DJIBOUTI ENERGY INITIATIVES PROJECT

Monthly Report

May - June 1986

1. Steve McGoff left Djibouti on June 3. Steve will spend a couple of weeks in Italy, then a month or two in Tunisia before returning to the US in August. Organizing Steve's departure coincided with the end of Ramadan, a time when the technicians are not quite at their best, so after Stancescu left on May 21 the work has been a bit slow.

2. The major emphasis has been on the energy planning work. This initiative started up in earnest in May when Professor Ioan Stancescu made his first visit to Djibouti. Stancescu's main responsibilities were to set out a workplan for the next 10 months leading up to the March 1987 conference, and to define the terms of reference for the other experts who will participate in the energy planning work.

These tasks were accomplished during the 2 week period of Stancescu's mission. Annexe 1 of this report shows the workplan and gives the Terms of Reference for the 3 principal experts. The energy experts are as follows:

Name	Position	Affiliation
Ioan Stancescu	Senior energy analyst (team leader)	UN consultant based in Germany
Arturo Villavicencio	Energy Analyst	National Institute of Energy (INE), Quito, Ecuador.
Renato Pugno	Economist	ElectroConsult, Milan, Italy.

In addition, the transportation expert will be either Jose Gomez Flores, who is with the Government of Mexico, or Jean-Pierre Diehl--a UN consultant from France. Of the two we lean towards Gomez, but then Diehl may be provided gratis by the Government of France. A decision will be taken before the end of June.

We are still looking for an expert on electricity tariffs to examine the pricing policies of EdD, as well as an expert on rural energy use to advise us on that aspect of energy planning. However, these last two persons are not considered essential to the energy planning task, and if they cannot be located and confirmed within the next few weeks we will probably do the work ourselves.

Below is the proposed schedule for the missions:

	1986								1987			
Activity	may	june	july	aug	sept	oct	nov	dec	jan	feb	mar	apr
Team leader (Stancescu)	XX	XX	X			X	XX				X	X
Energy analyst (Villavicencio)					XXXX	XXXX						
Economist (Pugno)					XXXX	XXXX						
Transportation (Gomez or Diehl)				XX	XX							
Analyst 2 (tariffs)					XXXX							
Analyst 3 (rural energy)					XXXX							

As you can see, the idea is that the analytical work and the drafts of the project documents should be completed by the middle of November.

3. Based on our latest figures I estimate that the cost of the energy planning work will be in the region of $185,000. If all goes according to plan (i.e. the UNDP comes up with their share of the money) this amount will be about evenly split between ISERST and the UNDP. Annexe 2 shows the breakdown of the $185,000. The UNDP in New York has apparently approved the original proposal which has them contributing $50,000. We then arranged for the Ministry of Foreign Affaires to petition the UNDP for the remaining $40,000 (at the suggestion of the UNDP representative here), and we are hopeful that this arrangement will work out.

4. The ISERST financial arrangement with AID has been set up. As I mentioned in the last report, ISERST received a first allocation of $110,000 in mid-May. The accounting and reporting procedures have been laid out and are ready to go. AID has just issued PIL #18 which defines the way that ISERST should report its expenditures, and sets out the format to be used for requesting future allocations from the $240,000 set aside by AID.

5. The energy conservation teams continue their technical assistance work. The booth at EdD is manned three mornings a week; the rest of the time the technicians are in the quartiers doing the manual work. So far, 26 fridges have been insulated, with another 28 on the waiting list; 54 buildings have been audited, with another seven waiting, and eight incandescent lighting fixtures have been replaced by fluorescent ones.

The team consists of six technicians: three from other Government services, one being trained for the Service de l'Energie, and two from ISERST. The ISERST technicians are Ibrahim and Abdulkarim. Ibrahim's position, however, is temporary. After reviewing the report received from GRETA which was extrememly critical of Ibrahim, Ibrahim is no longer being paid. He continues to work for the project, and we have not prevented this, because he believes that his father, who is influential, can persuade Anis to take him (Ibrahim) on as a technician with ISERST. Anis is manoeuvering to head off Ibrahim's father, and Ibrahim will probably be discretely shifted to another Government agency.

6. The problem with the Apple IIE has not yet been resolved. Comprite in Nairobi finally responded to our telexes, but they will only take a look at the Apple if it is actually delivered to their door--they claim that Kenyan customs procedures make delivery by post impractical. I am considering taking down the computer to Nairobi myself, and combining the trip with a vacation, perhaps in mid-July. I can then ask Jim Fanning to arrange for the Apple to be returned to Djibouti. In the meantime, we are using Jean-Yves' IIE in the office since he is not using it at the present time.

In fact, we have been quite preoccupied with computers lately. Stancescu's plan is to use a computer program called MEDEE-S to model energy demand in Djibouti. The model, which was developed by the Institut Economique et Juridique de l'Energie (IEJE) in Grenoble, has been specifically developed for developing countries. It has been used in only a few countries so far, but apparently with considerable success. Villavicencio is an expert on the program, and will run the program in Djibouti; IEJE will provide the program free of charge to ISERST.

Our problem is to find a computer which can run the program. We think that an IBM or an IBM-compatible machine should be able to do it, but at this point we are not sure. One option is Wang. A couple of youthful and enterprising Frenchmen have started up a franchise in Djibouti and pretty much cornered the market. It turns out that Wang makes a decent 256 K IBM-compatible computer which sells here for about $6,000 (including a printer). That's not too bad by Djiboutian standards. If it works out that we can run MEDEE-S on a Wang, we may consider getting one.

7. Speaking of Fanning, he was here for a few days towards the end of May. We reviewed the Hol-Hol clinic proposal, and decided to redesign the system. I think that the original idea was technically sound; what I did not anticipate was that a battery charger would be so expensive. In any event, it's clear that a more conventional PV system will be significantly cheaper, and this is the system that we now intend to install.

8. The Commission on Habitat (alias our collaboration with the Urban Development Project) continues to meet on a regular basis. We have issued the Appel d'Offres for the house to be built for the Chef du Quartier 3. So far, only two building companies have picked up the dossiers, but we are hopeful that we can select a builder and start construction on schedule.

The plans for the Balbala house and for the Ambouli dispensary are also progressing.

Djibouti
15 June 1986.

Annexe 1.

C I D E

21 Mai 1986

CONFERENCE INTERNATIONALE DES DONATEURS RELATIVE AUX PROJETS DE DEVELOPPEMENT ENERGETIQUE DE LA REPUBLIQUE DE DJIBOUTI

PLANNING -- PRELIMINAIRE	1986: mai	juin	juil	aout	sept	oct	nov	dec	1987: janv	fevr	mars	avril	RESPONSABLES (experts étrangers)
0 Seminaire sur l'évaluation énergetique nationale (fait en fevrier)													
1 PLAN ENERGETIQUE NATIONAL (horizon 2000)	XXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	X					ANIS
2 PROJETS SPECIFIQUES		XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	X					OBLIK
3 CONFERENCE DES DONATEURS											X	X	OBLIK
1 PLAN NATIONAL SUR L'ENERGIE													ANIS
1.1 Données de base (situation generale - future)													
- population	XX	XX											OBLIK
- industrie	XX	XX											OBLIK
- transports		XX	XXXX	XXXX									YACOB
- transit énergie et reexpedition	XX	XX											OBLIK
- zones rurales		XXXX											ABDOURAHMAN
- statistiques generales		XX											YACOB
1.2 Besoins en énergie utile, demande d'énergie finale, et effets possible de la gestion de la demande, dans:		XXXX	XXXX	XXXX	XXXX								ANIS
- secteur residentiel et tertiare		XXXX	XXXX	XXXX	XXXX								)
- transport		XXXX	XXXX	XXXX	XXXX								) (Garnier, Analyste en
- industrie		XXXX	XXXX	XXXX	XXXX								) énergie, Analyste 1,) Analyste 2))
- zones rurales		XXXX	XXXX	XXXX	XXXX								ABDOURAHMAN (Bush, Analyste 3)
en tant que chaleur, froid, énergie mecanique, et électricité													(électricité: DJAMA ALI)
1.3 Offre d'énergie primaire													ANIS
- combustibles													
petrole	XX	XX											OBLIK
biomasse (bois et charbon de bois)	XX	XXXX	XXXX	XXXX	XX								ABDOURAHMAN (Bush, Analyste 3)
- énergie geothermique			XXXX	XXXX	XX								ANIS
- énergie solaire et éolienne	XXXX	XXXX											ABDOURAHMAN (Bush)

5

	mai	juin	juil	aout	sept	oct	nov	dec	jan	fevr	mars	avril	
Electricité		XXXX	XXXX		XXXX								DJAMA ALI, ABDOURAHMAN, (Garnier, Analyste 1, Analyste 2)
1.5 Optimisation techniques du systeme énergetique		XXXX	XXXX	XXXX	XX								ANIS (Bush, Garnier, Analyste en énergie, Economiste)
- politique inchangée													
- differents niveaux d'économie d'énergie													
- sources d'énergie combinées													
1.6 Variantes technico-economiques		XX	XXXX	XXXX	XXXX	XXXX	XXXX						ANIS (Bush, Garnier, Analyste en énergie, Economiste)
- differents scenarios													
- analyse de sensibilité													
1.7 Aspects generaux		XX	XXXX	XXXX	XXXX	XXXX	XXXX	X					ANIS, OBLIK, ABDOURAHMAN, YACOB (Bush, Garnier, Economiste, Analyste en énergie)
- cadre institutional													
- plan de cadres et formation													
- recommandations économiques sur l'énergie													
1.8 Text final							XX	X					ANIS, ABDOURAHMAN, YACOB (Garnier, Bush, Economiste, Analyste en énergie)
PROJETS SPECIFIQUES													OBLIK (Economiste)
2.1 Secteur residentiel et tertiare		XXXX	XXXX	XXXX	XXXX	XXXX							OBLIK (Garnier)
2.2 Secteur transports		XXXX	XXXX	XXXX									OBLIK, YACOB (Garnier, Analyste 1)
2.3 Secteur industrie				XXXX	XXXX								OBLIK, YACOB (Garnier, Analyste 2)
2.4 Zones rurales	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX							ABDOURAHMAN (Bush, Analyste 3)
2.5 Projets électriques	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX							DJAMA ALI, ABDOURAHMAN, (Garnier, Bush, Analyste 2)
TEXTE DE PRESENTATION						XX	XX						OBLIK (Economiste, Garnier, Bush)
TRADUCTION							XX	XXXX					Bush, Garnier, PNUD
3 CONFERENCE DES DONATEURS											X		OBLIK, ABDOURAHMAN, YACOB (Bush, Garnier)

Mr STANCESCU (team leader): coordination, responsibilité generale, ainsi que assistance individuelle selon les besoins

Analyste 1 -- Transport

Analyste 2 -- Tariffication

Analyste 3 -- Energie rurale

20 May 1986

REVISED TERMS OF REFERENCE

The terms of reference for this position have been revised because the structure and format of the project workplan and schedule has changed.

Senior Energy Policy Analyst (Team Leader)

Purpose: The purpose of this consultancy is to provide a leader for a small international team of energy experts who will assist the Government of Djibouti in formulating a comprehensive National Energy Plan. Under the direction of this leader, the team will also assist in the conception, design, and implementation of priority energy supply and energy demand management development projects.

Objective: The objective is to assist the Government of Djibouti to reduce Djibouti's dependence on imported oil, to improve the availability of economic supplies of energy to the urban and rural areas of the country, and to contribute to the overall economic development of Djibouti.

Specific Tasks of the Senior Energy Policy Analyst

In collaboration with ISERST, the Service de l'Energie, and the National Energy Commission, the consultant will:

- Coordinate the different activities involved in the project, as well as participate directly in certain activities as required.
- Work closely with the Energy Analyst, the Consultant Economist, the VITA technical assistance team, and Djiboutian counterpart personnel, and define and supervise their different tasks.
- Review the National Energy Assessment, other available energy studies, and the results of the February seminar on energy, and review the validity of the recommendations made in these studies.
- Recommend any further studies and analyses of the energy demand in specific sectors or sub-sectors of the Djibouti economy where data appear to be lacking.

- Define in detail the structure of the energy planning activities, set out a preliminary workplan, and recommend any possible additional short-term consultant missions that may be required.

- Assist with the selection of foreign energy experts to assist with the analysis and planning work.

- Supervise and participate in the preparation of the final draft of the National Energy Plan, and in the description of the specific energy projects.

- Review the role and the interrelationship of the principal Government energy-related agencies and services, assess their technical capability and managerial potential, and make recommendations for the institutional development and strengthening of these organizations.

- Participate in the Conference of Donors and provide expert advice to the donor agencies, assist with the presentation of the projects during the conference, and participate in the evaluation of the conference results.

Specific Tasks of Energy Analyst

In collaboration with ISERST, the Service de l'Energie, and the National Energy Commission, and under the general supervision of the Team Leader, the Energy Analyst will:

- Conduct a detailed study of energy demand in Djibouti over the short and medium term, and study in more general terms the demand for energy until the year 2000. These studies will be based on the existing documentation and the available data. The preferred method of analysis to be applied in the study of energy demand is computer simulation. For this analysis the program MEDEE S will be made available.

- Evaluate, using the demand projections, the impact of different levels of demand management measures.

- Study the energy supply options based on existing data, and in collaboration with the Energy Economist, determine a set of feasible techno-economic options; recommend an optimal set of development alternatives, taking into account the sensitivity of the alternatives to variations in key economic factors.

- Prepare a draft of the National Energy Plan based on the results of the above studies and simulations.

Specific Tasks of the Economist

In collaboration with ISERST, the Service de l'Energie, and the National Energy Commission, and under the general supervision of the Team Leader, the Economist will:

- Participate in the formulation and selection of possible energy development options, assist with their economic analysis based on realistic world and local economic indicators, and participate in the writing of the draft of the National Energy Plan.

- Assist with the selection and general design of the energy development projects proposed by the Government.

- Prepare the basic data needed for the economic and financial analyses of the proposed energy development projects.

- Calculate the detailed design data for the proposed projects, including all pertinent economic, financial, and social analyses. This work will involve the calculation of internal rates of return, cost-benefit ratios, and/or other indices of project viability generally applied by the international donor agencies.

- Assist with the preparation of the detailed description of the energy development projects and with the presentation of the proposed projects to the National Energy Commission.

- Assist with the analysis, particularly the economic and financial analysis, of the present institutional structure of the principal energy-related agencies and services of the Government.

- Participate in the analysis of current energy pricing policy and recommend measures to promote a more efficient price structure.

All foreign experts will work closely with Djiboutian counterpart analysts, and by on-the-job training will strengthen the technical and economic expertise of the Djiboutian staff.

The time schedule for the consulting experts is defined in the project document.

The Senior Energy Policy Analyst (team leader) will take ultimate responsibility for the final draft of the National Energy Plan, and for the final set of priority energy projects. The counterpart of the Senior Energy Policy Analyst is the Director of ISERST.

The Senior Energy Policy Analyst should be present in Djibouti on a regular but not necessarily continuous basis between May 1986, and April 1987. The timing of the consulting missions is indicated in the attached planning chart. The total time of the 4 missions is 10 weeks, but this may be extended if necessary.

Annexe 2.

C I D E PROJECT 9 June 1986

COST OF INTERNATIONAL CONSULTANTS

Ioan STANCESCU (team leader)	per diem: $144.90/day		fee: $500/day	
June 15 - July 5	per diem	23 days		$ 3,333
	fee	18 days		9,000
	divers			50
	airfare (paid)			-
				12,383
Oct 25 - Nov 14	per diem	23 days		$ 3,333
	fee	18 days		9,000
	divers			50
	airfare			1,480
				13,863
Mar 25 - Apr 7	per diem	16 days		$ 2,318
	fee	12 days		6,000
(1987 conference)	divers			50
	airfare			1,480
				9,848
Arturo VILLAVICENCIO (energy analyst)	per diem: $144.90/day		fee: $300/day	
Sept 1 - Oct 30	per diem	63 days		$ 9,130
	fee	53 days		15,900
	divers			50
	airfare			3,000
				28,080
Renato PUGNO (economist)	per diem: $144.90/day		fee: $250/day	
Sept 1 - Oct 30	per diem	63 days		$ 9,130
	fee	53 days		13,250
	divers			50
	airfare			1,500
				23,930

Jose GOMEZ FLORES (transportation)	per diem: $144.90/day		fee: $300/day
Aug 15 - Sept 14	per diem	33 days	$ 4,782
	fee	27 days	8,100
	divers		50
(alternate: DIEHL ?)	airfare		3,000
			15,932

Expert on tarification (1 month) $15,000

Expert on rural energy (1 month) $15,000

SUMMARY OF COSTS

Ioan STANCESCU		
Mission	# 1 (accomplished)	
	# 2	12,383
	# 3	13,863
	# 4	9,848
Arturo VILLAVICENCIO		28,080
Renato PUGNO		23,930
Jose GOMEZ FLORES		15,932
Expert on tariffs		15,000
Expert on rural energy		15,000
		$ 134,036

DISPOSITION OF FINANCING

		ISERST,$	UNDP,$
STANCESCU	# 2	12,303	
	# 3	13,863	
	# 4 (conference)		9,848
VILLAVICENCIO		28,080	
PUGNO			23,930
FLORES	(or DIEHL ?)	15,932	
Expert on tariffs		15,000	
Expert on rural energy			15,000
		$ 85,258	$ 48,778

Other Expenses

Secretary		10,000
Interpreters / translation		19,000
Office equipment		8,000
Miscellaneous		2,000
TOTAL EXPENDITURES	$ 85,258	$ 87,778

Note: ISERST has already spent $12,000 on Stancescu's first mission.

ref: CIDE/Mission costs