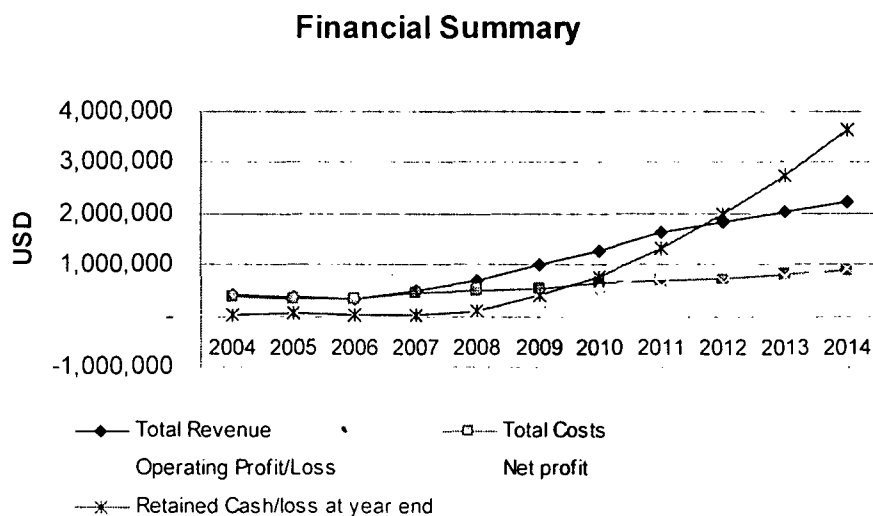
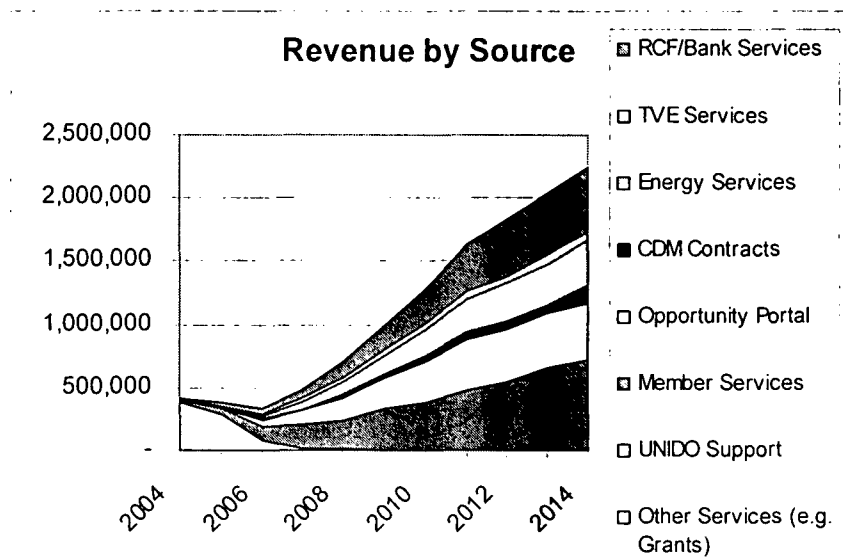
The cash flow projections for the first five years of operation can be seen below.

Cashflow	1 st Year (2004)	2 nd Year	3 rd Year	4 th Year	5 th Year
Income	408,861	384,511	329,180	479,027	701,343
Income tax	22,487	21,148	18,105	26,347	38,574
Net Income	386,374	363,362	311,075	452,681	662,769
Expenses	379,411	319,785	339,172	465,337	495,432
Operating Profit	6963	43577	-28097	-12656	167338
Operating Margin	2%	11%	-9%	-3%	24%

Tax (33%)	2298	14380	0	0	55221
Net Profit	4665	29197	-28097	-12656	112116
Share capital	24166 (of which 12088 available)	0	0	0	0
Net Cash at year end	16743	45939	17842	5186	117302

Clearly appropriate use of the funds envisaged in the Project document to build capacity in PTPMC is critical to PTPMC’s path to sustainability. A strategic investor could be introduced into PTPMC after the project period to allow it to expand quicker, but this is not required for its sustainability.

The financials are summarised in the following charts:



10.6. Projected Balance Sheets

The balance sheet for the first five years is:

Item	Year 1 (2004)	Year 2	Year 3	Year 4	Year 5
Fixed Assets (no account is taken of depreciation)	46,000	122,000	148,000	185,000	193,000
Current Assets Cash (includes 100,000 RMB which cannot be expensed)	31118	67732	-3943	11499	191492
Total Assets	77,118	189,732	144,057	196,499	384,492
Current liabilities and accruals	-	-	-	-	-
Total Assets less current liabilities	77,118	189,732	144,057	196,499	384,492

10.7. Sensitivity Analysis

The sensitivity analysis is a risk evaluation for the capability of the PTPMC to supply service to the TVEs RCF and other consultancy service.

The income activities without risk comes from GEF grant and sub-contract service from the UNIDO as well as the government support. The other risk analysis is listed below:

1. The baseline case

- PTPMC gets adequate, support both from UNIDO and Chinese government and it can supply efficient support to the PMO and PIC during the project implementation period;
- PTPMC has enough membership
- A strong strategic partnership between PTPMC and RCF has been set up;
- Qualified staff have selected for the operating of PTPMC and sustainable business plan could be implemented with the support of the shareholders;
- Government introduces adequate policies for the efficiency improvement of TVEs and SMEs.

2. The aggressive case:

- A strategic partnership between PTPMC and RCF is set up, PTPMC will get the regular contract based income from project identification for RCF;

- PTPMC can increase its capability from learning by doing during the project period to supply other consultancy service to TVEs as well as SMEs in the future, especially after the project;
 - The initial number of members is 40% higher than for the base case
 - Take-up of EE projects by TVE's and SME's is more rapid with 50% more projects per year from Year 3
 - The service offered by PTPMC is recognised in the market and valued as such
3. The conservative case:
- PTPMC did not get enough sub-contract from UNIDO during the project implementation period;
 - PTPMC co-operation with RCF is poor;
 - Consequently, PTPMC was without strong capability of contract based service to the TVEs and SMEs
 - Take-up of EE projects by TVE is weak;
 - PTPMC is bypassed in the marketplace to some extent and must charge service providers lower fees for its service.
 - PTPMC needs to rely on donor support for far longer (up to 7 years) and also reduce costs – i.e. hire later

As the conclusion of the sensitivity analysis, UNIDO's support and close linkages to the RCF will be the most important factor for the PTPMC financial situation as well as its reputation & credit building.

What if Analysis

The above scenarios have included the probabilistic nature and risks to the business and the impact on revenues. This section further outlines some suggestions as to what PTPMC should do or might become if key events are not realised:

1) Failure to enter into contract with UNIDO as per Annex 6

- If UNIDO support is not forthcoming then PTPMC cannot grow as envisaged. The project staff will be busy on implementing project activities and once the project has completed there will be no money left to pay them nor will they have built up internal capabilities or business to fend for themselves. So PTPMC could consider:
 - Going to the market for the financing – venture capital or short term overdrafts. This will have a delay effect on the business (probably up to 6 months) and also mean that PTPMC does not hire staff quickly
 - VC's include Green-capital, ADB VC fund, ChinaVCMC, others. PTPMC will need to revise this business plan to make it acceptable to VCs and will need to market itself directly to them.
 - However it will be difficult to get this financing in years 1 and 2 as early stage financiers are looking more at commercial and not policy investments and also are looking for bigger investment amounts – typically US1m to US10m.
 - It is much more likely to receive late-stage financing, i.e. in Year 3.
 - partnering with other companies to gain referral fees and gradually retain this cash to seed finance other activities PTPMC – this will be a slow process.
- If this financing is not forthcoming then PTPMC should aim to become a "resource centre" like CREIA and tap into ad-hoc donor financing. PTPMC would probably be housed under one of the sponsors existing organisations.

- 2) Failure to closely couple with RCF and deliver matching funds for RCF to grow and finance additional projects beyond the 8 pilot projects
 - PTPMC needs to build close links with financial institutions now like the commercial banks, multilateral banks (e.g. World Bank ESCO project US246.5m funding) and private funds like green-capital (US1Bn under management) to enable the 100 projects pipeline to receive funding in time for 2004-5, once RCF funds are fully employed.
 - If this is not achieved PTPMC will likely need to rely on other streams of revenue, e.g. from donors, which are difficult to predict and also to win (tendering is highly uncertain). PTPMC would need to identify early in 2004 whether its marketing to financial institutions is working and if not would have to reconsider its business model maybe towards the resource centre model.
- 3) Failure to get members
 - It is likely that PTPMC will get sufficient members if it controls the project identification service and it manages the service group contracts – as members are likely to get business from joining. However if this is not the case then PTPMC will find it more difficult to get members.

11. FINANCE REQUIREMENTS

Finance already in place:

Salaries for: Director, Contract Officer, Information Management Officer, support staff
Equipment for PTPMC Secretariat (4pcs, ISDN, fax, printer, etc. 17k). Not office or running costs.

Capitalisation – RMB200,000 (of which only RMB100,000 is available for use)

Additional Immediate Needs

Additional

- Payments for services provided to UNIDO under the contractual arrangements laid out in the draft TOR (included in Annex 6).

There are venture capitalists operating in China today who would be keen to get involved with a company with the profile of PTPMC. This should be considered, if the shareholders cannot commit the required financing or donors cannot be found to fund specific projects.

Longer term financing needs

As a partnership based consortium, additional finance supports from multiple channels are necessary for PTPMC. There are number of the national and international financial agencies would be helpful for the establishment and operation of PTPMC, through directly finance or other support, such as:

- SETC and MoST SMEs development foundations;
- GEF/World Bank energy efficiency promotion program;
- International Advisory Fund sponsored by GEF and SANet which meets some of project sponsors' cost' of obtaining advice to explore energy efficiency projects
- EU energy efficiency, CDM and renewable energy program;
- New venture for clean production investment, financed by USA foundations;
- Potential CDM projects implementation, through ADB, UNF and others.

Therefore, PTPMC should be attractive to other investors.

12. IMPLEMENTATION

12.1. PTPMC Capacity Building Timetable

PTPMC's capacity building requirements together with a programme of initiatives for meeting internal capacity needs, as well as for developing important external links (e.g. to potential Members and other clients) are summarised in Table 6. A more detailed description of the purpose of the Capacity building activities is provided as Annex 5 and these are further supported by the TOR in Annex 6. The dates for these events will obviously change depending on the start of operations of PTPMC.

Table 6: Timetable of PTPMC Capacity Building Activities

Event	Title	Date	Participants
Study Tours	Europe Study Tour	April 2002	-- China Government, Industry Officials, key staff of PTPMC
	USA Study Tour	April-May 2003	-- Key staff of PTPMC and key members of BD
	Shanghai New-venture for clean production	October 10 to 14, 2002	-- Staff of PTPMC
International Conference	PTPMC business plan publicity, Beijing, China	March – May, 2003	Government Officials -- potential PTPMC members - potential investors - International Organizations - Industry (China, Global) - Consumers
Workshops	Business-Finance Workshop, Beijing, China	March, 2003	-- China Government, TVEs, potential PTPMC members, potential investors, RCF Representatives
	Local PIC policies training activities	From January 2003 to end of the project	-- Local government and enterprise
	New project selection training workshops	From December 2002, to end of the project	-- Local PIC and enterprise as well as RCF staff
	National energy efficiency policies workshop for TVEs	May, 2004	-- Government Officials, Local PICs and TVEs
	Standards training workshop	August, 2004	-- Local PIC, member of PTPMC and national standards authority
	New project financing workshop	March 2005	-- Industry Financiers, TVEs and PTPMC members
PTPMC Strengthening	PTPMC start meeting	January 2003	-- Government officials, TVEs and member of PTPMC
	PTPMC Advisory Group Meeting, Beijing	January 2003	-- PTPMC Advisory Group, PTPMC Staff
	International training of PTPMC staff	April 2003	-- IT Power or USA energy efficiency consortium, administration staff of PTPMC
	Modify PTPMC business plan	May, 2005	PTPMC with the help of sub-contractor

12.2. Year 1 Operating Plan

Apart from capacity building there are a range of detailed steps that will need to be taken to achieve the business plan, Key of which are presented in Table 7. The dates for these events will obviously change depending on the start of operations of PTPMC.

Table 7: Activity plan for Year 1 of PTPMC Operation

Category	Activity	Description	Dates	Responsibility	Comments
PTPMC Establishment	Establish Legal Entity	Approve company structure	Q1-2003	Board (Director)	Essential that Operating conditions are clearly defined prior to recruiting members or projects
		Define Charter	Q1-2003	Board (Director)	
		Lodge registration(s)	Q1-2003		
	Arrange banking services	Bank Account Credit card (acceptance) facility	Done(?) By website launch	CFO	Make payment options as simple as possible for Members
	ISO 9001 Accreditation	Develop Quality Management Procedures Gain Accredited Status	Q1&Q2-2003 Q3-Q4 2003	Board (CIO & Contracts Mgr)	QA approval will improve marketability of the PTPMC Services
	Secure Foundation Income	Negotiate TOR with UNIDO	2003	Director & Contracts Mgr	Financial bedrock on which range of services can be developed
	Develop RCF services	Lobby ABC for administration role	Q2-Q4-2003	RCF Manager (& Director)	
	Develop Corporate Image	Logo and corporate brand design	Q1-2003	Director (External contract)	Need recognisable image for marketing material

Category	Activity	Description	Dates	Responsibility	Comments
Service Group Activities	Regulatory Reform service Group (US410k in total, US320 in 2003) Entry Conditions: Have items Activities 1,2, 3 been completed satisfactorily?	Write more detailed TOR for 2003 requirements Identify suitable national & international providers – PTPMC members Issue RFP Select contractor Manage Contract Analyse Results	Q103	Contracts Mgr and, once hired, Regulatory Advisor; PTPMC Director	Essential to future smooth operation of the barrier removal framework and integration of PTPMC/RCF with PIC/LPIC
	Engineering (US1940k in total, US700k in 2003) Entry conditions: To what extent have the years 2000-2002 work been carried out satisfactorily	Write more detailed TOR for 2003 requirements Identify suitable national & international providers – PTPMC members Issue RFP Select contractor Manage Contract Analyse Results	From 1Q03	Contracts Manager, once hired Project/ESCO Director and CDM/Technical Director	Should link with organisation like BECon for EE training

Category	Activity	Description	Dates	Responsibility	Comments
	<p>Marketing Management (US770k in total, US350k in 2003)</p> <p>Entry Conditions:</p> <p>Supposedly half way through the program, has this been completed satisfactorily</p>	<p>Write more detailed TOR for 2003 requirements</p> <p>Identify suitable national & international providers – PTPMC members</p> <p>Issue RFP</p> <p>Select contractor</p> <p>Manage Contract</p> <p>Analyse Results</p>	1Q03	Contracts Manager, once hired Project/ESCO Director and CDM/Technical Director	Mainly focussing on brick sector – what other support is proposed for other three sectors
	<p>Finance Management (US600k in total, US100k in 2003)</p> <p>Entry conditions:</p> <p>Bankable project proposals for 8 projects completed</p>	<p>Write more detailed TOR for 2003 requirements</p> <p>Identify suitable national & international providers – PTPMC members</p> <p>Issue RFP</p> <p>Select contractor</p> <p>Manage Contract</p> <p>Analyse Results</p>	1Q03	Contracts Manager and RCF services manager, once hired.	Critical to the success of the pilot projects

Category	Activity	Description	Dates	Responsibility	Comments
Membership Activities	Membership Drive	Agree initial membership terms / fees	Q1-2003	Board	Special Introductory Offer?
		Produce membership form	Q1-2003	CIO (Board)	
		Produce promo literature	Q1-2003	CIO (Board)	
		Targeted recruitment	As soon as IMD and NMD are recruited	IMD & NMD	
	Members' services	Produce 'Welcome' pack	Q1&2-2003		
		Develop Newsletter	Q2-2003		
		Produce Yearbook	Year End		
(TVE) Marketing Activities	Build marketing channels	Foster links with TVE contact points	Continuous	Director and Marketing Mgr	Via ABC, MOA, ETC
	Services promotion	Produce promo literature	As soon as TVE Marketing Mgr is recruited	Marketing Mgr	Direct to TVEs and via marketing channels
		Distribute literature	Continuous		
		Organise outreach workshops	Q3&4-2003	Marketing Mgr	
Internal Capabilities build up	Capacity Building	See 12.1			
Internal Capabilities build up	Financing	Secure working capital	1Q03	CFO & Director	To address predicted negative cashflow

Category	Activity	Description	Dates	Responsibility	Comments
	Recruitment	<ul style="list-style-type: none"> - Advertise 5 key posts - Identify candidates - Negotiate contracts - Sign on candidates 	<p>As soon as business plan is approved</p> <p>Q1&2-2003</p>	<p>Board (Contracts Mgr)</p> <p>Board</p> <p>Contracts Mgr</p> <p>Director / Contracts Mgr</p>	Staff with core competencies are critical for delivering planned services.
	Equipment & facilities	<ul style="list-style-type: none"> - Identify suitable offices (for 2003&04) – assume current office suffices and is paid for in-kind by Chinese Government - Purchase desks- Purchase IT equipment for new hires 	<p>By arrival of new staff</p> <p>As staff are hired</p>	<p>Contracts Manager</p> <p>Contracts Manager</p> <p>CIO</p>	Present offices are inadequate for envisaged number of staff
	Website	<ul style="list-style-type: none"> Develop temporary mini-site Develop informational website 	<p>Q1-2003</p> <p>Q1&2 - 2003</p>	CIO	<p>'Placeholder' to introduce PTPMC – give confidence to new members</p> <p>Needs to have clear business requirements defined before build and be ready for transactional capability</p>
	Information Management System	<ul style="list-style-type: none"> Design IMS functionality Construct IMS 	<p>By end Q1-2003</p> <p>Q2 2003</p>	<p>CIO</p> <p>CIO</p>	Essential for tracking services

12.3. Short-term actions – Year 2

- Continue to deliver the services as per the Terms of Reference with UNIDO

- Continue to build membership numbers, successfully deliver additional 4 pilot projects, ensure that Year 3 projects (4 of) are ready for closure in Year 3
- Develop close relationships with RCF/banks to ensure funding requirements can be met

12.4. Medium term – 3-8 years

- Conclude Final Year of services as per the Terms of Reference with UNIDO
- Additional recruitment and splitting of technical roles
- Reinvest a proportion of retained profit into refining internal systems and processes to cope with increased volume of business and staff numbers
 - Administrative processes
 - HR processes
 - Financial/contract management processes
 - Project monitoring and reporting processes
 - Knowledge Management Processes
 - Business development processes - BD central

As PTPMC gets more staff it will be crucial to develop a co-ordinated and central business development process – BD Central. This location will be a web-based internal resource where all the latest marketing materials, account plans, standard contracts, etc can be accessed and project reports monitored to ensure that the business is running smoothly.

- Continue to build service revenue
- Start re-investing retained profit into staff training, R&D, own project development or seed financing of new ventures (once dividend to shareholders has been paid out)
- Expand into other sectors (other TVEs, SMEs, SOE's, broader environmental services e.g. waste and water) and potentially set up satellite offices elsewhere in China
- Look at regional expansion opportunities

12.5. Long term – 8+ years

- Regional expansion
- Spin-off successful areas of the business in to companies in their own right
- Needs further elaboration in business plan review in 2005.

13. CONCLUSION

Foundation support from UNIDO, TVE, STC, aims to establish PTPMC as a mechanism for enabling energy efficiency projects within the Chinese TVE industry sub-sectors of Brick Making, Cement Production, Metal Casting and Coking.

This business plan has presented a financial model and implementation strategy aimed at maintaining PTPMC as the commercial hub of TVE Energy Efficiency product and service flows beyond the foundation support period, based on services that it can provide to a range of customers, notably the target sector TVEs, energy related service providers and product manufacturers from China and internationally, business service providers, the finance sector, Government of China and its ministries and international development agencies.

13.1. SWOT Summary

In summary a SWOT analysis of the potential business identifies the following issues:

- **Strengths:**
 - The business has the backing of UNIDO and the Chinese Ministry of Agriculture, and already benefits from substantial start-up funding to cover several key staff salaries and office establishment costs
 - Senior Management has a detailed understanding of the target client group (the TVEs) and excellent links to the TVE sector via TVE Bureaux and Science and Technology Education Centres. These will be leveraged by PTPMC to maximise the marketing value and stimulate demand within the potential TVE client base, which in turn justifies Members participation in the Consortium
 - The eight pilot projects are a good inducement with which to build the membership base
 - The business aims to minimise the risks to customers both on the supply and demand sides (by identifying probable projects for the suppliers and building in quality requirements for the buyers). This distinguishes PTPMC from most other business development services.
- **Weaknesses**
 - Success is strongly reliant upon performance of the management team. The existing staff do not have the technical capacity to deliver the range of services provided. This will be addressed by recruitment of key staff early in the business.
 - The TVEs do not yet know that they need PTPMC's services. The success of the TVE marketing model relies on good performance of external stakeholders – provincial and county government, ABC etc. – over which PTPMC has little control. PTPMC Senior Management will be critical in ensuring continued good cooperation with these organisations
 - There is a need for additional finance to overcome cashflow during Yr1 & 2. The Senior Management will press the case for additional UNIDO support for learning by doing activities during the pilot project phase to alleviate this problem.
 - The strong coupling with the RCF, which is seen as an important inducement for TVEs, is not yet defined and additional co-finance for RCF needs to be identified for the business model to work. Senior Management, including staff as yet to be appointed, need to lobby hard for this from the outset.
- **Opportunities**
 - The main opportunity is clearly the huge potential demand within the TVE sector to implement cost-effective measures that will reduce costs and/or improve the competitiveness for small companies. The potential for PTPMC to provide access to finance for such initiatives will be an additional attraction for TVEs. The consortium will use its knowledge of and links to the TVE sector to maximise exposure to potential clients.
 - There is very strong interest from international industry to doing business in China. For businesses it is seen as a rapidly emerging economy offering tremendous potential new market for products and services, or for joint venture cooperation or manufacturing relocation. PTPMC will harness this desire by providing a simple, low-cost, low-risk route to market

- For International Development Agencies and the Chinese Government the development potential is exciting, but requires careful management to meet development priorities in a sustainable manner. The significance of the TVE sector both to the Chinese economy and for the global environment offers PTPMC tremendous potential for developing policy support and project implementation services. The Secretariat will develop strong links with relevant IDAs and GoC ministries to harness this potential.
- The Clean Development Mechanism also presents an excellent opportunity for PTPMC, with various national governments and major multinationals seeking to offset emissions by implementing actions with a lower cost:benefit in other countries. PTPMC will position itself to take advantage of these opportunities through development of in-house CDM response capabilities.
- Threats
 - The biggest danger for PTPMC is that it will not respond aggressively enough to the opportunities and will fail to address the weaknesses presented above. If this is the case, existing and emerging multipliers may crowd PTPMC out of the market. PTPMC must leverage its strong position with TVE agencies, and differentiate the services that it provides to the TVE sector from those of the competition.

13.2. The route to commercial sustainability...

The financial model base case suggests that PTPMC can potentially realise the objective of financial self-sustainability within three years with the support provided from the contract with UNIDO – see Annex 6 for draft terms of reference. However this is dependent upon PTPMC:

- addressing key staffing issues by recruiting additional high-level staff to manage delivery of the envisaged technical services
- developing a strong relationship with the Agricultural Bank of China to whom it will provide external management services for screening and delivering projects to the RCF pipeline
- Securing additional co-finance in the order of USD 2.5 to 3 .5 million in years 2 and 3 for RCF-type projects, and continued additional RCF investment into the future to finance increasing numbers of TVE EE projects.

Failure to address these issues will prevent PTPMC from growing its commercial business and is likely to see the Secretariat playing a marginal role as a resource centre providing information products to TVEs and to its (limited) members.

14. ANNEX 1- DETAILED DESCRIPTION OF PTPMC SERVICES

1. Website – Tender Opportunities (Project Notification)

Customer:	PTPMC Members (TVEs)
Service:	Online access to latest requests for products/services via members-only area of PTPMC website (TOR & bid documents for download)
Delivery Mechanisms	Members' login area of website Project summary presented as simple html TOR & bid docs in Word format for download
Controls	Monitoring of member's (individual) login Monitoring of bid doc download
Income Route:	Via PTPMC Membership subscription (Bid docs not available to Associate Members)
Needs	1.) Project summary (make summary provision part of bid docs) for DB entry 2.) Simple notification posting and bid doc upload facility. This should be integrated with the Project Tracking DB. 3.) Online trading functions integrated to projects DB
Costs	Staff salary: Membership Services Manager Project DB Administrator (1 hour/ summary?)
Success factors/ Prerequisites	Functional project/member tracking DB Attractive, user friendly & efficient website Identified projects (see #4)

2. Email – Tender Opportunities (Project Notification)

Customer:	As per (1)
Service:	Electronic alert providing summary of latest tender opportunities in main interest sectors
Delivery Mechanisms	Personalised email to PTPMCM from DB Project summary provided as email text TOR & bid docs in word format available on request from PTPMCS or from website (members' area)
Controls	Monitoring of request for docs (email or hard copy) Monitoring as per (1) for weblink
Income Route:	As per (1)
Needs	1.) As per (1) 2.) Simple email distribution to relevant PTPMCMs 3.) Responder to requests for bid docs (ideally automated). Also needs to enter request/action on DB
Costs	As per (1)
Success factors/ Prerequisites	Functional project/member tracking DB Identified projects (see #4)

3. Bulletin – Tender Opportunities (Project Identification)

Customer:	As per (1)
Service:	Hard copy overview of project opportunities
Delivery Mechanisms	Personalised fax or letter to PTPMC Member from DB providing individual project summary notice TOR & Bid docs in word format available on request from PTPMCS via CD or floppy, or hard copy

Controls	As per (2)
Income Route:	As per (1 & 2)
Needs	As per (1) Simple procedure for distribution of hard copy notifications to PTPMCMs Responder to requests for bid docs and DB entry
Costs	As per (1)
Success factors/ Prerequisites	Functional project/member tracking DB Identified projects (see #4)

4. Project Identification (Passive Brokerage via opportunity portal)

Customer:	PTPMC Members	
Service:	PTPMCS will identify TVEs with a need for energy efficiency products or services for supply of which PTPMCM may wish to bid.	
Delivery Mechanisms	<p>PTPMCS will undertake awareness-raising campaign of services available for 4 to get TVE sectors among TVE representative groups, notably TVE Bureau within MOA. TVE technical service centres (regional level) and so to country level TVE offices. Also within ABC [& subsequently other banks e.g. CBAD] for dissemination to local branches. Also direct marketing to the TVE sectors (is email marketing idea?)</p> <p>TVEs with requirements that may be provided by PTPMC will be passed on to PTPMCS from TVE reps and via ABC.</p> <p>PTPMCS will discuss with TVE directly to access scope for PTPMCS assistance e.g. Basic Energy Audit for TVE (See #11)</p> <p>If potential exists [and TVE has adequate financial capability + appropriate environmental management/business skills (see #XX)]</p> <p>PTPMCS will work with TVE to develop TOR (see #8) for PTPMCM services. Service Tender notification will be delivered through (1),(2) and (3)</p>	
Controls	<p>Record of all TVE interest to be maintained (+ follow-up actions) including financial pre-screening of TVEs.</p> <p>If project requires RCF funding, requirement upon TVE to satisfy Environment/Business management requirements or undertake training to meet standard.</p> <p>Monitoring of PTPMCM interest/follow up via (1),(2) and (3)</p>	
Income Route:	Via PTPMC membership subscription and ensuring that successful PTPMC Members pay a service fee to the contract to PTPMC	
Needs	<p>Strong promotional campaign [+ regular follow-ups]. Requires succinct + understandable summary of services offered.</p> <p>Bridge building with TVE Bureau etc + Banking sector</p> <p>Strong project evaluation capability (pre-feasibility)</p> <p>Capability to develop TOR/bid docs for use by PTPMCM</p> <p>Energy audit capability</p> <p>Project Administrator to track progress (Database) and website</p> <p>Financial appraisal capability</p>	
Costs	<p>Promo leaflet production</p> <p>Promo leaflet distribution</p> <p>Staff salaries: min</p> <p style="padding-left: 40px;">1x marketing + ABC/TVEB liaison staff</p> <p style="padding-left: 40px;">1x project evaluator</p> <p style="padding-left: 40px;">1x credit checker</p> <p style="padding-left: 40px;">1x contracts officer</p> <p style="padding-left: 40px;">1x project administrator</p>	
Success factors / Prerequisites	TVE marketing campaign Strong membership base (expertise pool)	6 months to establish these?

Workflow:

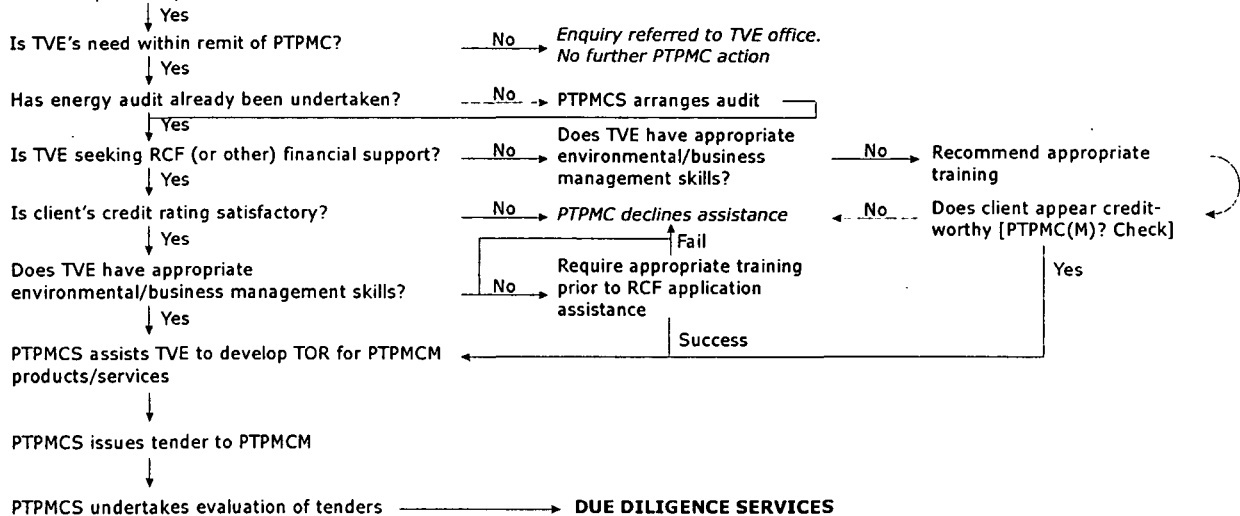
PRODUCT IDENTIFICATION & FORMULATION SERVICES

TVE approaches either:

- local TVE office (county level)
- TVE Technology Service Centre (regional level)
- Local Branch of ABC (or other bank)
- PTPMCS directly

Request forwarded to PTPMCS

PTPMCS discusses needs/scope with TVE and assesses possibility for PTPMC to assist



5. [RCF] Loan Application Advisor

Customer:	PTPMCM + TVEs
Service:	PTPMCS will assist TVEs + the successful PTPMCM to prepare their application for RCF [or other loan] funding according to the ABC [or other financier] requirements + will undertake pre-screening to maximise potential for success for TVE/PTPMC [+ minimise review process for ABC] (see #6)
Delivery Mechanisms	One-to-one meetings (?) +/- or telecom (location dependant) Review of loan application docs Review/knowledge of bank's/lender's application procedures Preparation of 'guide for applicants' addressing technical, legal, financial + other administrative requirements Standard application form to 'harmonise' with banks review procedures
Controls	Database record of all correspondence/actions relating to each application + maintain files for life of project. TVE/PTPMC must satisfy lenders basic lending criteria + TVE must have recognised environment/business management skills (ie have attended PTPMC approved training, or eg ISO 9001:2000) + PTPMC membership must be valid (ie fully paid-up, not Associate)
Income Route:	Via PTPMC membership subscription / TVE loan (if successful) – possibly also as % of energy savings
Needs	Staff are competent in current RCF (etc) lending terms (i.e. financial expertise) Staff have solid technical understanding of EE measures for the TVE sectors + ability to undertake technical proposal review Project Administrator to track application process.
Costs	'Guide for Applicants' production

	Standard application form production Staff salaries: min 1x loan advisor 1x technical/engineer 1x project administrator
Prerequisites	Strong membership – i.e. membership drive Excellent project status tracking facility – i.e. database design TVE clients – i.e. awareness campaign Identified projects (see #4)

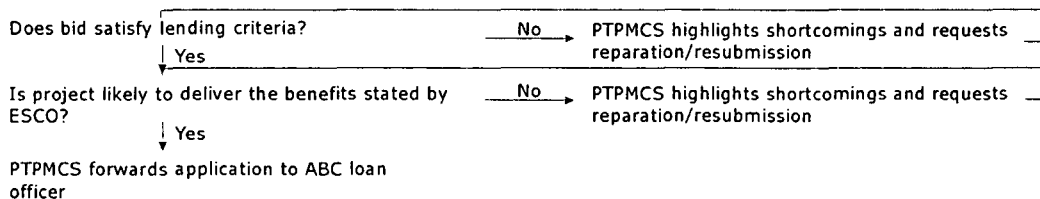
6. Loan Application Screening / Pre-loan - due diligence

Customer:	ABC [ADBC etc]
Service:	As per (5)
Delivery Mechanisms	[As per (5)] PTPMCS will undertake credit guarantee checks of applicant TVEs prior to project definition. All PTPMCSs will be required to demonstrate sound financial + technical capabilities as condition of membership PTPMCS will undertake due diligence appraisal on banks' behalf of technical viability of all projects submitted for RCF funds + the validity of anticipated energy saving production benefits
Controls	As per (5). All records for each application submitted to bank will be made available to bank loan officers. A summary report describing key features + risks of each application will be provided as matter of course.
Income Route:	Fee for service from Bank
Needs	As per (5)
Costs	Staff salaries: min 1x loan advisor 1x technical/engineer 1x project administrator
Prerequisites	As per (5) Linkages to ABC (+ others) / recognition of service ? skills marketing

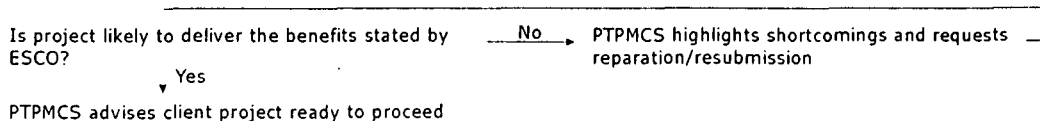
Example workflow

DUE DILIGENCE SERVICES

External Finance Route (e.g. via RCF)



Self-financed Route



7. Post Loan Approval – Due Diligence

N.B. could be stand-alone function – outside RCF type (PTPMC just providing this function)

Customer:	ABC [+ other banks]
Service:	PTPMCS will monitor project implementation, in particular validating/approving draw-down of funds / stage payments (i.e. ensuring that service for which ABC had approved loan is delivered, quality of workmanship is to a high standard)
Delivery Mechanisms	Site visits and/or approval of contractors' progress reports. Analysis of post implementation energy savings/production impact etc. Standard approval form / reporting procedures (incl. Before + after photos) Remedial action indicators (to PTPMCM + Cc to bank)
Controls	Database record of all correspondence / actions Permanent record of full documentation (for proj duration) Internal sign-off procedures – implies PTPMCS itself needs to be ISO 9001 accredited Adequate indemnity/liability coverage
Income Route:	For fee service (day rate charge) <i>check out market rate (as % of contract value?)</i>
Needs	As per (5) QA (ISO) administrator ISO accreditation
Costs	T+S for site visits [\$100 / mission?] Staff salaries: Min 1x tech evaluator as per (5) + (6) 1x marketing (ABC/TVEB liaison from (4) ISO registration + audit fee `[\$1000?] + annual audit \$750? Public liability insurance/indemnity?? (what level required?)
Prerequisites	Successful banks marketing campaign Established operational procedures + tracking tools (DB)

8. Project Preparation / Formulation

Customer:	TVEs
Service:	PTPMCS will assist TVEs to develop TOR for bids for EE products/services from member companies. This service will include evaluation of expected bid price, minimum quality standards, timeline etc [for use against (9)] TOR will be released to PTPMCM via (1), (2) + (3)
Delivery Mechanisms	TVEs will previously have received an energy audit (either from PTPMC or external) + will have undertaken EE/TQM + business development assistance if required (compulsory for RCF) Will also have met minimum financial requirements (approval credit rating / adequate resources) Site visit will be required to confirm client's needs Project definition will be drafted (+ if required revised) by PTPMCS, with details entered into project tracking database prior to dissemination of tender opportunity notice
Controls	Correspondance + development of project notice maintained in tracking database Client must undertake accredited EE/TQM traing + may wish to receive business development advice in conjunction with project preparation if applying for RCF support. May wish to voluntarily undertake EE/TQM if self-financing
Income Route:	Share of energy savings or flat fee as agreed with client
Needs	Technical expertise in project formulation wth EE knowledge Project Administration / tracking facility + administrator Credit risk/financial analysis expertise Marketing of service to TVEs (directly + via TVE bureaux + banks) T+S for site visits

Costs	As per (4)
Prerequisites	Sound PTPMC membership (suppliers) Service marketing campaign Functional Project Management System (ideally integrated with website) Identified, capable staff (or sub-contractors)

9. Bid Evaluation / TVE Due diligence service

N.B. function could be provided as stand-alone service

Customer:	TVEs
Service:	PTPMCS will evaluate technical, managerial + financial quality of responses totender notices for EE products + seminars to identify capable + best-value service provider The due diligence function will be techno-economic analysis of proposed measures to assess potential for delivering stated energy savings / productivity benefits (notably for self-financed projects)
Delivery Mechanisms	Office based review of proposal documents (alongside TOR) [Note: stand-alone service will require site visit if first contact with client] Culminating in recommendation report + justification
Controls	Usual tracking / recording of correspondence, actions etc. Requires capability/prior experience + financials from bidding companies
Income Route:	Flat fee or share of energy savings (as agreed with client)
Needs	As (8) Tracking + monitoring of decisions must be maintained for justification if required (dispute resolution) Adequate liability insurance / indemnity cover
Costs	Staff salaries: Project evaluator (could be same as project formulator) Administrator Financial administrator Legal advisor T+S for site visits (if required) Insurance etc
Prerequisites	Marketing of services to TVEs (etc) Adequate tracking system Insurance etc

10. Post Implementation Monitoring / Due Diligence

N.B. Stand-alone possibility

Customer:	TVEs
Service:	PTPMCS will undertake appraisal of project implementation (post service delivery) to ensure service provider (PTPMCM or external contractor depending on funding approach) has delivered quality product fit for service. Monitoring, in the form of post implementation energy audit / production assessment will be undertaken to access savings delivered, notably for 'value-share' arrangement between client + provider.
Delivery Mechanisms	Site visit with audit if required. Findings will be presented in summary report, including recommendations for remedial section if necessary.
Controls	As 7
Income Route:	As 7
Needs	As 7
Costs	As 7
Prerequisites	As 7

11. Energy Auditor

N.B. Stand-alone possibility

Customer:	TVEs
Service:	PTPMCS will provide pre-project implementation assessment of client's Energy consumption to determine energy saving potential + to identify process or technology improvements that will yield energy cost savings for the client, ideally with reduction in overall GHG emissions. The service will include an evaluation of potential for accessing CDM funding + a prioritised energy efficiency action plan.
Delivery Mechanisms	Site visit will be essential. PTPMCS findings will be delivered to the client as a comprehensive report describing current position, a comparison to international best practice standards, suggestions for measures to reduce energy consumption/GHG emissions +/- to reduce energy expenditure. Prioritised recommendations + costings for energy efficiency actions will be the main deliverable.
Controls	PTPMCS will maintain record of all correspondence with client + key actions. Key input documentation (e.g. energy bills, process flow charts, site plans etc) will be held on file for 5 years (min) or duration of any follow-on project. Photographic record of the site will be made. PTPMCS will refer to best practice literature. All reports will be counter-signed off by qualified staff prior to issue.
Income Route:	Fee for service or costs + % of implemented energy savings
Needs	Staff with technical expertise in energy auditing, including capability for financial evaluation of proposed actions. Standard reporting format CDM analysis capacity Photographic equipment
Costs	Staff salaries: <ul style="list-style-type: none"> ESCO Director Energy Auditor Project Administrator T+S or site visit (potentially several days)
Prerequisites	Marketing to TVEs

12. Project Identification (Active Brokerage)

N.B. This service will be provided in addition to the passive brokerage where individual members request the service. A non-confidential description of the requests for service will be published to the website and if additional members also express an interest to receive the information then the request will revert to "passive" type request and be published via the opportunity portal (to avoid potential conflicts of interest)

Customer:	(Individual) PTPMC Members
Service:	PTPMCS will act on behalf of individual Members to identify TVE(s) with a need for the specific energy efficiency products or services supplied by that Member.
Delivery Mechanisms	PTPMCS will actively market this personalised brokerage service to Members. PTPMCS will actively approach individual TVEs (and potentially SOEs, SMEs etc.) offering services matched to an individual Member's capabilities. PTPMCS will work with TVE to assess precise needs – including initial energy audit – and whether Member is in suitable position to satisfy their requirements. (Otherwise should revert to 4 – i.e. Project Identification for general tender) PTPMCS will assist both parties to define contract.
Controls	Record of original request from Member for Opportunity Portal assistance and any follow-up actions Record of all TVE interest to be maintained (+ follow-up actions) including financial pre-screening of TVEs. If project requires RCF funding, requirement upon TVE to satisfy

	Environment/Business management requirements or undertake training to meet standard.
Income Route:	Fixed price plus % of contract value as appropriate
Needs	Strong business development (marketing) capability Site visit to potential TVE client Strong project identification capability (pre-feasibility) Contract definition capability Energy audit capability Project Administrator to track progress (Database) Financial appraisal capability
Costs	Staff salaries: min 1x marketing staff 1x project evaluator / energy auditor 1x credit checker 1x contracts officer 1x project administrator T&S for site visits
Success factors / Prerequisites	Marketing campaign to Members Strong membership base (expertise pool)

13. CDM Aggregation

Customer:	TVEs & PTPMC partnerships (& CDM Investors?)
Service:	Aggregation of 'small' energy efficiency projects for CDM bundle portfolio.
Delivery Mechanisms	PTPMCS will undertake evaluation of carbon offset potential for each TVE project (pre-implementation), including downstream energy efficiency impacts(?). PTPMCS will track its project portfolio and will submit project bundle for CDM funding when sufficient volume has been realised.
Controls	Maintain database of all live projects and carbon offset potential (including calculation methodology used in case of historical referral) PTPMCS will stay abreast of latest CDM submission procedures and offset evaluation procedures
Income Route:	From TVE/PTPMCM partnerships - % of CDM contract value
Needs	CDM assessment capability Excellent project tracking facility and Project Administrator to track progress (Database) Strong client liaison (to maintain portfolio)
Costs	Staff salaries: min 1x CDM analyst 1x project administrator
Success factors / Prerequisites	

15. ANNEX 2 - EXISTING STAFF CVS AND YEAR 1 STAFF TORS

15.1. Existing Staff CVs

[Insert short CVs for Wang Guiling, Song Dongfeng et al]

15.2. Requirements for additional staff

Three key additional staff are required for 2003/4:

- RCF Services Manager
- National/TVE Marketing Manager
- Project/ESCO Director

Other staff can be recruited as required and may include a:

- International Membership Director
- CDM/Technical Director
- Regulatory co-ordinator

The requirements and role are now explained in more detail

RCF Services Manager

Justification for role: A key gap in the market currently is TVE's ability to create bankable project proposals and for banks to find and screen potential projects. PTPMC aims to provide services to bridge this barrier to the financing of EE projects in the four key TVE sectors and therefore an RCF manager is required to inject the necessary financing experience in to PTPMC. In Year 1 this role breaks even and from Year 2 onwards, the revenue earned from providing this service more than covers the costs of the role.

Reporting: reports directly to PTPMC Director

Description of role: The RCF services manager's role is to manage the interaction of PTMC and the RCF fund and other lenders. The RCF manager is to build relationships with the key financial services members within PTPMC and assist the National/TVE marketing manager and international partnership director in building this membership. The RCF services manager might also assist the RCF to attract more funds depending on the RCF business plan. The RCF manager is in charge of delivering the following key services (5,6,7 in annex []):

- RCF loan application advisor
- Loan Application Screening / Pre-loan - due diligence
- Post Loan Approval – Due Diligence

Initially the RCF manager will both need to carry out business development but also implement the projects. The RCF manager will be responsible for overseeing the Finance Management Service Group contracts. The RCF manager will recruit additional staff, with approval from the PTPMC Director, as the business volume grows.

Requirements for role: PTPMC should select an RCF Manager with the following characteristics:

- 10+ years in the banking sector with experience in project screening, due diligence, lending, credit evaluation, and loan monitoring
- Ideally some experience of revolving capital funds and other innovative funding mechanisms
- Ideally some experience of technical projects, like Energy Efficiency
- Ideally experience with developing relationships with other banks, both national and international
- Fluent in Mandarin, Reasonable level of English
- Typically early 30's with ability to both develop business and implement projects
- Likely to be able to build up and lead the RCF team (the model shows that this team is likely to reach 3 within five years)

Timeline for hire: Recruitment process should start immediately after PTPMC is registered and applicant should be in place by 1Q04.

Proposed Initial Salary: US2000 per month

International Membership Director (IMD)

Justification for role: A key gap in the market currently is TVE's ability to find suitably qualified international equipment/service providers and for these equipment/service providers to find potential projects in China. PTPMC aims to provide member services to bridge this barrier and therefore an International Membership Director is required to inject the necessary international experience in to PTPMC. In Year 1 this role breaks even and from Year 2 onwards, the revenue earned from providing this service more than covers the costs of the role.

Reporting: reports directly to PTPMC Director

Description of role: The International Membership Director's role is to manage and build the number of international members of PTPMC. Working together with the National/TVE Marketing Manager, the IMD identifies potential members, negotiates membership terms with them and carries out the following services (international part of 1,2,3,4 and 12) for them:

- Website Tender Notification
- Email Tender Alert
- Tenders Bulletin Fax Service
- Project Identification Service (active brokerage)
- Inward Investment Advice
- 'Shop Window' (via website & case studies)
- Liaison services for non CN members
- Inward Trade Missions
- New Product Development / Identification
- Outward market advice

Initially the IMD will both need to carry out business development but also manage the resulting projects. The IMD manager will recruit additional staff, with approval from PTPMC Director, as the business grows.

Requirements for role: PTPMC should select an IMD with the following characteristics:

- 10+ years in international facing role, preferably in trade promotion, technology transfer, inward investment advice
- Experienced in business development and account management with international companies
- Ideally some experience of technical projects, like Energy Efficiency or business development assistance
- Fluent in Mandarin, Good level of reading, writing and speaking English
- Typically early 30's with ability to both develop business and implement projects
- Likely to be able to build up and lead the international facing members of the membership team

Timeline for hire: Recruitment process should be initiated when required.

Proposed Initial Salary: US2000 per month

National/TVE Marketing Manager

Justification for role: A key need for PTPMC to grow its business is to develop a network of national PTPMC members and manage an outreach and marketing campaign to TVE's in the four key sectors, the MoA, and as time progresses other SMEs, SOEs and TVEs in different sectors. This requires a full time National/TVE Marketing Manager to work together with the IMD in driving membership numbers and service revenue. In Year 1 this role breaks even and from Year 2 onwards, the revenue earned from providing this service more than covers the costs of the role.

Reporting: reports directly to PTPMC Director

Description of role: The National/TVE Marketing Manager's role is to manage and build the number of national members of PTPMC as well as manage the outreach program to TVEs, MoA etc. Working together with the IMD, the National/TVE Marketing Manager identifies potential members, negotiates membership terms with them and manages the national elements of the provision of the following services to them:

- Website Tender Notification
- Email Tender Alert
- Tenders Bulletin Fax Service
- Project Identification Service (active brokerage)
- Inward Investment Advice (identification of suitable partners with the IMD)
- 'Shop Window' (via website & case studies)
- Inward Trade Missions (identification of national attendees/key people for trade missions to meet)
- New Product Development / Identification (based on needs of TVEs)
- Outward market advice (based on needs of TVEs)

Initially the National/TVE Marketing Manager will need to further elaborate the marketing plan laid out in section 7, but equally create the materials required and organise the outreach workshops/events. The National/TVE marketing Manager should be able to carry out business development but also manage the resulting work. The National/TVE Marketing Manager will be responsible for the business development assistance and marketing programs during the UNIDO phase of the project and subsequently may recruit a TVE Business Development Advisor. The National/TVE Marketing Manager will recruit additional staff, with approval from PTPMC Director, as the business grows.

Requirements for role: The National/TVE Marketing Manager should have the following characteristics:

- 5+ years in similar membership services/marketing role
- Experienced in business development and account management with national companies, ideally TVEs
- Ideally some experience of technical projects, like Energy Efficiency or business development assistance
- Fluent in Mandarin, English a bonus
- Typically early 30's with ability to both develop business and implement projects
- Likely to be able to build up and lead the national membership services team

Timeline for hire: Recruitment process should start immediately after PTPMC is registered and applicant should be in role 1Q04.

Proposed Initial Salary: US1000 per month

Project/ESCO Director

Justification for role: A key need for PTPMC to grow its business is to assist TVEs in developing energy efficiency projects. There are two ways to do this: through attracting the interest of energy efficiency service companies which are just developing in China (under a World Bank project) and in certain cases to helping the TVE directly to carry out the feasibility studies required. To do this requires a full time Project/ESCO Director to work together with the TVEs in developing good EE projects. In Year 1 this role breaks even and from Year 2 onwards, the revenue earned from providing this service more than covers the costs of the role. In time this role may be split depending on the relative workload of the two areas – negotiating with ESCO's or developing projects directly.

Reporting: reports directly to PTPMC Director

Description of role: The Project/ESCO Director's role is to ensure TVE's develop good EE projects and also to manage the relationships and project related contracts with the TVEs and ESCO service providers. Working together with the CDM/Technical Director, the Project/ESCO Director manages the provision of the following services to TVEs/Members:

- Project Formulation / Identification
- Bid Evaluation / TVE Due diligence
- Post Implementation Monitoring / Due Diligence
- Energy Auditor

Initially the Project/ESCO Director will need to support the implementation of the 8 pilot projects and the engineering service group contracts and build relationships with the TVEs who have the 100 or so pipeline projects. The Project/ESCO Director should also build strong links with existing ESCOs to get them to become PTPMC members. The Project/ESCO Director will recruit additional staff, with approval from PTPMC Director, as the business grows.

Requirements for role: PTPMC should select a Project/ESCO Director with the following characteristics:

- 10+ years in similar project development/ESCO role
- Experienced in all aspects of energy efficiency projects, ideally with experience in the four key sectors
- Fluent in Mandarin, English a bonus
- Typically early 30's with ability to both develop business and implement projects
- Likely to be able to build up and lead the project development team

Timeline for hire: Recruitment process should start immediately after PTPMC is registered and applicant should be in role 1Q04.

Proposed Initial Salary: US2000 per month

CDM/Technical Director

Justification for role: Energy efficiency projects can qualify for support under the Clean Development Mechanism (CDM). It is intended that PTPMC builds capability in this area to provide advice to the TVEs (as the market matures this team may be spun out to remove possible conflicts of interest). Furthermore there is a need to create a group of qualified technical engineers who can support the projects group in their evaluation of technologies for the four key sectors and potentially assist in developing new areas for projects. To do this requires a full time CDM/Technical Director to work together with the TVEs in developing good CDM projects and to support the Projects/ESCO Director. In Year 1 this role breaks even and from Year 2 onwards, the revenue earned from providing this service more than covers the costs of the role. In time this role may be split depending on the relative workload of the two areas.

Reporting: reports directly to PTPMC Director

Description of role: The CDM/Technical Director's role is to ensure that, where appropriate, TVE's develop their projects as CDM projects and also to support the projects director with the technical aspects of the projects. Working together with the Project/ESCO Director, the CDM/Technical Director manages the provision of the following services to TVEs/Members:

- CDM Aggregation; and supports the following services:
- Project Formulation / Identification
- Bid Evaluation / TVE Due diligence
- Post Implementation Monitoring / Due Diligence
- Energy Auditor

Initially the CDM/Technical Director will need to support the implementation of the 8 pilot projects and the engineering service group contracts and build relationships with the TVEs who have the 100 or so pipeline projects. The CDM/Technical Director should also build strong links with technology providers and the relevant CDM stakeholders to get them to become PTPMC members. The CDM/Technical Director will recruit additional staff, with approval from PTPMC Director, as the business grows.

Requirements for role: PTPMC should select a CDM/Technical Director with the following characteristics:

- 10+ years in similar technical role
- Experienced in all technical aspects of energy efficiency projects, ideally with experience in the four key sectors
- Fluent in Mandarin, English a bonus
- Experience in CDM or similar schemes a bonus
- Typically early 30's with ability to both develop business and implement projects
- Likely to be able to build up and lead the project development team

Timeline for hire: Recruitment process should be initiated when required.

Proposed Initial Salary: US2000 per month .

Regulatory Advisor

Justification for role: A key aim of the project is to identify and implement suitable action plans for the strengthening of regulation implementation at the county level and to insitute barrier removal to promote the adoption of energy efficiency best practice and other environmental management best practices in the TVE sector. The national PIC and the local LPICs are instrumental in this. PTPMC will need to liaise closely with these organisations to ensure that both objectives are met. This role is likely to be an overhead role in the PTPMC corporate centre, providing advice to core services and consulting services personnel as required.

Reporting: reports directly to PTPMC Director

Description of role: The Regulatory Advisor's role is to ensure that liaison with the national PIC and the local county LPICs is effective and to work with the core services and consulting teams to understand what barriers there are to adoption of EE best practice and to lobby county, provincial and national agencies to ensure that these barriers can be removed. Additionally there may be some fee-paying work for members on policy advice.

The regulatory advisor will have responsibility to ensure the Regulatory Reform Services Contract meets its objectives.

Requirements for role: PTPMC should select a Regulatory Advisor with the following characteristics:

- 7+ years in similar role, perhaps in a government agency with responsibility for environmental compliance or in a large enterprise as the regulatory advisor
- Experienced in all regulatory aspects of energy efficiency projects and environmental protection, ideally with experience in the four key sectors
- Fluent in Mandarin, English a bonus
- Able to build consensus amongst diverse stakeholders to remove barriers to EE projects
- Typically early 30's with ability to both develop business and implement projects

Timeline for hire: Recruitment process should be initiated when required.

Proposed Initial Salary: US1500 per month

16. ANNEX 3 – LIST OF POTENTIAL PTPMC MEMBERS

PTPMC has been provided with a Database of over 200 potential members from all categories of the target members. A subset of the key members is included here to indicate the kind of members that PTPMC should target and the sources used.

Category	Example Members
Brick Making equipment manufacturer (Main sources are www.alibaba.com , www.chinanet.com , www.tgrnet.com , www.business-china.com)	Sichuan Center Machinery Co., Ltd. Henan Yutai Machinery Co., Ltd Quanzhou Fuli constructing material facilities company Shangyashan Oriental Industrial Company Changshu Buliding Material Application Research Institute
Cement equipment manufacturer	Zhengzhou zhongyuan songshan jixie zhizao Co., Ltd. Zhangjiagang Gangqu Converyor Co., Ltd. Jingjiang Hongfa Machinery Co., Ltd. Yingxing Cold Work Machinery Factory Wuhan Cement Machinery Plant Beipiao BOM Machinery Plant Longtan Heavy Machinery Plant Hubei Heavy Machinery Plant Shenyang Cement Machinery Co., Ltd. Luoyang Dahua Machinery Plant KEFA Trading & Industries Ltd. Shandong Zhangqiu Blower Works Hangzhou Tianba Cement Machinery Plant
Machining equipment manufacturer	Changshu Construction And Mining Machinery Corporation Ltd. Jiangsu Hongda Special Steel Machinery Factory BAOSHAN IRON AND STEEL GROUP SUZHOU METALLURGICAL MACHINERY FACTORY Qinhuangdao Metallurgical Machinery Co., Ltd. Sichuan Metallurgical Machinery Plant Henan Taihang Vibrating Machinery Co., Ltd Jiangsu Quanneng Machinery Equipment Co., Ltd Wuxi Zhouda Metallurigical Machinery Plant Beijing Metallurgical Machinery Research Institute Yantai City Industrial Furnace Factory Wuhu Boiler Plant China Metallurgical Equipment Nanjing Company Taixing Jianeng Metallurgical Equipment Plant
Coking equipment manufacturer	Taiyuan Heavy Industries Dalian Heavy Industries Group. Shanxi Heavy Machinery Plant Xian Dongfang Machinery Plant Anshan Pengcheng Coking Co., Ltd Shanxi Jiexiu Coking Equipment Plant Wuxi Coking Equipment Plant
Training Providers	PTPMC is advised to search the www.uichina.com/training_directory site as and when required

Energy Service Co's	Shandong Energy Conservation Engineering Co Ltd, Beijing Yuanshen Energy Saving Technology Ltd, Energy Conservation Information Dissemination Centre of SETC, Beijing Energy Conservation Centre (BECON) PTPMC is also advised to build relationship with US and Japanese ESCO associations as well as other regional ESCOs and services like www.caddett.org 1) US ESCO association – www.ecee.org/inside/default.htm Japanese ESCO Association – www.jaesco.gr.jp
CDM Consultants	China Energy Conservation Investment Corporation , CREIA, Tsinghua University, CESTT, China Sciences Group, IT Power, ESD, IRG, ECOSECURITIES, NATSOURCE
Business development Service Consultants	To be identified as required, e.g. from http://www.expertisearch.com
Quality management consultants	To be identified as required, e.g. from http://www.expertisearch.com
Environmental Management Consultants	ERM, AEA, CH2MHILL, SCOTT Wilson
Engineering design consultants	To be identified as required, e.g. from http://www.expertisearch.com
Financial institutions	China Development Bank , Bank of China, Agricultural bank of China, China Construction Bank, China Minsheng Banking Group, CITIC, RaboBank, World Bank, International Finance Corporation, Asia Development Bank, KfW, ASRIA, BlueMoon Fund, HSBC, ABN AMRO, BARCLAYS Capital
Legal institutions	Baker and MacKenzie, Lehman, Lee and Xu – see www.ChinaBig.com for comprehensive listing or http://www.hq.org/firms-china.html
Donors/NGO's	UNDP, UNIDO, British Government/REEEP, WWF, Energy Foundation, etc
Credit Investigators	Steele Business Investigators, others to be identified as required from http://www.wapi.com
Investment advisory companies	GREEN Capital, CHINA VC, CDC Capital venture Partners,
Regulatory advisory companies	APCO, SINOSPHERE

17. ANNEX 4 – BUSINESS MODEL SUMMARY

17.1. A4.1 Detailed Revenue Assumptions

Revenue Category	Item	Base case assumption	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Risks
Project Growth		Projects of average size US\$1178750 (avg of 8 pilot pro-formas)	4	4	4	9	13	PTPMC ability to identify and broker these projects
RCF growth		Funds at 70:30 debt to equity	3300500	3300500	3824728	7955435	12410478	PTPMC/RCF ability to leverage additional funding
		RCF/co funds capital employed assuming 3 yr bullet payback	3300500	6601000	10425728	15080663	24190642	
UNIDO support	Salaries	From Project Document pro-rated per year	53,600	53,600	-	-	-	None
Project Document activity derived revenue	Contract with UNIDO	As per TOR in Annex 6	254605	146540	66250	-	-	Subject to agreement by UNIDO
	Opportunity Portal	1% equivalent service fee for 8 pilot project, equipment costs 9.43m from phase 1 output pro-forma projects	47,150	47,150	-	-	-	Subject to agreement with technology providers

	CDM of 1 project	Assumes 26,000 per CDM project and use external consultant to learn from	26,000	-	-	-	-	-	Subject to donor funding either FCO, UNDP/UNF, WWF other
	Funds could come from other donor e.g. FCO								
	CDM benefit	\$4/tCO2, 5% revenue for 5 years	-	424.32	424.32	424.32	424.32	424.32	Subject to above
	Energy saving benefit	5% of ESCO's 90% for 3 yrs i.e. 4.5%, Average energy saving per project 3600 tce, energy price 112 RMB/t, sign 100% of pilot projects	-	8834	17668	17668	17668	8834	Risks that ESCO's say No to energy sharing
	Note: we have not assumed PTPMC gets value for "production improvements" which are actually main earner								
Member services	Membership Growth	Assume 100 initial members, 10% growth	100	110	121	133	146	146	Finding members
	Membership fees	US300 per member per year, 80% fee paying,	12000	13728	15705	17966	20554	20554	Finding members willing to pay
	Project ID service	2.5% of members require the service, growing to 5% by 2005, US3000 per time, also inflation	7500	8580	19631	22457	25691	25691	Convincing international members of the need for this service
	Loans Application Advisor	100% as number of projects during UNIDO project, reducing afterwards, US1500 per contract	6000	6240	4867.2	10123.776	14038.3	14038.3	Convincing TVEs to pay this consulting fee to enable them to access RCF funds
	Inward investment advice	Team of 4 for two months, plus manager 25% - US27000	0	28080	29203.2	60742.656	63172.36	63172.36	Depends on how good Project ID service goes and links to national members

	Liaison services	2 man weeks per time i.e. US1500	0	0	6952	14462	22561	
	Inward trade missions	US3000 per time	0	3120	3244	6749	7019	
	New Product Development / Identification	8 man months US24000	0	0	25958.4	53993.472	84229.82	As inward advice
	Total		25500	59748	105563	186496	237266	
TVE Services	Project Preparation/ Formulation	Covered by Energy Savings Revenue						Depends on ESCOs
	Bid Evaluation/TVE Due Diligence Service	Covered by Opportunity Portal Revenue						Depends on members agreement
	Post-implementation monitoring & reporting	US3000 per project	0	0	12515	23140	31586	Depends on RCF willingness to pay
	Business development assistance	0.03% of 90,000 over TVE's gives 24 projects, 25% growth This can be realised by 8 workshops per year with 40 attendees and 10% hit rate	24	30	37	46	58	Depends on TVE willingness to pay
		each project US8,500, PTPMC gets 2% equivalent service fee for brokering service	2006	2608	15906	27547	37316	Depends on TVEs requesting these services
Opportunity Portal		1% equivalent service fee for brokering of equipment costs, average project 1.2m,	0	0	54639	113649	177293	
CDM revenues*		1 project in pilot 8 as CDM project, thereafter 1 in 5 are CDM projects US60000 per project, PTPMC gets 4% contract service fee, also shares 5% of CDM revenue for	0	0	4043	10083	18130	Depends on revenue sharing agreement signed

Energy Savings	five years	0	0	21361	55079	102533	Depends on ESCOs agreement
RCF External Management services	5% of ESCO's 90% for 3 yrs i.e. 4.5%, Average energy saving per project 3600 tce, energy price 112 RMB/t, sign 100% of pilot projects	0	0	43324	68080	119547	Depends on RCF and RCF co-funders
Others/Grants	10% of net income of RCF	0	39606				
	Multi-lateral projects						
	Study Tours						
	Capacity Building						
	Conferences						
	Product Labelling						
	Other consulting						

17.2. A4.2 Selected Assumption Justifications

Assumption	Justification
Inward investment advice/new product development	<ul style="list-style-type: none"> • Agency companies and inward investment companies charge high rates to companies entering the china market. • PR Investment advice house – US10,000 per week • Agency company – US25,000 per company on retainer basis and then % of business introduced • It is not unreasonable to assume fees in the range 25,000-30,000 for these kind of projects • Furthermore there is a large degree of potential upside from any resulting success fee
Energy Savings charge	<ul style="list-style-type: none"> • Survey of ESCO's demonstrate they typically charge clients 90% of the energy savings for first three years. TVE projects will be different and are mainly strategic product change initiatives but it is likely that a similar deal structure will emerge as the normal contractual arrangement. How energy efficiency will measured needs to be developed by PTPMC's ESCO Director. Other value share arrangements could be entered into on the basis of financial performance, and these are likely to be more significant.
Opportunity Portal 2%	<ul style="list-style-type: none"> • A survey of B2B exchanges in a range of sectors from electricity trading to equipment purchasing reveals a range of business models and fees charged per transaction from 0.25% to 15%. Some charge both buyer and seller but most charge sellers. Equally in more complex purchasing, like equipment, the fees charged tend to be higher as the service is more complex – including project identification, tender management etc. Reference examples include: <ul style="list-style-type: none"> • Altra (electricity trading) 0.25% to buyer and seller • APX (electricity trading) 1% to seller • Chemconnect – 0.2% to 2% depending on transaction size • e-Steel – 7/8% charged to seller • Fastparts – 12% • Medibuy – 12% • Metalsite – 0.25-2% • Paperexchange – 3% • Plastics net – 15% to seller

17.3. A4.3 Schedule of service provision / Prioritisation of services based on revenue

Member services	Service	Schedule	Five years income	Priority
Member services	Membership Svcs	Year 1	80,000	High
	Project ID service	Year 1	84,000	High
	Loans Application Advisor	Year 1	42,000	Medium
	Inward investment advice	Year 2	120,000	High
	Liaison services	Year 3	44,000	Medium
	Inward trade missions	Year 2	20,000	Low
	New Product Development / Identification	Year 3	164,000	High
TVE Services	Project Preparation/ Formulation	Year 1	Covered by Energy Savings Revenue	High
	Bid Evaluation/TVE Due Diligence Service	Year 1	Covered by Opportunity Portal Revenue	High
	Post-implementation monitoring & reporting	Year 2	67,000	Medium
	Business development assistance	Year 1	18,000	Low (but project requires)
Opportunity Portal	Brokering of equipment and software costs	Year 3	344000	Very High
CDM revenues*	CDM brokering and revenue sharing	Year 1	32,000	Low (but high brand impact)
Energy Savings	ESCO type service	Year 1	110,000	High
RCF External Management services	External fund management and fund matching service	Year 2	270,000	High
Others/Grants	Support revenue in build up phase from other donors	Years 1-3, could be longer if no strategic investor	140,000	High
	Multi-lateral projects	Not modelled		
	Study Tours	Not modelled		
	Capacity Building	Not modelled		
	Conferences	Not modelled		
	Product Labelling	Not modelled		
	Other consulting	Not modelled		

17.4. A4.4 Costs Assumptions

Summary of PTPMC business costs

	2004	2005	2006	2007	2008
Costs of Sales					
Office kit-out	3000		20000		
IT Hardware	8000	6000	6000	12000	8000
Software					
Website	35000	70000			
Network/Web/Host Support	1750	1820	1893	1969	2047
Cars	0	0	0	25000	
Seminars/Workshops	0	0	25000	25000	25000
Sub-Total	47750	77820	52893	63969	35047
Equipment & facilities	11000	6000	26000	37000	8000
Assets (including website)	46000	76000	26000	37000	8000
Cumulative assets	46000	122000	148000	185000	193000

PTPMC should assess when staff are hired in line with their revenue growth

e.g. if TOR contract is not realised, then staffing should be reduced and partnering should be used to win contracts and build cash position so staff can be hired

Staff (additional to UNIDO)

Corporate Exec Office

Makeup UNIDO support (at Project end) - 4 staff - Director, CIO, Contracts Mngr, PA	0	0	53600	56280	59094
Chief Legal Officer	0	0	24000	25200	26460
Office Admin/HR	0	0	0	25200	26460
Regulatory Advisor	0	0	0	0	0
Support staff (admin, drivers, reception etc)	1	1	2	2	2
Support staff cost	6000	6300	6615	6946	7293
Total support staff cost	6000	6300	13230	13892	14586
Total staff	5	5	7	8	8
Sub Total	6000	6300	90830	120572	126600

Core Service Office

RCF Services Manager	24000	25200	26460	27783	29172
Number of RCF staff	0	1	1	1	2
RCF staff costs	18000	18900	19845	20837	21879
Total RCF staff	24000	44100	46305	48620	72930
International Partnership Director	0	25200	26460	27783	29172
Marketing + ABC/TVEB liaison	12000	12600	13230	13892	14586

Year 1 staff costs are pro-rated depending on when they are scheduled to be hired – see TORs

officer

Membership Services Officer	12000	12600	13230	13892	14586
Additional officers	0	0	0	1	2
Cost of Officers	0	0	0	13892	29172
TVE BizDev Advisor	0	0	0	12600	13230
Total Staff	2	5	5	7	9
Sub-Total	36000	63000	66150	95949	115333

PTPMCS Consulting

Project Evaluator Director	24000	25200	26460	27783	29172
Project Evaluators	12000	12600	13230	13892	14586
Number of Evaluators	0	0	0	0	0
Eavluator staff costs	0	0	0	0	0
Total PE staff	24000	25200	26460	27783	29172
1 ESCO Manager	0	0		25200	26460
Energy Efficiency Advisors	12000	12600	13230	13892	14586
Number of EE Advisors	0	0	0	0	1
EE Staff	0	0	0	0	14586
Total EE Staff costs	0	0	0	25200	41046
1 CDM Manager	0		0	27441	28813
CDM Assessors	12000	12600	13230	13892	14586
Number of CDM Assessors	0	0	0	0	1
Cost of CDM Staff	0	0	0	0	14586
Total CDM staff costs	0	0	0	27441	43399
1 Technical Director	0	0	26460	27783	29172
Engineers	12000	12600	13230	13892	14586
No of Engineers	0	0	0	1	1
Engineer staff costs	0	0	0	13892	14586
Total Technical staff costs	0	0	26460	41675	43758
Total Staff	1	1	2	5	7
Sub-Total	24000	25200	52920	122099	157376

Total Number of Staff	8	11	14	20	24
Total Salary Cost	66000	94500	209900	338619	399308
Total Cost of Sales	113750	172320	262793	402588	434355

Admin Costs

1. Rent and rates	0	0	25200	25200	25200
2. Computers + tech suppt	800	1100	1400	2000	2400
4. Printing	1440	1440	1440	1440	1440
5. Computer supplies	400	400	400	400	400
6. Legal fees	4000	4000	4000	4000	4000

7. Recruitment	11000	4125	4125	8250	5500
8. Stationery	960	960	960	960	960
9. Postage	960	960	960	960	960
10. Cleaning	1200	1200	1200	1200	1200
11. Software	0	0	0	0	0
12. Tel / fax	4800	4800	4800	4800	4800
13. Staff cost	0	0	0	0	0
14. Other Travel & Entertainment	11696	12280	12894	13539	14216
Number of key departments	3	3	3	3	3
Cost per department	3899	4093	4298	4513	4739
Total cost	11696	12280	12894	13539	14216
15. Other					
Company Registration		0	0	0	0
Sub Total	37256	31265	57379	62749	61076
Total	151006	203585	320172	465337	495432
Other admin	37256	31265	32179	37549	35876

18. ANNEX 5 – DESCRIPTION OF PTPMC CAPACITY BUILDING PROGRAMME

Activity	Event	Purpose
Study Tours	Europe Study Tour	The European Study Tour is intended to provide key PTPMC staff, together with Officials from the Chinese Government and Industry Representatives of the four TVE sub-sectors the opportunity to meet with European counterparts as well as suppliers of energy efficiency products and services that may be suitable for introduction to Chinese TVE sector. It also provides an opportunity to meet with similar business-to-business services to help define PTPMC Function and business model.
	Shanghai New-venture for clean production	To provide PTPMC staff with opportunity to investigate technologies for cleaner production processes appropriate for introduction to TVEs
	USA Study Tour	The USA Study Tour is intended to provide key PTPMC staff, together with Officials from the Chinese Government and Industry Representatives of the four TVE sub-sectors the opportunity to meet with US counterparts as well as suppliers of energy efficiency products and services that may be suitable for introduction to Chinese TVE sector. It also provides an opportunity to meet with similar business-to-business services to help define PTPMC Function and business model.
International Conference	PTPMC business plan publicity, Beijing, China	This event is envisaged to publicly launch the PTPMC business venture. It will highlight the need and potential for cost-effective implementation of EE and process efficiency improvements within the TVE sector. Potential PTPMC Members (Chinese and international EE product and service providers, business service providers), investors, Government Officials and representatives from the TVE sector TVE sector will be introduced to the range of PTPMC's business-to-business services, investment opportunities and services to donors and government.
Workshops	Business-Finance Workshop, Beijing, China	The business finance workshop will be similar in scope to the Business Plan publicity conference, though with greater emphasis on the availability of Finance under the RCF. In particular it is intended that this will serve as an opportunity for attracting additional investment to the RCF to allow further projects to be implemented.
	Local PIC policies training activities	PTPMC can provide training activities to assist the PIC to meet its objectives.

	New project selection training workshops	This series of events is designed to improve the 'bankability' of TVE EE projects, presenting an overview of the project evaluation process (particularly in respect of applications to the RCF) and a 'template' for successful project design and loan application.
	National energy efficiency policies workshop for TVEs	This event is intended primarily as a specialist focus meeting to present PTPMC services to the TVE sector, highlighting the potential for business development and product improvement through implementation of PTPMC projects. It will be established with reference to national policies on energy and the environment.
	Standards training workshop	This event will provide a perspective on the intricacies of implementing projects in China, largely for the benefit of international PTPMC members in respect of relevant national standards, notably for environmental protection, but also building construction, design and monitoring.
	New project financing workshop	The primary objective of this workshop is to identify strategic investment partner(s) to sustain the future business stability of PTPMC, by presenting the supply and demand for PTPMC's services.
PTPMC Strengthening	PTPMC start meeting	This meeting is to launch the PTPMC and build market awareness of its activities.
	PTPMC Advisory Group Meeting, Beijing	This internal meeting will assist PTPMC Staff to establish clear operating procedures, lines of referral etc and general coordination with the Steering Committee.
	International training of PTPMC staff	This 2 to 3 month internship - shadowing staff in a quality-accredited international practice specialising in delivering energy services to industry, government, donors, private clients etc. - is intended to provide PTPMC's administrative staff with relevant business administration skills that will engender quality practices within PTPMC day-to-day operations.
	Modify PTPMC business plan	Subsequent to the completion of the UNIDO assistance for establishment of PTPMC, and the introduction of strategic commercial investment to continue the growth of the business, the business plan will be updated to reflect the (new) business focus.

ANNEX 6 - DRAFT TERMS OF REFERENCE FOR PTPMC CONTRACT WITH UNIDO

Project No. and Title: United Nations Industrial Development Organisation Project EG/CPR/99/G31
- "Energy Conservation and GHG Emissions Reduction in Chinese TVEs –
Phase II"

Title of Terms of Reference: "Support to Product Technology and Product Marketing Consortium (PTPMC)
to ensure sustainability of their activities"

Implementing Agency: Sole bidder for Year 1 and 2 is Product Technology and Product Marketing
Consortium

Duration of Service: 24 months (Anticipated from September 2003 to September 2005),
extendable subject to bidding for a further 1 year

Overall Project Background:

Township-Village Enterprises (TVEs) constitute a significant share of Chinese economic production and social welfare. TVEs also contribute significantly to local and global environmental problems. In the early part of 1999, UNDP/GEF approved a project titled "Energy Conservation and GHG Emissions Reduction in Chinese TVEs – Phase II". This project is to reduce GHG emissions in China from the TVE sector by increasing the utilization of energy efficient technologies and products in the brick, cement, metal casting and coking sectors. The project removes key market, policy, technological, and financial barriers to the production, marketing and utilization of energy efficient technologies and products in these industries.

Project objectives include: a) creating institutional mechanisms for barrier removal at the national, county and enterprise level; b) establishing incentives and monitoring systems to strengthen existing regulatory programs at the county level; c) building technical capacity for energy efficiency and product quality improvement in TVEs; d) creating access to commercial financing for TVE in the four industries; and e) commercialize the financing of TVE energy conservation projects and; f) expanding the application of best practices for local regulatory reform to the national level.

Establishment & sustainable operation of the Production Technology and Product Marketing Consortium (PTPMC) in China is one of the crucial tasks in the project. The current status of the setting up of PTPMC is:

- ✓ The PTPMC business plan has been drafted
- ✓ PTPMC is registered as a commercial entity with two initial shareholders (IE Energy and Environmental Protection Company and Zhongnong Company)
- ✓ PTPMC Secretariat has key staff and office resource to support the establishment of PTPMC
- ✓ PTPMC has other initial business opportunities that are currently under development, e.g. proposal for developing Clean Development Mechanism Projects in the TVE Sector.

It has been recognised by all stakeholders to the Project that it is crucial to provide foundation assistance to PTPMC via providing opportunities to carry out activities in support of the Project and thereby build its internal capabilities and reputation through "learning by doing" so that after two to three years of operation PTPMC can sustainably continue. Furthermore these activities should be carried out by suitably qualified staff of PTPMC on a contractual basis with performance linked payment. This was agreed at the meeting between all of the Project stakeholders on 21st May and it was further decided to structure this foundation support as a Contract between UNIDO and PTPMC under Budget Line 21 with a clear Terms of Reference determining the activities and deliverables. This Terms of Reference would be in addition to other previously agreed Project support for PTPMC, e.g. for purchasing IT hardware/software, provision of office space and on-going support of salary costs of the PTPMC Secretariat.

Objectives

The overall objectives for the activities outlined in this Terms of Reference are:

- To support the development of PTPMC as a sustainable operating company via supporting it to carry out additional "learning by doing" activities for the following Project subcontracts:
 - 21-100 Regulatory Reform Service Group Subcontract (Budget 410,000 US\$) – this will be subject to separate agreements between PIC and PTPMC
 - 21-200 Engineering Service Group Subcontracts (Budget 1,940,000 US\$)
 - 21-300 Marketing management Service Group Subcontract (Budget 770,000 US\$)
 - 21-400 Finance management Service Group Subcontract (Budget 600,000 US\$)
- To ensure PTPMC can attract suitably qualified staff for it to build its reputation in the market and deliver the Projects broader objectives
- To ensure close linkages and support services between PTPMC and the Revolving Capital Fund and the Policy Implementation Committee (PIC) and the local counterparts (LPICs).
- To assist PTPMC to expand its membership base so that PTPMC can build its revenue from other services during the foundation period
- To give PTPMC some revenue certainty in the short term (first two years) and assist it to migrate to full performance based bidding and commercial operation in three years time
- To capture best practices from the project implementation and use these to highlight the Projects outcomes and as case studies to showcase PTPMC's reputation and experience

Proposed scope of work

It is proposed that the following scope of work is carried out by PTPMC to meet the objectives stated above:

Task 1. To provide services in support of delivery of the 21-200 Engineering Service Group Subcontracts

Year 1 Activities

1.1 Set up processes for management of the engineering service group contracts and carry out initial proposal solicitation and training :

- **Proposed Schedule:** Month 1 to Month 6 after contract award
- **Objective:** Ensure PTPMC has the capabilities, processes and materials (e.g. training for loan officers and TVEs) to ensure good programme management of the contracts for the pilot projects and that the opportunity portal is developed according to industry requirements and is popular and that good quality proposals are solicited.
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - *Scope out and put in place the required internal and external facing processes/systems for contract management of the engineering service group contracts. This should include the development of the required standard contractual arrangements e.g. between TVEs and PTPMC, PTPMC and its members, and RCF and PTPMC, which include the revenue sharing and fees for service arrangements.*
 - *Carry out needs assessment and develop a training strategy and package for TVEs and ABC loan officers to provide proposals to PTPMC and prepare bankable energy conservation project proposals*
 - *Develop the initial opportunity portal as envisaged in the business plan for managing the product and service opportunities that PTPMC will post on behalf of TVEs and for which PTPMC members will bid. This will include developing an appropriate section on the PTPMC website.*
 - *Carry out initial training for the developed training strategy and package to TVEs and ABC loan officers so that proposals are received, reviewed, posted to the portal and contracts for equipment procurement developed and posted to the opportunity portal. This will require an initial training session.*
 - *Solicit initial proposals for the pilot projects and trial them through the developed processes and systems and use this "learning by doing" to refine them*
- **PTPMC Staff requirements:** RCF Services Manager, Technical Director, Contracts Manager, National TVE Marketing Manager, others as required.
- **Deliverables:**
 - A report outlining the detailed processes/systems that PTPMC will put in place to facilitate and manage contracts, with standard contracts attached as annexes (end month 2)
 - A report summarizing the training needs assessment for TVEs and ABC Loan officers to use the proposed processes/systems and develop bankable project proposals through it (end month 2)
 - Website, including the opportunity portal (end month 3)
 - Training strategy and package for TVE Managers and ABC Loan Officers to use the PTPMC systems and on the preparation of bankable energy conservation project proposals (end month 3)
 - Report on initial training carried out and feedback received. (end month 4)
 - Report on the initial "learning by doing" trials of the processes/systems (end Month

6)

- **Estimated Input:** 15 man months (PTPMC), 18 national flights, 40 per diems initial opportunity portal website (US40,000) , initial training session (US20,000)
- **Justification:** The early setting up of PTPMCs processes to engage and manage its dealings with TVEs, ABC loan officers, PTPMC members providing engineering services to the Pilot projects and Financing institutions is essential to the delivery of the pilot projects.

1.2 Continue to refine the developed systems and processes to manage the Engineering Service Group Contracts for Year 1 pilot projects and issue a summary report to the contracting authority by the end of Year 1 on PTPMC contract management performance

- **Proposed Schedule:** Month 6 to Month 12 after Contract award
- **Objective:** Coordinate TVEs, PTPMC members and RCF to ensure goods and services are delivered for the pilot projects implementation – assumed 4 in Year 1 of PTPMC and 4 in Year 2
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - Keep Quality auditable records of all proposals/correspondence received from TVEs by PTPMC and all procurement managed by PTPMC on behalf of TVEs and financing proposals with RCF
 - Issue a summary report on the performance of PTPMC's systems and processes in meeting the needs of the Year 1 Pilot projects, highlighting any weaknesses and suggesting ways to improve them
- **PTPMC Staff requirements:** National TVE Marketing Manager and PTPMC Information Officer, RCF Services Manager, Technical Director, Contracts Manager
- **Deliverables**
 - Report on Year 1 performance of PTPMC in coordinating and managing the Year 1 Pilot projects (by month 12)
- **Estimated Input:** Record keeping is paid for from opportunity portal revenues, Year 1 report requires 1 man month input (PTPMC)
- **Justification:** Key to project's demonstrable success

Year 2 Activities

1.3 Develop Monitoring and Verification Plan and procedures for the implemented Year 1 projects and use these as a baseline to investigate the potential for CDM registration of Year 2 projects as CDM projects

- **Proposed Schedule:** Month 12 to Month 18 after Contract award
- **Objective:** Support PTPMC to monitor the projects implementation and allow it to be a conduit for promoting TVE projects as CDM projects
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - Carry out 1-2 baseline missions to each project site to identify key contacts and develop Monitoring and Verification Plans (MVP) together with local project sponsors
 - For sites which are completed, trial MVP for 1-2 months
 - Carry out follow up evaluation missions to sites to establish how effective MVP is and any issues encountered and how to solve any problems
 - Get MVP's signed off
 - Assess whether Year 2 pilot projects could be registered as CDM projects and if so carry out the necessary steps, e.g. place a request on the opportunity portal for CDM service providers
- **PTPMC Staff requirements:** Technical Director, others as required

- **Deliverables:**
 - Mission reports for each site visit (following a standardized template)
 - Project Monitoring and Verification Procedures (by month 18)
 - If applicable, proposal to develop one pilot project as a CDM project
- **Estimated Input:** 6 man months (PTPMC), 12 National flights, 60 per diems
- **Justification:** Required for in Project Document, supports PTPMC to carry out next phase of Projects, ensures Project outcomes are measurable, facilitates use of CDM

1.4 PTPMC will develop Best practice case studies for Year 1 Projects and carry out two case study information dissemination /industry training workshops for soliciting and preparing post-Phase II proposals

- **Proposed Schedule:** Month 12 to Month 24 after Contract award
- **Objective:** Ensure PTPMC can gain experience of the project implementation and incorporate this in future projects and disseminate the information to build support for replicable projects elsewhere in China.
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - Develop best practice case study template in line with international best practices which captures the key learnings and is detailed enough for an industry training event
 - Visit pilot project sites to capture information to fill in template, including photographing key elements of the project and potentially visiting other national/international sites where similar projects have been carried out
 - Write up case studies
 - Revisit site at a later date to capture implementation plus 6 months experience
 - Develop agenda for case study information dissemination /industry training workshops
 - Organise and hold workshops, preferably in parallel with other key relevant events
- **PTPMC Staff requirements:** RCF Manager, Technical Director, National TVE Marketing Manager and PTPMC Information Officers
- **Deliverables**
 - Best practice case studies – one per project (and posted to PTPMC/CADDET/other relevant websites) (by month 21)
 - 2 Information dissemination /training workshops with follow-on projects identified and concept notes created for (by month 24)
 - Mission reports to support the above deliverables
 - Summary of the workshops
- **Estimated Input:** 5 man months (PTPMC), 8 National flights, 2 international flight, 50 per diems, plus US40,000 for PTPMC to organize 2 workshops / industry training events.
- **Justification:** Required by Project Document, supports PTPMC to develop post-Phase II projects, builds PTPMC ability to ideate and develop new project concepts for its members to bid for

1.5 Continue to refine the developed systems and processes to manage the Engineering Service Group Contracts for Year 2 pilot projects and issue a summary report to the contracting authority by the end of Year 2 on PTPMC contract management performance

- **Proposed Schedule:** Month 12 to Month 24 after Contract award
- **Objective:** Coordinate TVEs, PTPMC members and RCF to ensure goods and services are delivered for the pilot projects implementation – assumed 4 in Year 2 **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - Keep Quality auditable records of all proposals/correspondence received from TVEs by PTPMC and all procurement managed by PTPMC on behalf of TVEs and financing proposals with RCF

- Issue a summary report on the performance of PTPMC's systems and processes in meeting the needs of the Year 2 Pilot projects, highlighting any weaknesses and suggesting ways to improve them
- **PTPMC Staff requirements:** National TVE Marketing Manager and PTPMC Information Officer, RCF Services Manager, Technical Director, Contracts Manager
- **Deliverables**
 - Report on Year 2 performance of PTPMC in coordinating and managing the Year 2 Pilot projects (by month 24)
- **Estimated Input:** Record keeping is paid for from opportunity portal revenues, Year 2 report requires 1 man month input (PTPMC)
- **Justification:** Key to project's demonstrable success

Year 3 Activities

1.6 PTPMC will develop Best practice case studies for Year 2 Projects and carry out two case study information dissemination /industry training workshops for soliciting and preparing post-Phase II proposals

- **Proposed Schedule:** Month 24 to Month 36 after Contract award
- **Objective:** Ensure PTPMC can gain experience of the project implementation and incorporate this in future projects and disseminate the information to build support for replicable projects elsewhere in China.
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - Develop best practice case study template in line with international best practices which captures the key learnings and is detailed enough for an industry training event
 - Visit pilot project sites to capture information to fill in template, including photographing key elements of the project and potentially visiting other national/international sites where similar projects have been carried out
 - Write up case studies
 - Revisit site at a later date to capture implementation plus 6 months experience
 - Develop agenda for case study information dissemination /industry training workshops
 - Organise and hold workshops, preferably in parallel with other key relevant events
- **PTPMC Staff requirements:** RCF Manager, Technical Director, National TVE Marketing Manager and PTPMC Information Officers
- **Deliverables**
 - Best practice case studies – one per project (and posted to PTPMC/CADDET/other relevant websites) (by month 33)
 - 2 Information dissemination /training workshops with follow-on projects identified and concept notes created for (by month 36)
 - Mission reports to support the above deliverables
 - Summary of the workshops
- **Estimated Input:** 5 man months (PTPMC), 8 National flights, 2 international flight, 50 per diems, plus US40,000 for PTPMC to organize 2 workshops / industry training events.
- **Justification:** Required by Project Document, supports PTPMC to develop post-Phase II projects, builds PTPMC ability to ideate and develop new project concepts for its members to bid for

Reports included in the above deliverables for Task 1 should be submitted in Chinese and English.

Task 2. To provide services in support of delivery of the 21-300 Marketing Management Group Contract

Year 1 Activities

2.1 PTPMC will review the relevance of the as designed marketing Group Contract Activities (building materials) in light of the changes to the TVE sector since the project inception and make recommendations for a 3 year roadmap of how Marketing Management Group Contract budget should be spent to stimulate product marketing, training and related services to TVEs

- **Proposed Schedule:** Month 1 to Month 4 after Contract award
- **Objective:** To ensure the PTPMC marketing initiatives are relevant to the TVE sector of today and give PTPMC good experience in developing marketing strategies for tackling the four core sectors of the Project.
- **PTPMC Staff requirements:** National TVE Marketing Manager and PTPMC Information Officer
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - Review output of contract of market research into four industries (budget number 21-300)
 - Review other materials collected by the project.
 - Carry out primary (telephone and face to face interviews) and secondary research (through questionnaires) to ascertain how to improve the impact of the marketing group contract. Contacts will be provided with PTPMC marketing material.
 - Develop revised roadmap of activities for sign off by PMO.
- **Deliverables:**
 - Report detailing revised roadmap for the Marketing Group Contracts with detailed recommendations on how the budget is best spent and the outcomes/deliverables from the expenditure (by end of Month 4)
- **Estimated Input:** 4 man months (PTPMC), 8 national flights, 35 per diems
- **Justification:** The as designed TOR in the Project Document needs updating to reflect current situation and needs, gets TVE Marketing Manager and PTPMC Information Officer up to speed on the latest market situation.

2.2 Develop PTPMC marketing and launch strategy and hold Official PTPMC Launch Ceremony and one follow up regional event

- **Proposed Schedule:** Month 2 to Month 6 after Contract award
- **Objective:** To ensure that PTPMC meets its membership numbers, can attract the attention of the key stakeholders and that the marketing strategy as outlined in the business plan can be put into action
- **PTPMC Staff requirements:** National TVE Marketing Manager and PTPMC Information Officer
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - Create launch publicity material and agenda
 - Organise and hold launch event, inviting key TVEs, potential National and International Members and other relevant stakeholders
 - Organise follow up regional meeting in area of biggest potential
- **Deliverables**
 - Successful launch event and regional workshop and marketing of PTPMC
 - Summary report of workshops including identification of phase II pilot projects
- **Estimated Input:** US50,000
- **Justification:** As per budget line of Project (5.2.3.)

Year 2 Activities

2.3 Arrange for an external review of PTPMC operations and hold annual meeting of PTPMC where this is presented

- **Proposed Schedule:** Month 12 to Month 18 after Contract award
- **Objective:** Ensures external peer review of PTPMC by its members and that reinforcing good practices and suggesting improvements to failings can be identified and dealt with early on.
- **PTPMC Staff requirements:** All PTPMC Staff
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - Develop terms of reference and identify and select a suitably qualified external reviewer for PTPMC
 - Work closely with reviewer to develop a comprehensive report on year 1 performance and future strategy.
 - Arrange annual meeting of PTPMC where review report is presented
- **Deliverables:**
 - Joint Review Report on PTPMC year 1 activities and recommended actions for PTPMC going forward (by month 17)
 - Annual meeting of PTPMC held and External Reviewer Report reviewed by PTPMC membership
 - Report summary on annual meeting (within one month of meeting)
- **Estimated Input:** 3 man months (PTPMC), 10 per diems, plus annual meeting for US20,000
- **Justification:** Required by Project Document, ensures open peer review of PTPMC performance

Year 3 Activities

- *None proposed to be supported*

Reports included in the above deliverables for Task 2 should be submitted in Chinese and English.

Task 3. To provide services in support of delivery of the 21-400 Finance Management Group Contract

Year 1 Activities

3.1 Work with consultant who developed RCF to receive training in how to manage the RCF funds under the management of PTPMC and how to train TVEs to create bankable proposals and apply for financial support from RCF

- **Proposed Schedule:** Month 1 to Month 6 after Contract award
- **Objective:** Ensure the as-designed RCF is implemented smoothly and transition PTPMC into full control of the funds at its disposal.
- **PTPMC Staff requirements:** RCF Services Manager
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - Receive training in how RCF to work
 - Develop training strategy and package for how TVEs will apply to RCF for funds
 - Carry out training in conjunction with sub-Tasks of Activity 1.1
- **Deliverables**
 - Training package in the processes for fund application evaluation, approval, disbursement and monitoring and repayment – both for internal and external (TVE) use.
 - Summary of training received
- **Estimated Input:** 4 months PTPMC, 2 man month (local best practice partner)
- **Justification:** As required by Project Document and proposed RCF format

3.2 PTPMC will be responsible for operation of portion of the RCF under its management and will carry out its required activities for Year 1 ensuring development and closure of 4 bankable project proposals and associated capacity building

- **Proposed Schedule:** Month 1 to Month 12 after Contract award
- **Objective:** Ensure good stream of proposals for RCF to evaluate, at least 4 of which to proceed to implementation
- **PTPMC Staff requirements:** RCF services Manager, National TVE Marketing Manager, Technical Director and Contracts Manager
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - To be inserted by PMO from RCF documents
- **Deliverables:**
 - Financial documentation for the Projects
 - Financial assessment of the projects
 - Financial closure of projects
 - Summary Report on Year 1 performance (by month 12)
- **Estimated Input:** 8 man months PTPMC, 8 national flights, 20 per diems
- **Justification:** Required by Project Document

3.3 Hold financing workshop to present bankable project proposals, build financier interest in supporting and contributing to the RCF, develop the RCF financing and marketing plan and identify further financial barriers to EE projects in the TVE sector

- **Proposed Schedule:** Month 6 to Month 12 after Contract award
- **Objective:** To mobilize additional finance for the RCF to meet the Phase II and post-Phase II projects and ensure that additional complementary financing mechanisms to RCF are explored and incorporated into its future development
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - Develop workshop agenda, invitation list and materials
 - Organise and hold the workshop, including action oriented financing working groups to achieve the objectives
 - Write a workshop summary report
 - Follow-up leads and close additional funding for RCF and project proposals
 - Revise the RCF financing and marketing plan
- **PTPMC Staff requirements:** RCF Services Manager, National TVE Marketing Manager and

- PTPMC Information Officer
- **Deliverables**
 - Commitments to fund RCF beyond project period
 - Marketing materials for RCF
 - Marketing materials e.g. investment memoranda for project proposals
 - Workshop Proceedings and Summary Report
 - Revised RCF financing and marketing plan
- **Estimated Input:** 5 man months (PTPMC), 1 National flights, 10 per diems, plus US30,000 for PTPMC to organize workshop.
- **Justification:** As required by Project Document

Year 2 Activities

3.4 PTPMC will be responsible for operation of portion of the RCF under its management and will carry out its required activities for Year 2 ensuring development and closure of 4 bankable project proposals and associated capacity building

- **Proposed Schedule:** Month 12 to Month 24 after Contract award
- **Objective:** Ensure good stream of proposals for RCF to evaluate, at least 4 of which to proceed to implementation
- **PTPMC Staff requirements:** RCF services Manager, National TVE Marketing Manager, Technical Director and Contracts Manager
- **Sub-Tasks:** To achieve the above objective for this activity, PTPMC will carry out the following sub-tasks:
 - To be inserted by PMO from RCF documents
- **Deliverables:**
 - Financial documentation for the Projects
 - Financial assessment of the projects
 - Financial closure of projects
 - Summary Report on Year 2 performance (by month 24)
- **Estimated Input:** 8 man months PTPMC, 8 national flights, 20 per diems
- **Justification:** Required by Project Document

Year 3 Activities

- *None proposed to be supported*

Reports included in the above deliverables for Task 3 should be submitted in Chinese and English.

Anticipated Schedule and Reporting Requirements

Within one month of contract signing PTPMC will provide an Inception Report which includes a detailed 6 month and Year 1 workplan as well as an overall 3 year workplan for the Activities of the Project and agree

with the PMO the key performance indicators for the Project and how they will be used to establish actual performance. Every 6 months these plans will be updated.

It is anticipated that there will also be regular 3 monthly progress reports to be submitted to the contracting authority, together with monthly updates.

Estimated required inputs

It is estimated that the accomplishment of the above-listed tasks will require the following effort:

	PTPMC Effort	Other inputs
Task 1	33 man months	4 International flights, 71 national flights, 295 per diems, over 9 meetings, website for a total of US240,000
Task 2	7 man months	
Task 3	27 man months	
Total	At least 67 man months	

Coordination requirements and responsibilities of Parties

PTPMC will need to work closely with the key stakeholders in the Project namely, the PMO, UNDP, UNIDO, MoA and its relevant departments, Agricultural Bank of China. Overall coordination of the Project activities will remain with the Project Management Office.

Staffing Requirements

PTPMC should propose key staff that will support it to carry out the activities listed in this Terms of Reference and obtain "Statements of Availability" from them.

A Terms of Reference for each of the desired staff positions in PTPMC is included in Attachment 1, together with a proforma statement of availability which is included as Attachment 2. Should a role take longer than anticipated to fill then a temporary consultant can be used to ensure Project delivery.

Estimated Support to PTPMC for the activities of this TOR from Project Budget Line 21

The estimated foundation support to PTPMC to carry out the activities above is as follows:

	Year 1 (US\$)	Year 2 (US\$)	Year 2 (US\$)
Task 1	108,040	94,910	66,250
Task 2	66,935	28,010	0
Task 3	79,630	23,620	0
Total cost to Project	254,605	146,540	66,250
Portion of this to support PTPMC labour costs (i.e. excluding travel, workshops, per diems)	105,800	62,600	19,000
Nature of Award	Grant contract to PTPMC	Grant contract to PTPMC, based on previous years performance	Open bidding for all contracts, including PTPMC grant

PTPMC should meet all national and international traveling costs and per diems out of this amount. Furthermore this budget should include costs for inception meetings, internal working group meetings and seminars that PTPMC requires to carry out as part of its activities.

It is proposed that this support is invoiced on a monthly basis against clear reports and deliverables, with the first two months of each year paid upfront. PTPMC will be responsible for any tax or other liability in support of delivering this contract.

Attachment 1 – Role description and qualifications of staff in addition to the PTPMC Secretariat

In addition to the PTPMC Secretariat staff supported by the project, an additional three key staff are required under this TOR:

- RCF Services Manager – financing for this should be transferred from the RCF funding [comment received from the PMO suggested all 3 positions should transfer – is this the case]
- National/TVE Marketing Manager
- Technical Director (combining Project management, ESCO services and CDM)

The International Membership Director, that is envisaged in the PTPMC business plan as a separate role, will be covered by an expanded role for the current PTPMC Information Management Officer.

The requirements and role are now explained in more detail

RCF Services Manager

Justification for role: A key gap in the market currently is TVE's ability to create bankable project proposals and for banks to find and screen potential projects. PTPMC aims to provide services to bridge this barrier to the financing of EE projects in the four key TVE sectors and therefore an RCF manager is required to inject the necessary financing experience in to PTPMC. Furthermore PTPMC is now playing a more significant role in the management of the RCF funds.

Reporting: reports directly to PTPMC Director

Description of role: The RCF services manager's role is to manage the interaction of PTPMC and the RCF fund and other lenders. The RCF manager is to build relationships with the key financial services members within PTPMC and assist the National/TVE marketing manager and international partnership director in building this membership. The RCF services manager might also assist the RCF to attract more funds depending on the RCF business plan. The RCF manager is in charge of delivering the following key services:

- RCF loan application advisor
- Loan Application Screening / Pre-loan - due diligence
- Post Loan Approval – Due Diligence

Initially the RCF manager will both need to carry out business development but also implement the projects. The RCF manager will be responsible for overseeing the Finance Management Service Group contracts. The

RCF manager will recruit additional staff, with approval from the PTPMC Director, as the business volume grows.

Requirements for role: PTPMC should select an RCF Manager with the following characteristics:

- 10+ years in the banking sector with experience in project screening, due diligence, lending, credit evaluation, and loan monitoring
- Ideally some experience of revolving capital funds and other innovative funding mechanisms
- Ideally some experience of technical projects, like Energy Efficiency
- Ideally experience with developing relationships with other banks, both national and international
- Fluent in Mandarin, Reasonable level of English
- Typically early 30's with ability to both develop business and implement projects
- Likely to be able to build up and lead the RCF team (the model shows that this team is likely to reach 3 within five years)

Timeline for hire: Recruitment process should start immediately after PTPMC is registered

Proposed Initial Salary: US2000 per month

National/TVE Marketing Manager

Justification for role: A key need for PTPMC to grow its business is to develop a network of national PTPMC members and manage an outreach and marketing campaign to TVE's in the four key sectors, the MoA, and as time progresses other SMEs, SOEs and TVEs in different sectors. This requires a full time National/TVE Marketing Manager to work together with the IMD in driving membership numbers and service revenue.

Reporting: reports directly to PTPMC Director

Description of role: The National/TVE Marketing Manager's role is to manage and build the number of national members of PTPMC as well as manage the outreach program to TVEs, MoA etc. Working together with the IMD, the National/TVE Marketing Manager identifies potential members, negotiates membership terms with them and manages the national elements of the provision of the following services to them:

- Website Tender Notification
- Email Tender Alert
- Tenders Bulletin Fax Service
- Project Identification Service (active brokerage)
- Inward Investment Advice (identification of suitable partners with the IMD)
- 'Shop Window' (via website & case studies)
- Inward Trade Missions (identification of national attendees/key people for trade missions to meet)
- New Product Development / Identification (based on needs of TVEs)
- Outward market advice (based on needs of TVEs)

Initially the National/TVE Marketing Manager will need to further elaborate the marketing plan laid out in section 7 of the business plan, but equally create the materials required and organise the outreach workshops/events. The National/TVE marketing Manager should be able to carry out business development but also manage the resulting work. The National/TVE Marketing Manager will be responsible for the business development assistance and marketing programs during the UNIDO phase of the project and subsequently may recruit a TVE Business Development Advisor. The National/TVE Marketing Manager will recruit additional staff, with approval from PTPMC Director, as the business grows.

Requirements for role: The National/TVE Marketing Manager should have the following characteristics:

- 5+ years in similar membership services/marketing role
- Experienced in business development and account management with national companies, ideally TVEs
- Ideally some experience of technical projects, like Energy Efficiency or business development assistance
- Fluent in Mandarin, English a bonus
- Typically early 30's with ability to both develop business and implement projects

-
- Likely to be able to build up and lead the national membership services team

Timeline for hire: Recruitment process should start immediately after PTPMC is registered.

Proposed Initial Salary: US1000 per month

Technical Director (combining Project management, ESCO services and CDM)

Justification for role: A key need for PTPMC to grow its business is to assist TVEs in developing energy efficiency projects. There are two ways to do this: through attracting the interest of energy efficiency service companies which are just developing in China (under a World Bank project) and in certain cases to advise the TVEs directly on how best to carry out the feasibility studies required. To do this requires a full time Technical Director to work together with the TVEs in developing good EE projects. In time this role may be split depending on the relative workload of the two areas – negotiating with ESCO's or developing projects directly.

Reporting: reports directly to PTPMC Director

Description of role: The Technical Director's role is to ensure TVE's develop good EE projects and also to manage the relationships and project related contracts with the TVEs and ESCO service providers. The Technical Director manages the provision of the following services to TVEs/Members:

- Project Formulation / Identification
- Bid Evaluation / TVE Due diligence, working with the RCF Manager
- How to capture TVE requirements and match them with qualified product or service providers
- Post Implementation Monitoring / Due Diligence
- Energy Auditing
- Providing advice on CDM related aspects

Initially the Technical Director will need to support the implementation of the 8 pilot projects and the engineering service group contracts and build relationships with the TVEs who have the 100 or so pipeline projects. The Technical Director should also build strong links with existing ESCOs to get them to become PTPMC members. The Technical Director will recruit additional staff, with approval from PTPMC Director, as the business grows.

Requirements for role: PTPMC should select a Technical Director with the following characteristics:

- 10+ years in similar project development/ESCO role
- Experienced in all aspects of energy efficiency projects, ideally with experience in the four key sectors
- Fluent in Mandarin, English a bonus
- Typically early 30's with ability to both develop business and implement projects
- Likely to be able to build up and lead the project development team

- Experience or knowledge of CDM a plus

Timeline for hire: Recruitment process should start immediately after PTPMC is registered

Proposed Initial Salary: US2000 per month

Attachment 2. Pro-forma Statement of Availability

Project EG/CPR/99/G31

"Energy Conservation and GHG Emissions Reduction in Chinese TVEs – Phase II"

Title of Terms of Reference	
Current position of the person and employer's name:	
Position of the person in the proposed project:	

Statement of Availability

In the event of award of contract to PTPMC which has presented me as a candidate for the above project whose title is mentioned above, I, *<insert person's name>*, confirm my availability to provide services for the above-mentioned project according to the planned programme of activities and to be able and willing to work for all the period of implementation of the project as indicated in the attached Terms of Reference.

.....
Signature

.....
Date and place

ATTACHMENT 2: ESTIMATED COST BREAKDOWN

Cost assumptions (all in USD)

National rate per day	100
Flights (National)	400
Flights (International)	2500
Per diems (in China)	141
Assumed labour margin on conferences	20%