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Folder ID: 1136960

Series: Operational support and ESMAP project management

Dates: 07/04/1984 - 05/01/1987

Fonds: Records of the Energy Development Sector

ISAD Reference Code: WB IBRD/IDA ENGY-03

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Energy Sector Management Assistance Program [ESMAP] - Project Management Records - Miscellaneous Correspondence

OFFICE MEMORANDUM

DATE: May 1, 1987

TO: EGYES Staff

FROM: Bernard Montfort, Chief EGYE

SUBJECT: Secretarial Assignments

Attached is a revised list of secretarial assignments which goes into effect today. Angelica has already notified some of you of the changes. Please feel free to comment.

Attachment

/aaf

ENERGY EFFICIENCY AND STRATEGY DIVISION

Secretarial Assignments

Angelica Fernandes - Office Administrator

Helene Ah-Kine - Montfort/Megateli

Holly Mensing - Bates/Broadfield

Betsy Edison - Thadani/Gaskin/del Buono

Dawn Pigman - Gray/Schmedtje/Boroumand

Tara Allen - Hay/Mitchell/Rodriguez/Pacheco

Helene Talon - Sanchez-Sierra/Perine

Morissa Young* - Borthwick/Aleem/Rivera

Yashmin D'Souza* - Richter/Nickson

Vernetta Hitch* - Assaad/Leiva

Word Processor

Bashrat Ahmad* - Word Processor

April 29, 1987

^{*} Temporaries

Esmap Gen





Joint UNDP/World Bank Energy Sector Management Assistance Program

<u>ESMAP</u>

Background information compiled for a mission to China, April 1987

I. ORIGINS AND BACKGROUND

Introduction

1. The Joint UNDP/World Bank Energy Programmes have now been under way for just over five years. In this time the Programmes have managed to respond quickly and selectively to many of the most pressing energy problems facing developing countries, and their output has proven extremely valuable to developing countries and donors alike.

The Assessment Programme

- The achievements of the Assessment Programme should be 2. considered in light of the objectives that underlay this Programme at its inception. The Assessment Programme was introduced in 1980 following the second oil shock to assist many of the developing countries that were facing the compound burden of higher energy costs and increased debt service requirements. Developing countries needed measures to economize on energy use, expand and improve the efficiency in domestic energy supplies, and mobilize financial resources for an increased level of energy investments. The Energy Assessments were designed to offer energy policy makers a sharp focus on the key policy and investment decisions required for the sector, and a systematic and well argued ranking of priorities for action. The intention was not to duplicate resource inventory work already being carried out by other agencies or to offer master plan solutions. Instead, the Assessments were designed to be policy-oriented studies, with an emphasis on energy supply and demand options, pricing, investment priorities and institutional efficiency, out of which would flow a recommended list of specific actions.
- 3. Since the Assessment Programme was initiated, the basic approach has remained as originally conceived. Nevertheless, as the Programme has evolved more attention has been given to rural issues and the development and utilization of new and renewable energy sources. In the area of energy conservation, it was found that work was needed on strengthening of energy sector institutions, formulating national policies and programs, reducing electric power losses, and generating energy savings in the transport and industrial sectors. Another area of emphasis has been the assessment of manpower and training requirements and the subsequent design of a strategy for ensuring that adequate technical and managerial skills are made available to the energy sector. There has been an increased awareness of the need for an analysis of public and private investment programs in the energy sector within the macroeconomic framework of the country.
- 4. The Assessment Programme is now well advanced in its execution. Field work has been completed in 67 countries and final reports have been issued for 61 countries. The Programme has covered a wide range of countries with differing physical and economic characteristics. Nevertheless, there has been a major emphasis placed on

work in Sub-Saharan Africa, with just over half of the countries covered located in this region.

Energy Sector Management Assistance Programme (ESMAP)

- The initial concept of ESMAP was to assist governments in implementing the key recommendations of the Assessment reports, but it has since been expanded to also provide assistance in countries that were not included in the Assessment Programme. ESMAP was designed to help developing countries define and substantiate proposals for priority investments in the energy sector. Its reports supply these governments as well as donors and potential investors with the information needed to evaluate the costs and benefits and to speed up the preparation and implementation of energy projects. In addition to this project pre-investment work, ESMAP also now provides management, institutional, and policy advice to developing country decision makers.
- 6. The Programme has a number of inherent advantages which facilitate its activities. These include:
 - (a) sufficient flexibility of approach to respond to a wide range of needs in the energy sector;
 - (b) an organizational design which permits staff to respond quickly to these needs and to deliver high-quality output;
 - (c) recourse to a sufficiently large group of experts with a sector overview of energy;
 - (d) widespread distribution of ESMAP reports within the international donor community;
 - (e) recourse to grant resources;
 - (f) an efficient system for identifying consultants and managing their work; and
 - (g) integration with the Bank which allows ESMAP to draw upon the macroeconomic and sector experience of the institution's operating regions and benefit from the Bank's project appraisal experience and quality control processes.
- 7. Since the inception of ESMAP, the demand for assistance has far outstripped the Programme's available staff and financial resources. Because of the volume of requests received, criteria had to be developed to ensure that only high priority activities were selected. The most important criteria for selecting activities included the benefit/cost ratio of the project, the government's commitment to execute the work, and the prospective availability of financing for subsequent implementation.

- 8. The basic philosophy and methodology of ESMAP have changed little since the inception of the Programme, but there has been a shift in emphasis to address the changing requirements of developing countries. Reflecting the critical need to accelerate the preparation of energy sector investments, pre-investment work now comprises about 60% of the ongoing activities, or approximately twice the level of the first two years of operations.
- 9. ESMAP reports are distributed to the governments concerned and the Executive Directors of the World Bank. Additional copies are made available to members of the UNDP Governing Council and bilateral and multilateral agencies dealing with energy.

II. PRIORITIES

- 10. The demand for ESMAP services has continued to grow in developing countries despite the fall in oil prices, suggesting that ESMAP serves a valuable purpose in identifying gaps in already existing pre-investment and technical assistance programmes in the energy sector. Perhaps, ESMAP's greatest value to recipients and donors is its ability to respond quickly and flexibly to requests for assistance in a sector that has become subject to increasing uncertainty and change.
- 11. Throughout 1986, ESMAP work was influenced by several key developments, including the ongoing external debt situation in the developing countries, a great deal of which is energy related, and the perceived need to restructure energy investments and institutions to promote higher end use efficiencies. At the same time, the decline in oil prices has greatly complicated the task of energy planning while it has increased the overall consumption of energy worldwide, particularly in the developing countries. Finally, the fuelwood crisis has reached alarming proportions in certain regions such as Sub-Saharan Africa and in many Asian countries.
- 12. To accommodate these changes, the focus of ESMAP work has been shifted to the following priority areas:
 - (a) Household Energy. This category includes both strategy and project pre-investment work. Strategy work mainly takes the form of household energy strategy studies which involve an integrated analysis of the energy needs of urban and rural households. This includes an examination of the pattern of energy use in households, projected consumption trends, prospects for increasing supplies of traditional fuels, measures to improve use efficiency, the economic costs of different fuels and interfuel substitution policies. ESMAP is already implementing strategy studies in the Yemen Arab Republic, Niger and Morocco, and similar work is envisaged for Senegal, Burkina Faso, Indonesia, and a number of other countries. Pre-investment work in the household energy area has been concentrated on identifying and assessing the

technical and economic feasibility of projects for planting fuelwood, introducing improved cookstoves and charcoal kilns, and improving the efficiency of biomass use in rural industries.

- (b) Energy Sector Strategy and Efficiency. This category of work addresses the basic institutional, managerial, organizational, financial and policy issues affecting the efficiency and growth prospects of the energy sector. It includes strategy studies which address: the scope for increasing the role of the private petroleum, power and coal subsectors; sector in the strengthening coordination between energy institutions in order to promote efficient management of the sector; increased decentralization in decision-making; design and implementation of short-term responses to falling energy prices; and the fiscal, financial and macroeconomic aspects of energy pricing. Pre-investment work in this area has been focused on power system efficiency studies that evaluate the potential for reducing power system losses in order to avoid or postpone the need for new investments.
- (c) "Downstream" Project Implementation. ESMAP works closely with recipient countries to identify and mobilize funding for investment projects and/or other activities which have been supported by ESMAP. Where requested by both the recipient and the donor, ESMAP staff may play a role in monitoring the investment projects arising from its pre-investment work. Greater ESMAP involvement in such downstream activities is most likely to take place where recipient countries lack the requisite skills to supervise projects on their own.
- 13. ESMAP's output has continued to grow both in terms of the number of activities carried out as well as the number of countries in which it is active. ESMAP has already completed 44 projects in 27 countries and now has 47 projects underway in 30 countries (see Annex I).

III. ADMINISTRATION AND STAFFING

- 14. As noted above, ESMAP's priorities now focus heavily on household energy and energy efficiency issues. As a result, the structure of the program has been organized along these two functional lines. Two Divisions have been set up in the World Bank's Energy Department, as described below:
- The Household Energy Division is responsible for all of ESMAP's work in the household, rural and renewable energy areas. More specifically, the Division's work encompasses the following topics:
 - household energy strategy
 - traditional fuel supply (fuelwood planting, biomass residues)
 - traditional fuel utilization (improved stoves, charcoal kilns

- and biomass utilization in industry)
- substitution (household use of modern fuels)
- renewables (solar, wind, etc.)
- 16. The Energy Efficiency and Strategy Division is responsible for developing improved methodologies for analyzing the efficiency of energy use, carrying out energy strategy work outside of the household energy subsector and overall energy sector work. In particular, the Division's work program encompasses:
 - power system efficiency
 - energy efficiency in industry and transport
 - energy sector restructuring and increasing the efficiency of organizations and institutions dealing with the energy sector including utilities
 - improved planning methodologies
- 17. The Chief of each of these Divisions reports to the Director of the Energy Department who has overall responsibility for the implementation of the programme. Notwithstanding the reorganization of the day-to-day management of the Programme along functional lines, ESMAP continues to group under one roof a unique staff of qualified and experienced energy professionals.
- This team includes a mix of technical, economic, financial and managerial expertise drawn from within the Bank as well as from the public and private sectors. It represents in effect a policy advice and project preparation resource for the international community as a Sixty percent of the senior staff are on two-year fixed-term contracts; the salaries and benefits of this staff are financed by the UNDP and by the World Bank. Apart from senior staff, ESMAP makes heavy use of long-term consultants who are also based in Washington but who make frequent trips to the recipient countries to carry out individual ESMAP activities and, increasingly, to supervise the work of developing country nationals who are themselves carrying out the activities. addition, through the Assessment Programme and ESMAP process, a number of qualified specialists in both donor and developing countries have been identified and provide valuable expertise for short-term consulting assignments with the programmes. These consultants are normally recruited on an individual basis utilizing the good offices of donor agencies and other groups and organizations.
- UNDP Resident Representatives are also playing an increasingly important role in the planning and implementation of ESMAP activities by integrating them, wherever resources permit, into the technical framework offered cooperation by the UNDP Country Programmes. Furthermore, there has been growing collaboration between ESMAP and other UN organizations, notably the International Labour Organization (ILO), the United Nations Sudano Sahelian Office (UNSO), the United Nations Capital Development Fund (UNCDF), and the United Nations Department of Technical Cooperation for Development (UNDTCD).

20.. ESMAP's success in attracting a highly qualified and motivated staff backed up by an impressive array of consultants has allowed the Programme to undertake a very large range of activities in the energy sector. These activities stretch from the design of improved cooking stove programmes to studies of the costs and benefits of establishing or rehabilitating commercial fuel distribution systems in countries confronted with looming shortages of traditional biomass sources. An important element in ESMAP's success has been the proximity its staff enjoys to the large number of people working on the energy problems of developing countries as part of the World Bank's regular energy lending program. This program amounts to over US\$3.5 billion a year for projects which encompass nearly the entire spectrum of energy sector resources, including petroleum, power, coal and fuelwood development.

IV. FINANCING

- 21. THE ESMAP program presently costs about \$10.0 million per year. It is financed by its sponsors, the World Bank and the UNDP, which together provide about one-quarter of the required funds, and by contributions from bilateral donor agencies. While the World Bank and UNDP provide general budgetary support to ESMAP, the contributions from the bilateral agencies come mainly in the form of financing for specific ESMAP activities. So far, some 13 bilateral agencies have contributed more than \$17 million to the ESMAP program.
- The generous bilateral support ESMAP has received is evidence that the donor community has found that the program not only provides valuable assistance to the recipient developing countries but that it also can play an important role in facilitating their own country assistance programs. ESMAP's pre-investment studies help developing countries identify, evaluate and prepare energy investment projects for donor financing while its strategy studies provide guidance to donors and recipients alike on the objectives and policies to be pursued in the sector. ESMAP's effectiveness in assisting in channeling donor funds to the energy sector is reflected in the fact that projects studied by ESMAP have already generated more than \$500 million of investments in the recipient countries.

RSDosik/mpr April 3, 1987

ESMAP WORK PROGRAM January 1, 1987 through June 30, 1988

HOUSEHOLD ENERGY DIVISION (EGYHE)

Activities		Cost
ONGOING ACTI	VITIES	(\$,000)
oncorno norr	VIIII	
I.	HOUSEHOLD ENERGY	
	a. Strategy Studies	
Morocco	Household Energy Strategy	68
Niger	Household Energy Strategy	90
Senegal	Household Energy Strategy	316
Y.A.R.	Household Fuel Marketing Study	342
	b. Improved Stoves	
Ethiopia	Cooking Efficiency Project	155
Niger	Improved Urban Cookstoves	150
Rwanda	Charcoal Stoves - Implementation	135
		1,256
II.	TRADITIONAL FUEL SUPPLY	
	a. Fuelwood Supply	
Kenya	Peri-Urban Fuelwood	35
Sudan	Fuelwood/Forestry Feasibility	166
Tanzania	Peri-Urban Fuelwood Feasibility I	64
Thailand	Fuelwood Project Prefeasibility	55
	b. Charcoal Production	
Jamaica	Charcoal Kilns - Implementation	61
Rwanda	Charcoal Kilns - Implementation	173
Thailand	Charcoal Kilns/Stoves	15
		569

ESMAP WORK PROGRAM January 1, 1987 through June 30, 1988

HOUSEHOLD ENERGY DIVISION (EGYHE) (Cont.)

Activities		Cost
		(\$,000)
III. RU	TRAL INDUSTRY BIOMASS	
Burundi Costa Rica Cote d'Ivoire Ghana Kenya Mauritius Tanzania Uganda Uganda	Peat Carbonization Wood Residue Utilization Improved Biomass Utilization Wood Industry Residues Utilization Tea Industry Energy Efficiency Bagasse Supply and Handling Tobacco Industry Energy Efficiency Tobacco Curing - Pilot Project Brick & Tile Production	105 77 28 52 30 25 141 8 85
IV. R	RENEWABLE TECHNOLOGIES	
India	Renewable Energy Strategy	75
Total 18 Month 0	Cost of Ongoing EGYHE Activities	2,451

ESMAP WORK PROGRAM January 1, 1987 through June 30, 1988

ENERGY EFFICIENCY AND STRATEGY DIVISION (EGYES)

Activities		Cost
		(\$,000)
ONGOING ACTIVI	TIES	
I. A	SSESSMENT / POLICY STRATEGIES	
Angola	Assessment	595
Bolivia	National Energy Plan	231
Colombia	Technical Assistance	121
Congo	Power Development	252
Paraguay	Technical Assistance	81
		1,280
II. C	ONSERVATION AND EFFICIENCY	1,200
Benin/Togo	Power Efficiency	34
Cote d'Ivoire	ESIE Study	42
Cote d'Ivoire	Power Efficiency	39
Guinea-Bissau	Power System Restructuring	88
Indonesia	Diesel Rehabilitation	560
Jamaica	Energy Efficiency Building Code	141
Jamaica	Management Information System	79
Jamaica	Energy Efficiency Standards & Labels	97
Kenya	Power Master Plan	232
Kenya	Coal Industry	20
Madagascar	Power Efficiency	28
Malaysia	Power Efficiency	18
Senegal	Industrial Energy Efficiency	197
Syria	Cement Industry	168
Syria	Fertilizer Industry	190
Syria	Power Efficiency	111
Zimbabwe	Petroleum Management	100
Zimbabwe	Power Sector Study	166
		2,310
Total 18 Month	Cost of Ongoing EGYES Activities	3,590
5.00 Sept. No. 10		
Total Cost of	Ongoing EGYHE and EGYES Activities	6,041

Mr. Avandarup Ray

R: ESMAP

Attached for your information is

a paper presenting the main

Jeatures of the ESMAP programme

(Of pulied I manage our division,

while Dide Datile manages the other).

I have included a tecand

topy, which might be of when

to Or. Picciotto.

(B. Montfort)

4-3-87

THE WORLD BANK INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANI

DATE:

March 24, 1987

TO:

Mr. Stanley Panickaveetil, PBD

FROM:

EXT:

69420

SUBJECT:

Master Organization Code: Energy Department

PREINVESTMENT DIV. I For Action To: For Info. To: AU Action Taken On: Reference File: EGGES-

ENCHGY STRATESY AND

The functions of the two Strategy and Preinvestment Divisions in the Energy Department have changed. Therefore, please change their titles to the following, as approved by the Department Director:

Department	<u>Divisio</u> n	Organizational Unit	Abbreviation		
352	50	*-Energy Efficiency and Strategy Division	*EGYES		
	60	*-Household Energy Division	*EGYHE		

cc: B. G. Monfort, Chief, EGYES

R. S. Dosik, Chief, EGYHE

A. Attena, GSD, C-205

L. Bia Lowas, GSD, C-205

D. Campuzano, ITF, H-3236

O. Cardona, GSD, A-122

S. Chandra, ACT, I-4-167

C. Denaro, PBD, D-708

C. Ferreira, ITF, HB-2025

V. Fink, ACTAE, I-2-187

V. Gautam, ITF, H-2114

M. Geronimo, ITF, S-3119

L. Glover, PMD, S-6121

M. Hakuta, PMD, S-6061

N. Harrison, ACT, I-4-175

R. Kanda, COM, S-4125

E. Nemitz, EGYDR

L. Khemani, PMD, S-5044

N. Y. Lao, COM, S-5109

S. Lee, ACTBC, I-4-274

C. Lowndes, SVPMS, A-408

F. Murias, ACT, I-4-167

D. Murray, GSD, F-122

M. Saukel, COM, S-5038

W. Silverman, PMD, S-5121

M. Sinclair, ITF, C-225

S. Thavamoney, SVPMI, M-310

M. Tonson, PBD, D-740

V. Veizaga, COM, S-5103

R. Voight, OPD

I. Knapp, EIS

TNRuth: sst

THE WORLD BANK INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

DATE February 12, 1987

TO Senior Management Council

FROM T.T. Thahane, VPS

EXTENSION 72185

SUBJECT Communications with Individual Executive Directors (Ref.: OMS No. 5.05)

Attached is a memorandum from Mme. Ploix, French Executive Director, concerning the need to adhere to the instructions contained in OMS No. 5.05.

I would be grateful if you would once again remind your staff of this matter.

Attachment

cc.: President

Mr. Stanton

MAP. O Hage ciculate



Record Removal Notice



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February 9, 1986	Memorandum		
Correspondents / Participants			
To: Timothy T. Thahane			
From: Hélène Ploix			
*			
Subject / Title			
Communications with Individual Ex	ecutive Directors		
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Additional Comments			
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2		Withdrawn by	Date
		Shiri Alon	November 14, 2022

Mr.Kalim, EGY

Re: ESMAP Annual Report

Zia -

I attach the text that you requested for inclusion in the ESMAP Annual Report, to cover briefly the main developments in the Program since the Paris meeting. I took the draft that you gave me (which is dated December 9, 1986) and inserted my new text at para. 1.2, modifying your original para. 1.2 slightly, and then merging back into your original text, again with some minor modification, at my para. 1.4. I hope that this meets your needs, but please let me know if you need any further assistance with it.

Robin Bates

- The Paris Meeting, in addition to scrutinizing the achievements of the two Programs, addressed the issue of the future scope and content of ESMAP, which had been functioning for just about two years at that stage. The Energy Assessment Program, which was drawing formally to a close, was recognized as having significantly assisted a large number of developing countries to respond to the oil price increases of the 1970s. This was evident in the support it provided in the formulation of cohesive strategies for their energy sectors as well as giving impetus to specific policy changes, demand management, development of indigenous energy resources, and improved sector management, partly through institutional strengthening. As regards ESMAP, the participants at the consultation reviewed its future work program, made suggestions as to the priorities it should observe, and indicated support for the securing of the funding levels implied by the projected scale of its activities.
- 1.3 Subsequent to the Paris discussions and in light of the principal areas of consensus which emerged, certain points of focus under the two Programs have been apparent during the last year and can be noted:
- o a limited number of the more comprehensive energy assessments are going ahead or are planned on the basis of demands from the countries concerned (e.g., Angola), but our energy assessment activities have become more selective in the issues addressed and more strategy-oriented in approach (e.g., Colombia Energy Strategy and Bolivia National Energy Plan);

- o there has been much more involvement of local expertise in the execution of ESMAP/Assessment activities, although we have been conscious of the need not to dilute the integrity and objectivity of the Bank's position as Executing Agency (e.g., Ghana Assessment, Sudan Fuelwood Project Feasibility, Morocco Household Energy Strategy);
- o ESMAP has given more attention to "downstream" project preparation, in terms of identifying and helping to mobilise the investment follow-up to our pre-feasibility activities (Madagascar Power System Efficiency, Niger Energy Sector Credit, Indonesia Diesel Rehabilitation);
- o greater use has been made of country IPFs to secure funding for ESMAP, as a way of enhancing cost-sharing and local commitment to the Program (Paraguay Energy Planning, Angola Energy Assessment); and
- o rural energy issues have been emphasised in both strategy work and pre-feasibility work, notably as part of the household energy studies, the energy efficiency activities which benefit rural industries and the work on biomass use (Ivory Coast Agricultural Residues, Rwanda Charcoal Kilns).
- 1.4 The Paris Meeting also concluded that the donors should hold an annual review of ESMAP to discuss matters of mutual interest with representatives of the UNDP and the World Bank. It is our understanding that most donors would wish to concentrate on the general direction ESMAP

is following rather than undertake a detailed review of the numerous activities in which it is involved. Accordingly, this paper has been prepared to assess the demand for ESMAP's services in the context of the current world energy situation and to give an indication of how ESMAP itself is adapting to the greatly changed environment in which it operates. Pertinent information related to ESMAP's activities is conveyed to donors in the Quarterly Information Briefs which form the basis for periodic discussions between them and ESMAP staff.

1.5 Section II below gives a brief overview of major developments on the world energy scene during the past year; Section III describes what effect these developments have had on defining ESMAP priorities; Section IV outlines administrative arrangements; and Section V deals with future ESMAP funding requirements.

ESMAP

Over the past 12 months, since the January 1986 Paris meeting, the ESMAP program has been increasingly focused on the areas of:

- (a) household energy, including the integrated approach towards tackling the fuelwood shortage and related issues;
- (b) energy efficiency and strategy, including public sector management and restructuring.

Interest in ESMAP assistance in these areas is strong, from both the LDCs and bilateral donors, and we intend to continue, in consultation with the regions, to emphasize these areas in FY88. We have been successful in raising sufficient contributions from UNDP and other donors to at least maintain the program at its current level of about 65 SY, assuming that the Bank continues to contribute a reasonable share of the Program's basic core expenses.

The World Bank

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W. Washington, D.C. 20433

(202) 477-1234 Cable Address: INTBAFRAD Cable Address: INDEVAS

Corresp

November 18, 1986

Dr. S. H. Makoni Executive Secretary SADCC Secretariat P/B 0095 Gaborone, Botswana

Subject: Request for information on ESMAP.

Dear Dr. Makoni:

As requested by Mr. Kisa at his recent meeting with Robin Bates in Gaborone, I am sending you the reports on SADCC countries produced under the Joint UNDP/World Bank Energy Assessment and Energy Sector Management Assistance Programs. I also include various other relevant papers which may interest you.

Yours sincerely,

Masood Ahmed

Acting Division Chief

Energy Strategy & Preinvestment Division I

Energy Department

ESM ELVISI-Gen.

The World Bank

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W. Washington, D.C. 20433 U.S.A. (202) 477-1234 Cable Address: INTBAFRAD Cable Address: INDEVAS

September 16, 1986

Mr. D. B. Tunstall
Mead Data Central
IBEX International
Suite 900
1025 Connecticut Avenue, N. W.
Washington, D.C. 20036

Subject: Your Recent Correspondence Regarding the Joint UNDP/World Bank Energy Sector Programmes

Dear Mr. Tunstall,

In response to your recent correspondence with Ms. Sharkey of my Division, I regret to inform you that it will not be possible to send a set of the Energy Assessment reports as you requested.

The reports produced by the joint UNDP/World Bank Energy Sector Programmes are distributed only to the recipient governments concerned and to the official agencies participating in co-financing activities there. We frequently receive requests such as yours but it is imperative that our response on this question comply with the wishes of both our donors and recipients. I am sorry not to be of more assistance on this matter.

Mead Data Central's interest in the joint UNDP/World Bank Energy Sector Programmes is much appreciated.

Yours sincerely,

Bernard Montfort Division Chief

Energy Strategy and Preinvestment

Division I

Energy Department

KSharkey:mdd



IBEX International Suite 900 1025 Connecticut Avenue, N. W. Washington, D.C. 20036

Telephone: (202) 331-4340

Miss Katrina Sharkey
Energy Strategy and Pre-investment
Division I
Energy Department
World Bank
1818 H Street, N.W.
Washington, D.C. 20433

Dear Miss Sharkey:

August 19, 1986 ENERGY STREET DIV. I

Dt. Recd. Sty Log No. 1890

For Art Calma

For Man. Taken On:

Prierence File: Report mad.

At the suggestion of Ms. Jo Regino-Suarez, we would very much appreciate receiving the full set of Energy Assessment Status Reports prepared under the auspices of the UNDP/World Bank Energy Sector Assessment Program.

IBEX International, a division of Mead Data Central, is in the process of developing an international statistical database covering more than 150 countries. While our major sources of energy statistics are the reports and data tapes prepared by the U.N. Statistical Office, the Organization for Economic Cooperation and Development, and the U.S. Department of Energy, we have found that the IBRD Assessments are very useful in understanding the energy policies and practices of a developing country. We would now like to add to this collection. We would also appreciate being placed on the mailing list to receive copies of all future reports and and a copy of the Quarterly Information Brief.

I should add that we will abide by any restriction IBRD places on the distribtuion of the contents of these reports.

Please send all materials to:

Information Acquisition
Mead Data Central
1025 Connecticut Avenue, N.W.
Suite 900
Washington, D.C. 20036



Miss Katrina Sharkey August 25, 1986 Page 2

Thank you for your attention to this request. If you have any questions concerning our request, please feel free to call me at 202/331-4340.

Sincerely,

Daniel B. Tunstall

Manager

Information Sources

MeadDataCentral

IBEX International Suite 900 1025 Connecticut Avenue, N. W. Washington, D.C. 20036

Telephone: (202) 331-4340

August 19, 1986 Enemay Simon ()

	PREINVESTMENT DIV. I				
	Dt. Recd. 3/28 Lookin, 1890				
Miss Katrina Sharkey Energy Strategy and Pre-investment Division I	For Asia Campa				
Energy Department World Bank	Fations and an analysis of the second				
1818 H Street, N.W. Washington, D.C. 20433	A 1656n On:				
Dear Miss Sharkey:	Personce File: Report madin				

At the suggestion of Ms. Jo Regino-Suarez, we would very much appreciate receiving the full set of Energy Assessment Status Reports prepared under the auspices of the UNDP/World Bank Energy Sector Assessment Program.

IBEX International, a division of Mead Data Central, is in the process of developing an international statistical database covering more than 150 countries. While our major sources of energy statistics are the reports and data tapes prepared by the U.N. Statistical Office, the Organization for Economic Cooperation and Development, and the U.S. Department of Energy, we have found that the IBRD Assessments are very useful in understanding the energy policies and practices of a developing country. We would now like to add to this collection. We would also appreciate being placed on the mailing list to receive copies of all future reports and and a copy of the Quarterly Information Brief.

I should add that we will abide by any restriction IBRD places on the distribtuion of the contents of these reports.

Please send all materials to:

Information Acquisition
Mead Data Central
1025 Connecticut Avenue, N.W.
Suite 900
Washington, D.C. 20036

Mead Data Central

Miss Katrina Sharkey August 25, 1986 Page 2

Thank you for your attention to this request. If you have any questions concerning our request, please feel free to call me at 202/331-4340.

Sincerely,

Daniel B. Tunstall

Turstall

Manager

Information Sources



IBEX International Suite 900 1025 Connecticut Avenue, N. W. Washington, D.C. 20036

Telephone: (202) 331-4340

September 10, 1986

Ms. Katrina Sharkey
Energy Strategy and Pre-investment
Division I
Energy Department
World Bank
1818 H Street, N.W.
Washington, D.C. 20433

Dear Ms. Sharkey:

I very much appreciate your call to clarify my request of August 19. We are particularly interested in receiving the IBRD set of Energy Sector Assessments to use for internal research purposes only. If the scope of this request poses a problem, please let me know. We, of course, could be more restrictive in the number of country reports requested.

I have enclosed a brief review of IBEX products and material about Mead Data Central for your use. Please let me know if you need any additional information.

Sincerely,

Daniel B. Tunstall

Manager

Information Sources

enclosures

IBEX is an information service about 140 countries around the world available by personal computer. IBEX puts each country in context--business and economics, government and politics, natural resources and human resources--to provide information for making well-informed, timely decisions. The first information service to address four different dimensions of your information needs about countries, IBEX offers statistics, analyses, news and bibliographic references to provide a multi-dimensional view of a rapidly changing world.

The IBEX service is available online, seven days a week. All you need is an IBM-compatible personal computer with a modem. IBEX will supply specially-designed software to give you information about countries in a format you can use immediately.

IBEX International Database (IDB)

The IDB provides annual statistics from 1965 for 140 countries covering 1,000 subjects with no gaps. Units of measure are consistent across countries, across related subjects and across time frames. Its scope, size and consistency make country comparisons easy. Information has been synthesized so that it's ready to use--no further manipulation is needed. Coverage includes geography, energy, minerals and metals, agriculture, demographics, social indicators and national economics. Searchable either for numeric data or for countries that meet selected criteria, the IDB can retrieve data for any combination of IBEX countries, subjects or years.

IBEX International Index (II)

The Index provides bibliographic references to 1,000 key English-language publications covering 140 countries in 135 subject areas. Publications are selected based on quality, timeliness, and amount of pertinent analysis or statistical data. Information on each publication is retrievable by country and by subject. Each listing contains the publication title, bibliographic data, content description and ordering information.

IBEX International News Service (INS)

The INS provides access to news and feature stories published and broadcast by media from around the world. It consists of full text of 24 of the world's major wire services, newspapers, and business or trade publications. Sources have been selected based on the quality and scope of international as well as regional news coverage.

IBEX Country Assessments (CA)

Country Assessments provide extensive selections of current analyses and commentary prepared by recognized experts on 50 strategic countries worldwide. In-depth and full-text, Country Assessments cover business operating conditions as well as project economic and political forecasts.



Record Removal Notice



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EGYSI MISSE 1) News Te Carthy Alma Dem Cem an ZCZC DIST5660 RCA8738 be one making REF ! TOP HO H. Daffern's Africa XTE040 BLA004 Las organized for 05-09-86 1256 this gentleman meet the geophysicists & geologist in 9/K at 2130. WORLD BANK - WASHINGTON DC No action required ENERGY DEPT, (EGY) from EGYSI as per 9103501028 (WORLD BANK) ATTN OF: BERNARD G. MUNTFURD (CH)FF ENERGY STRATEGY AND PREINVESTMENT DIVISION 1)

- BECHTEL LTD. HAVE RECENTLY SET UP A PETROLEUM STUDIES GROUP AA) HERE IN LONDON CONSISTING OF PETROLEUM PRODUCTION AND RESERVOIR ENGINEERS, PETROPHYSICISTS AND GEOLOGISTS. THIS BROUP WILL UNDERTAKE ASSIGNMENTS CONCERNED WITH EVALUATION AND DEVELOPMENT OF PETROLEUM RESOURCES. OF PARTICULAR INTEREST ARE STUDIES INVOLVING EXPLORATION POTENTIAL AT THE REGIONAL, BASINAL AND PROSPECT LEVEL RESERVE EVALUATION AND ECONOMIC ANALYSIS.
- VIA OUR PARENT COMPANY WE ARE REGISTERED WITH THE VARIOUS BB) INTERNATIONAL AND AGENCIES INCLUDING THE WORLD BANK.
- THE UNDERSIGNED AS MANAGER OF THE ABOVE DESCRIBED GROUP IS CC) SCHEOULED TO BE IN WASHINGTON U.C. DURING THE WEEK COMMENCING SEPTEMBER 14, 1986.
- I WOULD LIKE TO MEET WITH YOU, OR IF IMPOSSIBLE FOR YOU, A DD) DESIGNATED REPRESENTATIVE OF YOUR DIVISION.
- EE) PURPOSE OF THE MEETING WOULD BE:
 - TO INTRODUCE MYSELF. 1.
 - TO DESCRIBE THE CAPABILITIES OF BECHTEL LTD. IN THOSE AREAS REFERRED TO IN PARA AA) ABOVE.
 - TO DISCUSS STATUS OF POSSIBLE PROJECTS IN AREAS COVERED BY YOUR OLVISION.
- COULD YOU PLEASE INDICATE A CONVENIENT DATE/TIME FOR SUCH A FF) MEETING, PREFERABLY SEPTEMBER 17/18/19, ALTHOUGH AM 15TH OR PM 16TH WOULD ALSO BE CONVENIENT.

QL LINT.

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05/09/86

LWEL

MANAGER PETROLEUM ENGINEERING/PETROLEUM STUDIES BH2/6 BECHTEL LONDON 934151 WATEKA G =09051121 ALT RIU FROM: YS1M инии

Le 5 septembre 1986.

M. Victor Fremaux
Direction Générale
Etudes Economiques Générales
ELECTRICITE DE FRANCE
2, rue Louis-Murat
75384 Paris Cedex 08
France

Objet : Recueil de textes EEG

Victor,

Merci de m'avoir envoyé un stock important d'exemplaires de ce recueil. Je l'ai immédiatement diffusé aux principaux intéressés (chefs de division "Energie" dans les régions et conseillers du Département Energie).

Certains l'ont trouvé extrêmement enrichissant, d'autres un peu ésotérique mais c'est de toutes façons une excellente base de référence. Bravo d'avoir eu la patience nécessaire pour en venir à bout....

Amitiés et bon vent.

Bernard Montfort

P.S. S'agissant de la qualité de l'anglais, j'ai été surpris de voir que des erreurs d'anglais ont été introduites ici et là dans le papier que j'ai écrit avec Lederer! Rien de grave mais normalement les modifications ont pour but d'améliorer ...

The World Bank

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W. Washington, D.C. 20433 U.S.A. (202) 477-1234 Cable Address: INTBAFRAD Cable Address: INDEVAS

Washington, le 28 juillet 1986

Monsieur Christian Deschars ECTI 3, rue de Logelbach 75847 París France

Cher Monsieur,

Je vous remercie de votre lettre du 30 mai 1986 (votre ref: CD/hk BM 116) et de l'échantillon de curriculum vitae que vous nous avez envoyé.

Suite à une évaluation préliminaire de ces C.V., nous en avons retenu un certain nombre pour notre fichier de consultants, à savoir ceux de Messieurs Coignard, Dagron, Grosmangin, Henry, de la Calle, Maire, Mainguy, Mariette, Pietraru et Uhart.

En fonction de nos besoins pour des projets déjà financés et programmés, les Chargés de projets de la division EGYS1 se mettront en contact avec l'ECTI pour des renseignements complémentaires. Le choix des consultants se fera à peu près 4 à 6 semaines avant l'envoi d'une mission sur le terrain.

Votre représentant à Washington nous a rendu visite le 3 juillet. Je me permets donc de lui envoyer une copie de cette lettre.

Je vous prie d'agréer, cher Monsieur, l'expression de mes sentiments distingués.

Bernard Montfort Chef, Division de Stragégie et de préinvestissèment énergetique, Département d'énergie, Banque mondiale

copie à: M. Christian M. Teyssier World Business Inc 1818 H Street NW, Suite 600 Washington DC 20006

cc: Dosik, Ahmed DCraig:dn 2 HERE

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OF TEXT

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START		EGYPA		

MR. JOHAN BRISMAN, SIDA, STOCKHOLM, SWEDEN. THANK YOU VERY MUCH FOR YOUR LETTER OF 14TH JULY TO MR. ROBIN BATES WHO IS NOW AWAY ON LEAVE. YOU SHOULD NOW HAVE MR. BATES' LETTER OF JULY 15 TO MR. HOLMBERG CONFIRMING OUR INTEREST IN PURSUING A NEW FUNDING AGREEMENT BETWEEN SIDA AND ESMAP ALONG THE LINES DISCUSSED IN STOCKHOLM AND MAKING CERTAIN SUGGESTIONS IN THIS REGARD. WE WOULD BE VERY HAPPY TO WELCOME YOU IN WASHINGTON FOR FURTHER DISCUSSIONS AND WOULD LIKE TO SUGGEST THE WEEK BEGINNING 8 OR 15 SEPTEMBER FOR THIS PURPOSE. PLEASE ADVISE WHETHER THIS IS CONVENIENT FOR YOU. REGARDS, RICHARD S. DOSIK, DIVISION CHIEF, ENERGY STRATEGY AND PRE-INVESTMENT DIVISION 2, THE WORLD BANK.

ENERGY STRATEGY AND
PREINVESTMENT DIV. I

Dt. Recd. 729 Log No. 1636

For Action To: BM 5016/MAhmed

For Info. To:

Action Taken On:
Reference File: ESMAP- General

PINK AREA TO BE LEFT BLANK AT ALL TIMES

CLASS OF SERVICE: Telex TELEX NO.:	11450 SIDA STHEM DATE:	7/28/86			
SUBJECT: ESMAP Programme	DRAFTED BY:	EXTENSION: 76894			
CLEARANCES AND COPY DISTRIBUTION: CC: Messrs. R. Bates and	AUTHORIZED BY (Name and Signature): RSDosik				
J. Schmetdje (EGYS2)	EGYPA SECTION BELOW FOR USE OF CABLE SECTION CHECKED FOR DISPATCH				
T. Hume and VB. Montfort (EGY					



Forestry Energy Production Group

Dt. Recd. 6/3 Log No. 1172

For Action To:

May Stork! Almost

Stockholm 1986-05-27

Energy Strategy and
Preinvestment Division
Energy Department
World Bank
1818H Street
Washington, D.C. 20433 USA

Moving, new address

SIAR-PP, and secretariat of Forestry Energy Production Group have moved to a new office

New address:

SIAR PP Forestry Energy Production Group Jungfrugatan 35 S-114 44 Stockholm, Sweden Tel: 08/60 30 35 or 63 50 30 Telex: 10697 SIAR S Telefax: 783 00 51

With the modern facilities in the new office I hope we will be able to serve you well also for the future.

Best regards

Bo Hektor, SIAR-PP

Forestry Energy Production Group



Project Promotion AB Stockholm, Lund, Helsinki, London, Boston, Paris, Milan, Hamburg, Tokyo, Singapore

Paris, Milan, Hamburg, Tokyo, Singapore Jungfrugatan 35 S-114 44 STOCKHOLM

S-114 44 STOCKHOLM Sweden Tel int + 46 8 635030 Tlx 10697 siar s



Box 154 S-182 12 DANDERYD Sweden Tel int +46 8 7552755 Tix 11758 forest s





Jungfrugatan 35 S-114 44 STOCKHOLM Sweden Tel. (08) 63 50 30 Telex 10697 SIAR S Telefax (08) 783 00 51 Please note that we would like all reports from you May 19, 1986

Mr. D. K. Rishton Principal The College of Power Generation Adam House Ogleforth, York Y01 2JG England

Re Your letter of April 21 1986 to Mr. M. A. Cohen

Dear Mr. Rishton

Mr. Cohen has passed on your letter to us in the Energy Department since his unit deals primarily with water supply rather than energy activities.

I have communicated your letter and the attached college prospectus to Mr. A. Gulstone, our Power Efficiency Specialist in the Energy Department, as well as to the World Bank units involved in power projects. A number of Mr. Gulstone's activities include power generation rehabilitation components and I am sure that he will be interested by the information you have sent us.

Yours sincerely,

Bernard Montfort Division Chief

Energy Strategy and Preinvestment

Division I Energy Department

cc: Messrs. Wackman (EAP); Bauer (WAP); Nayyar (AEP); Elwan (ASP);
 Reekie (EMP); Moscote (LCP);
 Churchill, Cohen (WUDOS); Fish, Gulstone (EGY)

BMontfort:aaf

FORM NO. 75 (6-83)

Michael Cohen

THE WORLD BANK/IFC

	ROUTING SLIP	May 1, 1986			
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21 April 1986

COLLEGE

Mr M A Cohen Chief - Operations Review and Support Unit The World Bank 1818H Street NW WASHINGTON DC 20433 USA Dt. Racd. <u>5/2</u> 1. 853 For Anna 7, Vina 16, 271

Dear Sir

The College of Power Generation has been established in York, to provide comprehensive training facilities in diesel and gas-turbine electricity generating schemes.

We can now offer a wide range of training courses which include "hands on" experience in stripping and re-building diesel engines or gas turbines and alternators, fault finding and rectification, maintenance scheduling and repairs to generating sets and associated control equipment. This training will be carried out in the manufacturers' works and on actual base load plants.

The courses offered are almost entirely of a practical nature, theoretical College work is kept to a minimum and is directed towards providing a better understanding of the practical involvement. A particular feature of all courses is the period spent in an actual power station, experiencing faults, repairs and normal routine maintenance of base-load and also stand-by equipment at first hand.

Student welfare is an important aspect of these courses and students will be met on arrival and all transport, accommodation, etc., will be arranged in addition to a wide range of College activities.

On the completion of a course students will be awarded a College Certificate and will also have future access to the College information service at any time this may be required.

I would be most grateful if you could advise me of any past or future clients who may require this type of training.

I enclose a copy of our College Prospectus, and details of pre-designed courses which we can modify to suit individual requirements.

Yours sincerely

D K Rishton PRINCIPAL

Enc

OFFICE MEMORANDUM

DATE: April 17, 1986

TO: EGYS1/Joint Services Staff

FROM: Bernard Montfort, Chief EGYS1

SUBJECT: Secretarial Assignments

You have already been notified by Angelica of the changes in the secretarial assignments. These will be revised somewhat when the bilingual secretaries join us in June. Until then the attached list is for your information.

Attachment

/aaf

ENERGY STRATEGY AND PREINVESTMENT DIVISION I

Secretarial Assignments

Angelica Fernandes - Montfort/Office Administrator

Holly Mensing - Ahmed/Taylor

Dawn Pigman* - Gray/Frueh

Morissa Young* - Floor/van der Plas

Nora Al-Wahayeb - Sharkey/Thadani

Linne Toehl - Borthwick/Shanberge

Delinda Thompson* - Richter/Boroumand/Grut

Betsy Edison* - Sherbiny/Perine/Craig

Adena Smith* - Aleem/Leitmann

Vernetta Hitch* - Owen/Walsh (Budget Unit)

April 17, 1986

^{*} Temporaries

OFFICE MEMORANDUM

TO: EGYS1 Support Staff, Higher Level Staff/information

FROM: Bernard Montfort, Division Thief, EGYS1

DATE: April 3, 1986

SUBJECT: Editing of Reports at Yellow Cover Review Stage

I would like you to add the editorial assistant, Ms. Buchanan, to the internal distribution list for all yellow cover reports produced or managed by this division. This means she should receive a copy of all ESMAP, assessment, and other sector and strategy papers at the time they are sent to the region. This will allow her to evaluate and discuss with authors the level of editing required early in the writing and review process.

/M Buchanan

THE WORLD BANK/INTERNATIONAL FINANCE CORPORATION

FFICE MEMORAN

DATEMarch 28, 1986

TOMr. Bernard Montfort, Chief, EGYS1

FROMNorris L. Harrison Jr., Chief, ACTAE

EXTENSION61109

Action Taken Helerence File:

Dt. Road

Foi

ENERGY STRATEGY AND

PREINVESTMENT DIV.

50

SUBJECTOutstanding Travel Advances of Messrs. Gulstone and Borthwick

- Reference is made to your memorandum of March 19, 1986 to Mr. M. J. Gillette, ACTDR.
- The statements of expenses in question were received and processed in the UNDP Section of the Loan Department. One of these claims (Mr. Borthwick's) indicated the trip's expense to be chargeable to a UNDP project; we now understand that it was subsequently determined to be a Bank charge. It appears that the travel claims, when processed and reviewed, may not have been verified against the related travel advances recorded and administered by the UNDP Section. Had this element of control been applied, it would have been noted that both trips were originally not committed/ chargeable to a UNDP project (no UNDP travel advances made) and the claims would have been forwarded to the Travel Unit of the Accounting Department for appropriate handling.
- We appreciate your bringing this matter to our attention and we will be discussing this issue with appropriate Loan Department staff in an effort to preclude similar cases from arising in the future. We have now cleared the related advance accounts. We apologize for this oversight.

cc: Messrs. Hume, Kalim, Ahmed (EGY), Lee (LOADR), Lau LOATF), Gillette (ACTDR) Mmes. Fink, Lao (ACTAE)

VFink/NLHarrison:jlg

March 19 1986

Mr. Alberto de Capitani, EGYS2

Re: Mexico Sector Work

Alberto -

I bumped into Peter Bottelier, Programs' Division Chief for Mexico, who said they were interested in doing some more indepth sector work on energy. I have asked him to contact you but you may want to follow up directly.

Ahmed

MAhmed:aaf

L 18 mas 1986

WORLD BANK / INTERNATIONAL FINANCE CORPORATION

Monsieur Le Bigre

Re: ESHAP

Rudi guement pris, von averg ruge tom la document ESMAP, soit directement (Quantury Information Brief), soit par le devetany's Office (Document = Mudron restreents).

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de la réorganisation d'ESMAP,

mais vous ître lim de le liste

de dostribution et receny donc c

document chaque fais pu'il est public.

(B. MontFort)
74844

THE WORLD BANK/INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

DATE March 7, 1986

Messrs. A. Golan, IND and P. Bourcier, EGY

FROM Jean-Loup Dherse, EISVP W

EXTENSION Visitors from Borrowing Countries

SUBJECT

PREINVESTMENT STORY

Dt. Read. 310 100 Mg. 373

For / Months + 101 med

EGYS1 Should

Reference File: Misc. Correspond your managers should

I would like to remind you that you and your managers should inform me of anticipated visits of officials from our borrowing countries so that I should have the opportunity of seeing them. This applies to negotiating teams as well as to prominent officials and representatives of the private sector. I would be grateful if information of this nature is conveyed to Miss Fernandini of my office in a timely manner.

cc: EIS Managers

ZK: jk-h

Done this time around

> Angelies, remind me to repeat dury so, say or may 5.





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THE WORLD BANK/IFC

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APPLICATIONS RECEIVED BY VIS OFFICE

Printed on: 03/24/86

Page

Job title : Secretary

Grade Range: 13-14

Dep/Div : EGY/Strategy & (35250)

Preinvestment 1

Vacancy Number

: 851157

Personnel Officer/Assist.: S. Salvador

Application Listing Date:

Vavacncy Closing Date : 86/03/21

Vacancy Announcement Date: 86/03/10

	Staff	Lev		Dep/		Assgt	Leve1	Not
Name	No.	e1	Title	Div	EOD			Eligible

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March 3, 1986	Booklet	
Correspondents / Participants Personnel Management Department		
Subject / Title Vacancy Information Service Announ	ncement	
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The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.

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Shiri Alon	November 14, 2022





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SUBJECT: Visit to Washington	DR/ Mas	AFTED BY:	()	EXTENSION: 73996			
CLEARANCES AND COPY DISTRIBUTION:	Mas	AUTHORIZED BY (Name and Signature): Masood Ahmed, Deputy Div. Chief, EGYS1					
Ms. Sharkey (EGYS1);	DEF	PARTMENT: ENERGY	1/4	£ 1			

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Roser

ANNEX 1 Page 1 of 3

ENERGY PROJECTS IN LDCS - UPDATED FULL LIST AT 02.10.86

	=	MERGI INCOLCIS IN EDGS - OFDATED FO	JLL LIST AT 02.10.00
	Country:	Project:	Comment:
	EMENA		
_	Egypt	Amoco: gas Western Desert	Bank role to be agreed with EMENA
		Shell: gas in Western Desert	и и и и
_	North Yemen	Hunt: associated gas	IFC already assisting: Hunt wishes?
_	Syria	Marathon: gas export	Viability needs checking
		Shell: non-associated gas	Likely development by NOC
		Pecten: associated gas	11 11 11 11
_	Tunisia	Elf etc: Gulf of Gabes Gas	Marginal at 1985 prices
		Pecten: onshore gas	Very small: unlikely to need Bank
		Amoco etc: small fields	Need further appraisal drilling
	S. ASIA		
	Bangladesh	Shell: pipeline to India	Viability needs checking
	Pakistan	Dhodak gas condensate	Government to decide priority
		Shell etc: refinery modification	Need for Bank to be determined
		Oxy: Associated gas	See FY86 project
		Union Texas: non-associated gas	и и и
		Unspecificied joint venture	и и и
	E. ASIA		
	- China	Arco: offshore gas	Viability needs checking
		Coal	IND responsibility
		Total: offshore gas	Suggest use Arco as precedent
		Mutual: refinery	No information
		Gulf of Bohai	Mission returns 2/25
	Indonesia	Total: Kalimantan gas	Viability needs checking
		Total: LPG distribution	Resolve relationship with Pertamina
		Conoco: Natuna gas	Attempting non-guaranteed finance

ANNEX 1 Page 2 of 3

		Arco: Java gas	Needs Pertamina interest	
		BP: Sulawesi gas	Development in progress	
ے	Korea	Caltex: refinery conversion	Caltex unwilling to invest	
_	Malaysia	Esso: gas pipeline	Attempting non-guaranteed finance	
_	PNG	Chevron: condensate pipeline	Awaiting further appraisal drilling	
_	Philippines	Caltex: refinery modification	Caltex unwilling to invest	
_	Thailand	Esso: offshore gas	Early agreement unlikely	
		Unocal: onshore gas	Pipeline investment small	
		Texas Pacific: offshore gas	Viability to be checked	
	LATIN AMERICA			
	Argentina	Total etc: Tierra del Fuego	Part of overall restructuring	
		Oxy: Northwest gas pipeline	Cogasco issue to be resolved	
		Bridas/Fluspetro: northern gas	FY86	
		Pipeline to Brazil	Viability/priority to be checked	
	Bolivia	Tesoro gas for Argentina/Brazil	Low priority to buyers	
	Brazil	Pecten: offshore gas	Contract being negotiated	
	Colombia	Tenneco: oil pipeline	Ecopetrol unwilling to borrow from	
		Texaco: gas for LNG	Bank	
		Chevron etc: oil pipeline		
	Peru	Shell: gas	Reserves uneconomic	
		Belco: gas	Nationalized	
	EAST AFRICA			
	Kenya	Lonrho: oil pipeline	Company not interested	
	Sudan	Chevron etc: oil appraisal	War zone	
	Tanzania	Caltex: CNG	Marginal and very small	
*		Agip: Mnazi gas prospect	No gas	
	WEST AFRICA			
_	, Cameroon	Gulf: non associated gas	Government unwilling to use Bank funds for petroleum	

ANNEX 1 Page 3 of 3

Elf etc: gas (ass/non-ass)

Mobil etc: associated gas

""""

Chad

Esso etc: oil for export

Operator believes insufficient reserves

Congo

Equatorial Guinea

Agip etc: gas

Equatorial Guinea

Hispanoil: offshore gas

Limited market/IMF issue

Limited market/under appraisal

Total: refinery modification

Company not interested

Phillips: offshore gas Discussions with IFC

Nigeria Shell etc: gas for LNG Limited international market

Gulf etc:: gas gathering. Time to get all companies to agree

OFFICE MEMORANDUM

DATE: December 18, 1985

TO: Mr. Ian Hume, Assistant Director, EGY

FROM: Bernard Montfort, Division Dief, EGYS1

SUBJECT: Mr. McCartney's letter

Messrs. Willem Floor and Josef Leitmann have had two meetings with interested parties concerning plans for using wastewood from Minnesota forest clearing operations to manufacture briquettes for sale The first meeting was with Mr. Davis Helberg, the in West Africa. Director of the Port Authority of Duluth, who introduced the idea and expressed institutional support from his facility which has extensive shipping connections with African ports (mainly grain exports). second meeting was with Mr. McCartney himself who is the private entrepreneur interested in putting up a 225,000 tonne per year At both meetings, Mr. Gilboy, their private briquetting facility. consultant, was present; he has assisted them with contacts in West Africa, market information and briquette testing. The main markets they are considering at present are Dakar, Nouakchott and Cabo Verde but, for reasons of timing and funding, they feel that the former two cities should be the focus of the marketing study.

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1818 H Street, N.W. Washington, D.C. 20433 U.S.A.

(202) 477-1234 Cable Address: INTBAFRAD Cable Address: INDEVAS

December 18, 1985

Mr. William H. McCartney President Biofuels International 15500 Wayzata Blvd. Wayzata, MN 55391

Dear Mr. McCartney:

I am advised by Messrs. Willem Floor and Josef Leitmann of recent discussions you have had concerning potential cooperation between your company and the joint UNDP/World Bank Energy Program.

We understand that you are interested in producing and selling briquettes from Midwest waste wood in select African cities, particularly Dakar and Nouakchott. Further, we realize that an impartial marketing study would be useful in gauging and guiding this effort, and that you may wish to contribute funds to the Bank to finance such a study. We also recognize that you are not interested in supporting theoretical studies, and we would only propose your participation in specific pre-investment activities where there is a reasonable likelihood that an actual marketing strategy would result downstream.

For such a marketing study to be conducted by the Energy Sector Management Assistance Program (ESMAP), there are three prerequisites. First, the host governments would be informed of the project and would have to agree. Second, your contribution would be an input to a World Bank activity, the management of which would remain under the control of the Bank. Specifically, in accordance with standard Bank regulations on collaborations of this type, we reserve the right to make final selection of all members of a Bank project team; however, we would or course carefully consider your recommendations. The third condition is that the Bank is responsible for finalizing the report with the Governments concerned, after which you will be presented with the final project report.

If these considerations for your participation in the ESMAP program are agreeable, then we could start working together in the near tuture. The critical path for the work you have discussed in Mauritania and Senegal would require two months of fieldwork. We believe that we could have a draft report ready for your review four months after initiation of the project, which, after completion, we would discuss with you and the Government concerned. The activity would include the following elements:

- (a) a household consumer acceptability study;
- (b) stove re-design, if necessary;
- (c) laboratory evaluation of briquette performance and composition;

- (d) economic and financial assessment of commercial and industrial market for briquettes as compared to other fuels; and
- (e) development of a marketing strategy for all types of consumers as well as assessment of reliability of supply arrangements.

Roughly, such an undertaking would consist of the following work and cost components, which we would expect you to finance.

Item	Time (man-months)	Cost (US\$)
stove technologist	2	20,000
sociologist	2	20,000
economist	2	20,000
boiler/energy expert	1	10,000
laboratory tests stove materials	0.75	2,000
$(2000 \text{ stoves } \times 2.50)$		5,000
travel		8,000
per diem	3	12,000
TOTAL		97,000

The Bank would cover all organizational, supervisorial and report writing costs.

The timing of this exercise is yet to be defined. However, we understand that you would like to proceed with it as soon as possible. Therefore, we look forward to hearing from you in the near future.

Ian Hume

Assistant Director Energy Department

Yours sincerely.

cc. & cleared with Mr. Montfort (EGYS1)

cc. Mr. Andrew Gilboy 1816 Fifteenth St., N.W. Washington, D.C. 20009

> Mr. Davis Helberg Executive Director Seaway Port Authority of Duluth P.O. Box 6877 Duluth, Minn. 55806

JLeitmann: mac

THE WORLD BANK INTERNATIONAL FINANCE CORPORATION.

OFFICE MEMORANDUM

DATE: December 15, 1986

TO: Distribution List (Non-Education Sectors)

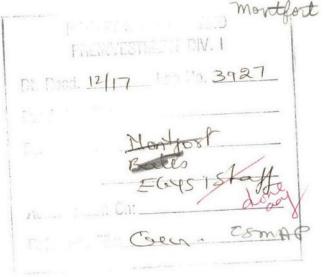
FROM: Dean Jamison, Chief, Policy Division, EDT

EXTENSION: 61641

SUBJECT:

- Advisory Responsibilities for PRT

- Distribution of Project Documents to EDT



Reorganization of the Education and Training Department in July of this year led to a transfer of advisory and functional review responsibilities for project-related training to EDT's Policy Division. Although EDT's principal functional review responsibility will be the annual assessment of training operations in the Bank's project portfolio, we are, in addition, prepared to respond (as time permits) to requests for advice on training from project officers. Such requests should be made to the following individuals:

Agricultural Sector

Mr. J. P. Gittinger Agricultural Education and Training Adviser

Other Sectors

Mr. H. W. Barker Training Adviser

2. The July reorganization led also to the need for new arrangements for the maintenance of this Department's computer-based information system on the Bank's performance on training. Among these is the need to substitute Mr. H. W. Barker for Mr. Swahn (former Chief, Training Division) on your distribution list for principal documents. We would appreciate continuing to receive the following documents:

Programs Divisions

- Initial Executive Project Summary

Projects Divisions

- Final Project Brief (or draft SAR)
- Buff Cover SAR
- Supervision Full Report
- Project Completion Report

Thank you for your assistance in this matter.

Distribution:

Regional Division Chiefs EIS Division Chiefs PHN Division Chiefs

Cleared with and cc: Aklilu Habte (EDT)

cc: Messrs. Johanson, Barker, Gittinger (EDT)

Regional Education Division Chiefs Regional Training Coordinators

Regional Harming oool

P-1867

ZCZC DIST1054 WUI426 EGYEA REF ! TOP FCA WUI426 58665 BHZ CH Marood; Did FN/ SG TX, 090 ZURICH: 10.4.85 FROM: BASLER / HOFMANN, FORCHSTRASSE 395, ZURICH TO : MR. JULIAN BHARIER, CHIEF ENERGY ASSESSMENT DIVISIO 1818 H STREET, WASHINGTON DC 20433 RE : CONSULTING SERVICES ESAP, ESMAP DEAR SIR REFERING TO THE VISIT OF OUR MR. KURT MEJER IN YOUR OFFICES, MARCH 29 TH 1985 AND THE OISCUSSIONS HELD WITH YOUR MESSRS W. FLOOR AND Z. ALAHDAD, WE WOULD APPRECIATE IF YOU COULD GIVE US THE FOLLOWING THEO: - HAVE YOU BEEN ABLE TO STUDY OUR BRIEF DOCUMENTATION WITH THE C.V.'S OF OUR INDIV, CONSULTANTS DATED FEBR. 19TH 857 (A FURTHER COPY WAS GIVEN TO YOUR STAFF BY K. METER) - DO YOU MEED FURTHER INFO ABOUT WORK PERFORMED BY OUR INDIV. CONSULTANTS? - HAS SOME WORK BEEN AWARDED TO SWISS CONSULTANTS SINCE YOU HAVE SPOKEN IN BERN, MOVEMBRE THE 20TH 1984? - WHAT SHALL BE THE FURTHER PROCFEDURE? - WHEN DO YOU ENVISAGE CONCRETE TALKS FOR A FIRST ASSIGNMENT? BEST REGARDS BASLER / HOFMANN FRITZ NUENLIST 78665 BHZ CH 224952 1017 100485 01710171 426 -04100609 ALT RTD FROM: YEAM

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JWS0869 JGJ571 IN 03/10:32 OUT 03/10:35 TRANERG 203292FH PARIS, OCTOBER 3, 1985 TE/258

ATTH MR MASOOD AHMED ENERGY DEPARTMENT

I CONFIRM MY ARRIVAL IN WASHINGTON ON TUESDAY B EVENING.
I WOULD BE PLEASED OF ANY APPOINTMENT EITHER ON WEONESDAY 9
OR ON THURSDAY 10, AT YOUR CONVENIENCE.

BEST REGARDS

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M. MALHERBE GENERAL MANAGER TRANS ENERG TRANERG 203292F TRANERG 203292F

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August 9, 1985

Mr. Malone (EDI)

Following our meeting a couple of weeks ago, I came across a note I did in 1983 on the (then proposed) EDI policy seminar. Some of these points may still be relevant for your current evaluation of the future options for EDI involvement in energy.

Please call me if you would like to discuss this further.

Regards.

Masood Ahmed

cc: Mr. I. Hume (EGY)

MAhmed:aaf

September 2, 1983

D.C .:

Re: EDI Seminar

Assuming that the participants will actually be PS Energy or equivalent (and I think that it's important not to accept lower tier substitutes such as head of energy planning units because then the structure/concent of the seminar would need to be very different) then, the principle objectives of the seminar should be:

- (i) raise their commitment in areas which we believe are being neglected (rural energy fuelwood);
- (ii) expose them to new approaches/opportunities for better management in areas where there is likely to be interest in principle (rational energy pricing, conservation, power system efficiency) and
- (iii) provide some guidance and an opportunity to share their experience on how to deal with problems that they have to resolve in person (how to deal with power utilities, oil companies, etc.).

The way to do this is to be selective in coverage and adopt a very practical approach in each session. These people don't need a general course on each aspect of energy or on the first principles of pricing, rural energy, etc. which they ought to know already.

The issues I would focus on in each category are:

(i) Commitment

- Fuelwood and rural energy-focus on need to translate general commitment to specific decisions on investment priorities; other areas of action include land allocation decisions, fuelwood pricing (why and constraints), institutional importance (have someone/group with specific responsibilities for this work);
- Pricing focus on relative pricing issues, on power pricing (internal cash generation requirements, lifeline tariffs as a way of mitigating equity effects); try and avoid general praise of marginal cost pricing which tends to turn many policymakers off, rather focus on why prices need to be increased and rationalized and how this can be done at minimum political/social cost.

(11) New Approaches

- Power Sector Efficiency Why important (demonstrate potential) how to achieve it (audit, loss reduction, maintentance, spare parts) - basic method is to use a number of case study examples and then to give them a list of things that can be done and conditions under which these things are likely to pay off.
- Conservation Again focus on how rather than why, what to do beyond audits--institutional problems in setting up a conservation program--alternative approaches; also principal opportunities--large users, Government buildings.
- Renewables How to rationalize programs, (most PS's now aware that existing approach ain't working!) What three or four technologies hold early payoffs--how to work on developing them--how to get the National Science Councils out of monopolizing renewable policy and resource allocation.
- Investment Programing Assessments the only way to start (well, almost!). How to set up project monitoring and evaluation systems PERT/CPM, etc.

(iii) Problems they Deal with:

- Relationship with Utility and NOC--how to set up information exchange; autonomy vs. control, contrat plans, etc.--(NB - this is an area in which we might have only limited wisdom to offer but shared experiences should be useful).
- Relationship with IOC's--we can say much more here: contractual arrangements, legal framework, exploration promotion, etc. (usual Palsen briefing).
- Relationship with Ministry of Finance/Planning-how to ensure that economic apsects of pricing policy are considered as well as fiscal ones; how to make a case for higher energy investments when total budgets are stagnant; how to ask for and justify more staff in energy sector management and also higher salaries.

Now, regarding structure of seminar,

- agree with JB that sessions 3-5 are not likely to be productive; if included, they should be towards the end of the week not the beginning. other sessions could be organized along above themes; not by systematic treatment of each subsector;

important that seminar presenter also participate in the group discussion which should really focus on how to apply the ideas presented in the various country situations.

Masood Ahmed

cc: Messrs. Rovani, Bharier

incoming is with YR's app.

OFFICE MEMORANDUM

DATE: August 1, 1985

TO: Mr. Gary Gaskin (EGYS2)

FROM: Robert van der Plas (EGYS1) Road

SUBJECT: Your memo d.d. June 28, 1985

- Thanks for your memo.
- 2. The annexes of the B.T.O. report, as stated in the main body of this report, were produced by the Dutch mission and were presented for informational purposes. Activity Initiation Briefs on a number of these subjects will be issued by EGYS1 shortly.
- 3. The AIB for Energy Improvements in the Brick and Tile industries gives the TOR for the work to be done. All the subjects mentioned by you are covered in great detail. If you wish, I can send you a preliminary AIB.
- 4. The suggestion that a solid economic study on LPG use in transport should be undertaken, rather than executing a pilot project, is very useful. Depending on the outcome of the LPG feasibility study, which is presently being conducted by the Bank, the scope of the complementary study should be determined.
- 5. Previously, TNO gave a presentation for the Bank to identify where LPG could be used to replace other petroleum fuels, and the results are available. If you like, I can send you a copy of this.
- This report also clearly indicates the advantages of using LPG, in relation to air pollution and energy consumption. Retrofitting diesel type engines to Otto type is more an economical question than a technical one; TNO has complete packages for retrofitting diesel as well as Otto type of engines which are commercially available.
- 7. The ESMAP study will eventually determine the economical viability of LPG use in the transport sector under Indonesian circumstances.

cc: Messrs. Bates (EGYS2); Ahmed; Floor; Thadani (EGYS1)

RvdPlas:mac

1818 H Street, N.W. Washington, D.C. 20433 U.S.A. (202) 477-1234 Cable Address INTBAFRAD Cable Address INDEVAS

July 25, 1985

John Lippert Technical Advisor VITA 1815 N. Lynn St., Suite 200 Arlington, VA 22209

Dear Mr. Lippert:

I am writing to thank you for the material you forwarded to us on cooking stoves and solar energy utilization. The stove information on Indian chulas, especially those which burn soft coke, was quiet timely as we are currently gathering information on household use of coal for cooking purposes. All three documents have been circulated within the Bank to staff who work or have an interest in these areas.

If you come across any additional publications on coal-burning cookstoves in particular or on renewables in general, please forward them to us. Your assistance is greatly appreciated.

Sincerely,

Masood Ahmed

Acting Division Chief

Energy Strategy and Preinvestment I

Energy Department

cc. of materials: Energy Library

Messrs. Brandreth (ASPPT); Manibog (EGYD1);

Malik (EGYS2);

Floor, van der Plas (EGYS1);

Ms. Shanberge (EGYS1)

Thise Corresp

The World Bank

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W Washington, D.C. 20433 U.S.A. (202) 477-1234 Cable Address INTBAFRAD Cable Address INDEVAS

July 9, 1985

Prof. Robert Mabro St. Anthony's College Oxford University Oxford, OX2 6JF England

Dear Robert:

Many thanks for your telex of July 3 clarifying a number of issues related to my proposed visit during summer 1985.

I have yet to finalize a Bank report before I can come to Oxford, and this is why I could not respond by a telex stating the time of my arrival. As things stand, I believe late-July is the most likely arrival time, in which case my proposed visit would be for less than two months.

There is an important point that I did not clarify in previous communications. In recognizing the significance of my research work, the Bank has agreed to grant me a two-months leave to be spent anywhere I decide, but was in no position to provide additional resources. I personally would have liked to bring some Bank financial assistance to your institute, but that was not possible to arrange.

On the lighter side of things, having seen our offices in the Bank and the kind of treatment we get, you can imagine my initial reaction to "desk in open space" stated in your telex. Of course, if that is the only thing available to visiting scholars, I would not mind it. After all, it is the opportunities for interaction that I am seeking most in this visit.

Looking forward to my association with your institute, I remain,

Sincerely yours,

Naiem A. Sherbiny

Mariem Shubny

WORLD BANK OUTGOING MESSAGE FORM Cable, Telex IMPORTANT—PLEASE READ INSTRUCTIONS BELOW BEFORE TYPING FORM

(3/82)

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RCA5971 248423 WORLDBANK SPPLML AA38110 Sary Jahn T. Rahin (olr) ma (olr)

OUR REF: 486 4TH JULY 1984 - 1184

TO: WORLD BANK, WASHINGTON

ATTENTION: DR. JULIAN BHARIER

FROM: IAN SHEDDEN

RE: THAI REFINERY PROJECT

- 1. HAVE YOU RECEIVED OUR LETTER DATED 15TH JUNE, 1984 REGARDING THE PROJECT WE HAVE SPOTTED TO REHABILITATE THE BANG CHAK REFINERY IN THAILAND?
 - 2. OUR PRELIMINARY INVESTIGATION SHOWS THAT:-
 - 2.1 OWNERSHIP WILL CHANGE AT THE END OF 1984 FROM THE MILITARY TO THE PETROLEUM AUTHORITY OF THAILAND (P.T.T.)
 - 2.2 THE GAS AND FUEL REPRESENTATIVE DOES NOT OBJECT TO OUR PURSUING THE MATTER INDEPENDANT OF THE ADB.
 - 2.3 THE P.T.T. WILL CONTROL ON GOING OPERATIONS AND ARE LOOKING FOR INCREASES IN EFFICIENTY AS OF EARLY 1985.

NONE OF THESE DEVELOPMENTS CHANGES OUR INTENT.

- 3. WE HAVEINDIRECT CONTACTS WITH THE GOVERNOR OF THE P.T.T. AND PROPOSE TO APPROACH THEM BOTH FORMALLY AND INFORMALLY ON THIS PROJECT IN THE NEAR FUTURE. WE NEED YOUR INPUT BEFORE WE MOVE.
- 4. CAN YOU SUPPORT OUR EFFORT AS OUTLINED.

REGARDS
I.W. SHEDDEN
MANAGING DIRECTOR
SHEDDEN PACIFIC, MELBOURNE, AUSTRALIA.
248423 WORLDBANK
SPPLML AA38110

OFFICE MEMORANDUM

DATE: July 5, 1985

TO: ESPD I Staff

FROM: Masood Ahmed, Acting Chief, Energy Strategy and Preinvestment

Division I

EXT: 73996

SUBJECT: Annual Leave

During my absence on July 5, Uwe Richter will be in charge of the division.

cc: Rovani, Kalim, Bourcier, Hume, Sanders, Fish, Heron, Dosik, McCarthy, Iskander, Sadove (EGY).

MAhmed:hm

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W. Washington, D.C. 20433 U.S.A. (202) 477-1234 Cable Address: INTBAFRAD Cable Address: INDEVAS

June 27, 1985

Ir. G.L. Stassen-te Velde Technology and Development Group Twente University of Technology P.O. Box 217 7500 AE Enschede The Netherlands

Subject: Request to publish Bank data

Dear Ms. Stassen,

In reply to your letter of May 31, 1985 in which you asked permission to publish energy data from "The Energy Transition in Developing Countries" and the Energy Assessment Reports published by the World Bank, I hereby give you permission to publish the required data in your ESCAP training course manual.

Yours sincerely,

Robin Bates

Deputy Division Chief Energy Assessment Division

Energy Department

WFloor: mac

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N W Washington, D.C. 20433 U.S.A. (202) 477-1234 Cable Address INTBAFRAD Cable Address INDEVAS

May 22, 1985

Permissions Department Combustion Engineering, Inc. Windsor, CT 06095

Dear Sirs:

The Energy Department of the World Bank intends to publish in English a series of reports on power loss reduction in developing countries over the next two years. The first issue titled "Generating Plant Efficiency Improvement" for Indonesia will be published in September 1985. Copyright will be held in the name of The International Bank for Reconstruction and Development/The World Bank. Distribution will be worldwide.

The purpose of World Bank publications is to encourage and provide technical information for economic and social progress in the developing countries of the world. As a result, many hundreds of copies will be distributed without charge in these countries, as well as among international organizations working in the area of development economics.

We would like to include in this series of publications the following material for which you hold copyright: the Mollier Diagram. Full credit will, of course, be given to the source. If you wish a special form of citation to be used, please indicate it below:

Although we hope that, because of the character and use of the projected publications, you can give for inclusion of this material without fee, any fee requested will be paid in full before publication. Please indicate your agreement below and return two copies to me.

Sincerely yours,

Masood Ahmed

Deputy Division Chief

Energy Assessments Division

Energy Department

The foregoing application is approved subject to the conditions stated.

Approved:
By:
Date:

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W. Washington, D.C. 20433 U.S.A. (202) 477-1234 Cable Address INTBAFRAD Cable Address INDEVAS

May 9, 1985

Mr. Pericles de Amorim Figueiredo Secretario de Tecnologia Ministerio de Mines y Energia Brazil

Dear Sir,

I am very pleased to have received the final report from your "Workshop on Regional Cooperation on Energy Development". We are now reviewing the report with keen interest and will distribute it to other interested parties within the Bank. We will contact you should there be any opportunities for cooperation.

Thank you for your kind attention.

Sincerely,

Masood Ahmed

Acting Division Chief

Energy Assessments Division

Energy Department

misc flip Sherbing ZCZC DIST5457 RCA5716 Ahmes EGYEA REF : TCP FCA bod 1 RCA5716 248423 WORLDBANK IEIUUQ ENERGY G 1031 85-06-24 15:55 ATTN. NAIEM SHERBINY, ENERGY ASSESSMENTS DIVISION, ENERGY DEPT., WORLD BANK I AM SORRY WE FAILED TO COMMUNICATE ON THE TELEPHONE BECAUSE OF MY AILMENT. FOR INSTITUTIONAL REASONS I NEED CERTAIN SPECIFIC DETAILS: A) THE EXACT TOPIC OF YOUR RESEARCH B) THE NATURE OF THE SPONSORSHIP REQUESTED. IT IS IMPORTANT HERE TO SPECIFY THE ARRANGEMENTS YOU ARE PROPOSING FOR POSSIBLE PUBLICATION. C) THE FACILITIES YOU ARE REQUESTING FROM THE INSTITUTE. THE SIMPLEST FORMULA WHICH COMMITS YOU TO NOTHING AND COMMITS US TO NOTHING IS FOR YOU TO SPEND THESE TWO MONTHS IN OXFORD PRIVATELY AND TO COME TO THE INSTITUTE'S LIBRARY AS A LIBRARY READER. THE SECOND FORMULA INVOLVES A QUID PRO QUO. WE WOULD PROVIDE YOU WITH A DESK AT THE INSTITUTE AND ACCESS TO LIBRARY COMPUTER FACILITIES ETC. BUT IN EXCHANGE WE WOULD NEED TO HAVE THE RIGHT OF FIRST REFUSAL ON THE PUBLICATION OF A RELEVANT PART OF YOUR RESEARCH. THERE IS A CHARGE OF GBP 300 PER MONTH FOR VISITING SCHOLARS BUT I WOULD BE PREPARED TO WAIVE THIS IF YOU COULD NOT PERSUADE THE BANK TO BUT OUR MUTUAL AGREEMENT ON THE RESEARCH TOPIC SPONSOR YOUR VISIT. AND PUBLICATION IS ESSENTIAL. BEST REGARDS, ROBERT MABRO, OXFORD INSTITUTE FOR ENERGY STUDIES 248423 WORLDBANK 838771 ENERGY G =06241724

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ALT DID FROM YEAR

The Decade of Energy Policy

by Paul Kemezis and Ernest J. Wilson, III

Reviewed by A. Ferroukhi, Sr. Energy Planner (EGY)

This book provides a thorough analysis of energy policies adopted by the various categories of oil importing countries in their effort to adjust to the international shocks of the 1970s and the The authors describe the last decade as being an "Energy Policy Explosion Period." Passive and disjointed approaches to energy policy that characterized the period of cheap and abundant oil changed by the end of the 1970s. Whether large or small, rich or poor, socialist or capitalist, oil importing countries had to adapt their domestic policies and institutions to massive international disruptions, especially to the volatile fluctuations of oil prices over the course of the decade. development of these policies led to new energy regulations, laws, and in some ways government's involvement in demand management as well as traditional supply side policies. Oil price increases affected other energy resources and led to their development with the emerging role of nuclear, coal and renewables. The principal consequences of these policy changes led to increased share of government-to-government oil deals, to multiplied government-sponsored energy companies in importing countries, and to expanded energy planning by governments in their effort to control supplies, prices, and end-use of fuels.

Despite the fact that specific policies adopted by the three categories described in the book (the U.S., the other Industrialized Importers, and the Developing Oil Importers) vary widely, there is a final set of policy objectives that are common for all oil importers: "to obtain secure energy supplies from abroad at reasonable prices in the short-term while promoting increased domestic production, efficient use and fair allocation of energy in the long term." The premier objective was the intense drive by importing countries to improve short- and medium-term energy supply security after exporters took over control over oil management and ownership. They pursued this objective by seeking firmer arrangements for oil deliveries and by diversifying sources of oil and other imported fuels. This was done in the period 1973-80 mainly through increasing direct bilateral with oil producers. In the buyer's market after 1982 these deals diminished. Oil importing countries tried also to increase security of supplies through state-supported exploration for oil in their own national territories. This meant policies to help find new oil, gas, coal, and hydroelectric resources and also research into the development of new energy forms (solar, synthetic fuels, etc.). In this context, the authors acknowledged the role of the World Bank in the developing countries who set up several programs to improve the legal and physical infrastructure necessary to attract foreign firms to oil exploration in so-called marginal areas. There was considerable success in commercial oil finds in several Western African countries.

Looking towards the coming ten years, the authors conclude that so long as energy remains a precious commodity in world trade, and while "so much oil comes from the most unstable regions, there is little room for complacency. Governments are now very good at planning" today for yesterday's energy crisis. As oil scarcity grows and demand increases in the future, they anticipate "further volatility of markets, confronting energy-importing governments with serious policy challenges in the next decade and beyond."

Shred

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TO:

THE WORLD BANK, WASHINGTON D.C.

ATTN:

MASOOD AHMED, DEPUTY CHIEF,

ENERGY ASSESSMENT DIVISION, ENERGY DEPARTMENT - ROOM D-629

DATE:

5 JUNE 1985.

MANY THANKS YR TLX REF: EGYEA OF YESTERDAY.

I PROPOSE TO CALL TO SEE YOU AT YOUR OFFICE AT 2.30PM ON 7TH JUNE. LOOKING FORWARD TO MEETING YOU THEN.

REGARDS.

JOHN J. DUNNE,
DEVELOPMENT DIRECTOR,
CALOR CONSULTING LTD.,
DUBLIN.

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TO:

THE WORLD BANK, WASHINGTON D.C.

ATTN:

MR ROBIN BROADFIELD,

ROOM D-624;

ENERGY DEPARTMENT.

DATE:

30 MAY 1985.

FURTHER TO OUR TELCON TODAY, I CONFIRM THAT MR JOHN DUNNE DIRECTOR OF CALOR CONSULTING LIMITED, IRELAND, WILL RING YOU FROM MR S. MOUSSA'S OFFICE IN YOUR DEPARTMENT ON THE MORNING OF FRIDAY 7TH JUNE WHEN HE CALLS TO THE WORLD BANK TOGETHER WITH MR D.J. SHELLY, OUR CHAIRMAN AND MANAGING DIRECTOR. I UNDERSTAND THAT YOU ARE AGREEABLE TO SEEING MR DUNNE AND MR SHELLY TO DISCUSS NIGERIA AND SPECIFICALLY N.N.P.C.

MANY THANKS.

A. SHERWOOD, SECRETARY TO: MR JOHN J. DUNNE, DEVELOPMENT DIRECTOR, CALOR CONSULTING LTD., DUBLIN.

90963 CGAS EI 248423 WORLDBANK

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ALT RTD FROM: YEAM

NNNN

OFFICE MEMORANDUM

DATE: May 22, 1985

TO: Masood Ahmed, Deputy Chief, EGYEA

NAS

FROM: Naiem A. Sherbiny, EGYEA

SUBJECT: WDR 1985 - Background Staff Working Paper

- This memo records the status of an SWP I was asked to prepare as a background paper for the forthcoming World Development Report. I prepared the first draft of the paper under the title "Arab Finance and Developing Countries" in August 1984 while in EMENA. I revised the draft in November 1984 after coming to EGYEA. The revision was based on an understanding between Messrs. F. Colaco and J. Bharier. Since then, I have not had the time to finalize the paper. Meanwhile, I have received a long list of suggestions and critical comments from several reviewers, including staff of the WDR, Mr. I. Shihata, and the Executive Director's office. To respond properly to these and other comments, the paper needs to be restructured. I have the raw material necessary for the rewriting, but not the time.
- The time required to finalize the paper is about four net staffweeks (160 staff-hours). I was told by Mr. Colaco that he can no longer allocate time to my paper because he has reached the limit of his budget. Having discussed my work program for the next 12 months with you, we could see that a four-week assignment to finish the working paper is manageable during the summer 1985, but the question was the source of such allocation. Is it possible to get the time allocated from somewhere in the Energy Department budget?

NSherbiny:gt

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N W Washington, D C 20433 U S A (202) 477-1234 Cable Address INTBAFRAD Cable Address INDEVAS

May 14, 1985

Prof. Krishna K. Prasad University of Technology Den Dolech 2 P.O.Box 513 5600 MB Eindhoven The Netherlands

Dear Krishna:

Enclosed you will find copies of <u>Issues and Options in the Energy Sector</u> for the following countries: Kenya, Sri Lanka, Zimbabwe, Bolivia, Haiti, Mauritius, Papua New Guinea, Burundi, Malawi, Turkey, Bangladesh, Rwanda, Senegal, Peru, Mauritania, Liberia and Yemen Arab Republic.

Best regards,

Willem M. Floor Energy Department

Attachments

WF:mac

P.S.: We will forward Mauritania's report as soon as it is ready.

IMF Survey

WORLD ECONOMIC OUTLOOK

Heads of Major Nations Endorse OECD Proposal For a New Trade Round

Calling an open trading system an essential prerequisite to global prosperity, the leaders of seven industrial countries meeting in Bonn "strongly" endorsed a recent proposal that a new round of trade talks under the auspices of the General Agreement on Tariffs and Trade begin as soon as possible. The proposal had been put forth at the April 11–12 Ministerial Council meeting of the Organization for Economic Cooperation and Development (*IMF Survey*, April 29, 1985, page 129).

WEO 1985 . . .

Fund Staff Study Assesses Prospects For Industrial, Developing Countries

Short-term prospects for world economic growth are good, according to a newly released Fund staff report, but a number of major problems remain. The April 1985 edition of the *World Economic Outlook (WEO)* cautions that despite expected industrial country growth in the 3 percent range over the next two years—accompanied by inflation of just under 4 percent—the "continuation of high rates of unemployment in Europe and the existence of major financial imbalances in some countries" are causes for concern. Moreover, the report notes, prospects are mixed for developing countries. Although the rate of output growth in developing areas recovered to an estimated 3¾ percent in 1984, it remained unbalanced and left some countries with reduced per capita incomes.

In the medium term, according to the staff's "best estimate" of likely

policies in member countries, industrial countries should attain an annual average rate of growth of just over 3 percent. No change in the rate of inflation from the rate projected in the short term is foreseen for these countries. According to the report, these developments in industrial countries imply that indebted developing countries could achieve a rate of domestic output growth of about 4¾ percent for the balance of the decade.

The 1985 WEO, prepared by the staff of the Fund and released on April 29, focuses on the current situation and



Summit leaders (from left): Canadian Prime Minister Brian Mulroney, U.S. President Ronald Reagan, Japanese Prime Minister Yasuhiro Nakasone, U.K. Prime Minister Margaret Thatcher, Chancellor Helmut Kohl of the Federal Republic of Germany, French President François Mitterrand, and Italian Premier Bettino Craxi.

In their communiqué, issued on May 4, the heads of state or government and the president of the Commission of the European Communities stated that "most of us think" that this new round of multilateral trade negotiations should begin in 1986. However, no specific date was suggested in the communiqué.

While acknowledging that "world economic conditions are better than they have been for a considerable time," the leaders noted in the Bonn communiqué that much remains to be done in order to ensure that this "new prosperity" will be extended and sustained. One of the most important challenges facing the industrial countries, the communiqué stated, is to find ways to stop the growth of protectionism. The leaders also pledged to take a number of other steps to ensure the sustainability of the current economic recovery. "The best contribution we can make to a lasting new prosperity in which all nations (Please turn to page 154) short-term outlook for both industrial and developing countries. It presents a "baseline" (most likely) medium-term scenario for the world economy to 1990, primarily as a means of assessing balance of payments and growth prospects in developing member countries. The report studies the sensitivity of the outcome of the baseline scenario to changes in policy by developing alternative scenarios that assume different policies in member countries from (Please turn to page 149)

in this issue . . .

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WORLD ECONOMIC OUTLOOK

Industrial Nations Record Policy Successes, **But Imbalances, Structural Problems Remain**

The medium-term strategy employed by the major industrial countries recently to combat inflation and restore sustainable growth has achieved a number of notable successes, according to the 1985 edition of the Fund staff's World Economic Outlook (WEO). The strategy-which entails government spending restraint and a gradual reduction in the rate of monetary expansion-has reduced inflation more rapidly than expected and has led to a resumption of economic growth, albeit at a fairly modest rate outside the United States and Japan. Nonetheless, the WEO states, these successes have been accompanied by a number of important failures, including the persistence of high unemployment in Europe, large fiscal deficits and external account imbalances in the United States, and the persistence of high real interest rates.

According to the report, these problems raise the question of whether the policy strategy has been either deficient or improperly implemented—or whether structural rigidities and distortions have impeded employment and structural change. The WEO devotes considerable attention to the achievements and continuing problems of industrial country policy, and reviews various options for its improvement. Specifically, it considers whether government efforts should focus on industrial policy formulation or on policies to ensure that incentives to private initiative are adequate and effective. Fiscal Policy. Despite the common obiective of smaller fiscal imbalances, the combined deficit of the seven major industrial countries widened considerably between 1979 and 1983-by about 21/2 percentage points relative to gross national product (GNP), according to a supplementary section in the WEO on industrial country fiscal policy. The expanded deficits were mainly the result of high real interest rates and the impact of the 1980-82 recession on the growth of government indebtedness.

The WEO abstracts from cyclical influences on government revenue and expenditures to identify actual changes in the underlying fiscal stance, or the "fiscal impulse." It reports a moderate overall tightening of the collective fiscal policy stance of the industrial countries until 1983. At the same time, it notes the contrast since 1979 between the expansionary thrust of fiscal policy in the United States and the generally restrictive stance in Japan and most major European nations. In the United States, the WEO notes, the federal budget imparted an expansionary impulse equivalent to 21/2 percent of GNP between 1979 and 1983, while central government fiscal operations in the six other industrial countries resulted in a net withdrawal of stimulus on the order of about 1 percent of GNP.

A notable development in 1984 was the narrowing of the combined fiscal deficit of the seven major industrial countries-the first since 1979-which the WEO attributes wholly to expanded economic activity. Differences in fiscal tendencies between the United States and most other industrial countries, however, continued in 1984, the WEO comments. U.S. policy-both central and general government-remained expansionary (although the federal deficit declined by 3/4 of 1 percent of GNP), while central government policy in the other six countries was restrained and general government budgetary changes were neutral.

For the seven major industrial countries in 1985, the WEO projects a slightly expansionary composite fiscal thrust at the central government level and a similar positive impulse-equivalent to less than 1/2 of 1 percent of GNP-at the general government level. It projects that the federal deficit of the United States will widen slightly while that of the other nations narrows. For 1986, the Fund staff expects a slight contractionary composite fiscal impulse, with significant moves toward restraint in Japan and Canada and more moderate or marginal withdrawals of stimulus in several other countries, including the United States.

The WEO asserts that the threat posed by large deficits in a number of industrial countries-which are "generally regarded" as a major cause of high real interest rates in the past several years-has not been removed. Particularly in the United States, Canada, and Italy, the report states, the general government deficits projected for 1985 will still impinge on private savings "to a vastly greater degree" than during cyclical recoveries prior to the mid-1970s. The WEO comments that none of the major industrial countries has restored the "relatively neutral fiscal balance" that characterized uses of private savings before 1974.

In examining recent trends in private savings, the WEO observes that while the ratio of gross private savings to gross domestic product (GDP) has been relatively stable in each of the major industrial countries, there have been much wider variations in the disposition of savings. All countries, however, have experienced a significantly lower proportion of savings absorbed by gross private domestic investment during the

Major Industrial Countries: Selected Composite Data on Monetary Developments

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10.4	11.7	7.5	5.6	6.6	8.9	9.3	6.5	
11.5	11.0	10.0	9.5	9.6	9.4	10.1	7.5	
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4.3	3.1	1.9	0.0	1.4	4.1	5.7	3.7	
2.8	1.0	2.0	4.4	3.7	-0.9	-2.5	1.9	
-0.4	1.0	1.1	8.0	0.6	-2.9	-2.7	1.2	
	7.2 11.8 10.4 11.5 3.2 4.3 2.8	4.4 4.5 7.2 7.3 11.8 12.1 10.4 11.7 11.5 11.0 3.2 3.7 4.3 3.1 2.8 1.0	4.4 4.5 3.6 7.2 7.3 8.0 11.8 12.1 11.9 10.4 11.7 7.5 11.5 11.0 10.0 3.2 3.7 -0.4 4.3 3.1 1.9 2.8 1.0 2.0	4.4 4.5 3.6 1.1 7.2 7.3 8.0 9.2 11.8 12.1 11.9 10.4 10.4 11.7 7.5 5.6 11.5 11.0 10.0 9.5 3.2 3.7 -0.4 3.6 4.3 3.1 1.9 0.0 2.8 1.0 2.0 4.4	4.4 4.5 3.6 1.1 1.8 7.2 7.3 8.0 9.2 8.6 11.8 12.1 11.9 10.4 10.6 10.4 11.7 7.5 5.6 6.6 11.5 11.0 10.0 9.5 9.6 3.2 3.7 -0.4 3.6 -1.4 4.3 3.1 1.9 0.0 1.4 2.8 1.0 2.0 4.4 3.7	4.4 4.5 3.6 1.1 1.8 -0.3 7.2 7.3 8.0 9.2 8.6 6.7 11.8 12.1 11.9 10.4 10.6 6.3 10.4 11.7 7.5 5.6 6.6 8.9 11.5 11.0 10.0 9.5 9.6 9.4 3.2 3.7 -0.4 3.6 -1.4 3.6 4.3 3.1 1.9 0.0 1.4 4.1 2.8 1.0 2.0 4.4 3.7 -0.9	4.4 4.5 3.6 1.1 1.8 -0.3 2.8 7.2 7.3 8.0 9.2 8.6 6.7 4.6 11.8 12.1 11.9 10.4 10.6 6.3 7.5 10.4 11.7 7.5 5.6 6.6 8.9 9.3 11.5 11.0 10.0 9.5 9.6 9.4 10.1 3.2 3.7 -0.4 3.6 -1.4 3.6 4.9 4.3 3.1 1.9 0.0 1.4 4.1 5.7 2.8 1.0 2.0 4.4 3.7 -0.9 -2.5	4.4 4.5 3.6 1.1 1.8 -0.3 2.8 5.1 7.2 7.3 8.0 9.2 8.6 6.7 4.6 3.6 11.8 12.1 11.9 10.4 10.6 6.3 7.5 9.0 10.4 11.7 7.5 5.6 6.6 8.9 9.3 6.5 11.5 11.0 10.0 9.5 9.6 9.4 10.1 7.5 3.2 3.7 -0.4 3.6 -1.4 3.6 4.9 2.7 4.3 3.1 1.9 0.0 1.4 4.1 5.7 3.7 2.8 1.0 2.0 4.4 3.7 -0.9 -2.5 1.9

Data: IMF, World Economic Outlook, 1985

¹The figures shown represent changes from year-end to year-end.

²Roughly approximated through deflation based on changes in gross national product (GNP) deflators for fourth quarters of

³Based on average stock of money during the year.

World Economic Outlook: Summary of Contents

The 1985 edition of the Fund staff's World Economic Outlook (WEO) is divided into three main chapters, several supplementary notes, and a statistical appendix. The first chapter, "The World Economy to 1990: Prospects and Issues" (IMF Survey, April 29, 1985, page 140), provides a general overview of some of the issues covered in depth in the other two chapters. This chapter assesses the current economic situation in industrial and developing countries and prospects for the short and medium term, and discusses a number of related policy issues. The second chapter, "Current Situation and Short-Term Prospects," describes the policies that fostered the economic recovery in the industrial countries and analyzes the debt problems and economic situations of developing countries. This chapter provides a detailed analysis of current domestic and external developments and of prospects through 1986. The third chapter, "Medium-Term Scenarios," discusses the projections of the Fund staff for the world economy in the medium term. It provides a thorough analysis of the likely impact of different sets of policies and develops alternative economic scenarios for both

industrial and developing countries.

The latest World Economic Outlook also includes nine short topical sections, termed "supplementary notes." Industrial country topics include fiscal and monetary policies, estimates of growth potential, and structural policies. With respect to developing countries, the supplementary notes analyze the impact of the external environment and domestic policies on their economic performance and discuss probable trends in capital flows to these countries. Two supplementary notes center on commodities and discuss the current situation and future prospects for non-oil primary commodity prices and the world oil market. An additional supplementary note deals with economic developments in Eastern Europe and the U.S.S.R. A statistical appendix contains 56 tables expanding the data used in the body of the report.

The WEO is available at a price of \$15 for airmail delivery and \$12 for surface mail (\$11 airmail and \$8 surface mail for university libraries, faculty members, and students). Copies may be obtained by writing to Publications, Box S-168, International Monetary Fund, Washington, D.C. 20431, U.S.A.

past two years than during earlier recoveries—owing mainly to the sharp rise in the share needed to finance larger deficits. The WEO notes that the United States has been able to maintain the highest industrial country share of savings flowing into private domestic investment (89 percent) in the face of a sharp rise in its general government deficit only because of a massive increase in the net inflow of foreign savings.

For countries with large shares of savings still being absorbed by government borrowing—and especially the United States—a "substantial reduction of government financing requirements" is one element necessary for any full recovery from recession, according to the WEO. The report does not consider "feasible for any extended period," substantial rises in savings ratios or continuing massive drains on the savings of other nations. It notes that if European economic recovery gains more momentum—along with a revival of growth in the developing

world—capital flows to the United States would be either limited or reversed, thereby curtailing funds available for investment. On the other hand, the report cautions, continued drains on foreign savings to sustain investment in the United States will tend to generate renewed upward pressure on interest rates.

For countries that have achieved considerable fiscal restraint in the early 1980s, the WEO terms "worrisome" the degree to which savings diverted from financing of fiscal imbalances have gone into net foreign investment, rather than into private domestic investment. The report does, however, applaud the arresting of the tendency toward continued expansion of the role of government in the major industrial countries through the general pursuit of fiscal policy restraint. Monetary Policy. In contrast to the substantial shifts in monetary conditions during 1979-83, the monetary environment was relatively more stable in 1984, the WEO reports. The major industrial countries generally maintained the growth of key monetary aggregates within their target ranges, and changes in income velocity of the aggregates were generally closer to their historical trend changes. In addition, the staff report notes, while real interest rates remained high, their average values were less variable.

For 1985, the WEO states, the major industrial countries have indicated a continuing commitment to anti-inflation policies. Those countries that employ monetary targets have announced further reductions in the growth rates (or ranges) set for these targets.

Between mid-1982 and mid-1983, the WEO observes, a number of industrial countries pursued relatively accommodating monetary policies that permitted sharp declines in short-term interest rates. Since mid-1983, however, monetary growth has been much closer to target ranges, according to the staff report. Consequently, average growth rates of narrow and broad money-both 9-10 percent annually in 1982 and 1983eased in 1984 to 6.5 percent for narrow money and 7.5 percent for broad money. This slowdown did not, however, prevent a further rise in nominal GNP growth in 1984; rather, it was associated with a continued improvement in the "split" between output and price increases, accordto the WEO.

The strengthening of GNP growth combined with monetary deceleration in 1984 meant that the income velocity of both measures of money increased on average—returning to the trend evident prior to the acceleration of inflation in the late 1970s. For 1985, the WEO does not project as sharp a change in velocity, since the lagged effects of the fall in interest rates and inflation rates will no longer be as significant. In general, the Fund staff foresees no substantial changes in monetary conditions of the major industrial countries from 1984.

Turning to interest rates, the WEO observes that there remains "considerable uncertainty" about the primary cause of the persistently high real interest rates. The report examines the evolution of real interest rates and reviews various explanations of their high levels, but asserts that there is no clear answer. The report projects that most of the purported causes—such as large fiscal deficits—will recede in importance with the passage of time,

WEO 1985 ...

but concludes that it would be "unwise to assume" that nominal rates adjusted for current inflation will fall to the average levels of the 1960s and 1970s.

Structural Issues. In another supplementary section, the WEO discusses some of the structural problems that affect the economic performance of the industrial countries and reviews policy options to ameliorate them. The report maintains that industrial countries can expect to continue to face important structural obstacles to achieving full employment and satisfactory growth over the medium term -especially in a number of European countries. The WEO projects that output in most of the large industrial countries will remain well below estimated potential levels; moreover, growth rates of potential output are expected to average about 2 percentage points below the actual growth rates that were attained from 1960 to 1972.

Among the structural problems addressed in the WEO—most of which have special relevance for the European countries—are the decline in the growth rate of the net capital stock, labor market rigidities (including wage indexation, limited geographic mobility of the labor force, and high unemployment benefits), and the failure to harmonize national standards on products, which act as barriers to trade and specialization.

In discussing structural policy options, the WEO notes that the debate generally focuses on two somewhat contradictory processes: deregulation-most prominent in the United States—and industrial policy formulation. The staff report observes that the scope for deregulation may be limited in countries other than the United States. It notes, however, that the option of industrial policy formulation must be approached cautiously. Such policies can include rationalizing of tax structures, providing subsidies for replacing obsolete capital equipment or to support research and development in new technologies, orienting public spending directly toward industrial restructuring and toward developing and applying new technologies, introducing programs to reduce unemployment, enacting incomes policies where feasible, eliminating subsidies to industries that no longer enjoy a comparative advantage, and adopting fiscal and monetary policies that are stable and balanced, in order to foster increased investment.

How Capital Flows and World Oil Prospects Affect the Outlook for Developing Nations

An important element complicating judgments about prospective capital flows to developing countries is the uncertainty that surrounds the world oil situation. In two supplementary sections of the World Economic Outlook (WEO), the Fund staff takes a close look at the prospects for oil and-in light of these prospects and other developments-at the likely trends in capital flows to developing countries. Capital Flows. The flows of investment funds to developing countries in the next several years will depend, more than at any time in recent history, on developments in both capital-exporting and capital-importing countries, one supplementary note to the WEO suggests. Both groups of countries are experiencing novel conditions, it states, and future financing flows will depend more on policies pursued by these groups of countries than on historical trends.

Capital-importing countries, the WEO points out, are still in relatively early stages of recovery from the disturbances of the past decade, including the international debt crisis and the severe global recession. For the time being, it suggests, "they have no option but to adjust their absorption of external goods and services to levels dictated by their actual export earnings and the greatly reduced net financial flows that remain available to them." Over time, however, these countries are likely to seek renewed growth of supplementary resources from abroad. In order to do so, the report argues, they must restore confidence in their ability to finance debt by reducing excessive debt ratios-which may require holding current account deficits below levels that could eventually prove sus-

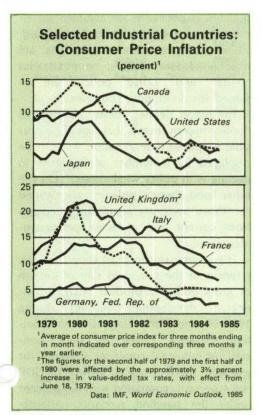
Among the potential capital exporters, according to the staff analysis, marked shifts in the composition and disposition of national savings have been occurring over the past 10–15 years, with implications for both the availability and the cost of credit for borrowers in developing countries. And, the report states, the sudden emergence of the United States as an external deficit country on a major scale "casts doubt on whether the industrial world as a whole will resume its traditional role as a large-scale source of

finance to developing countries."

The WEO describes the traditional global pattern of net capital flows that characterized the 1950s, 1960s, and early 1970s. During this period, it states, the industrial countries as a group were net suppliers of both real resources and the associated financing to the developing countries. Relatively high incomes in the industrial countries generated savings somewhat in excess of their domestic investment outlays, and there was a propensity to invest these savings abroad.

The WEO supplementary note describes how this pattern changed during 1974 through 1981, when two waves of major oil price increases led to massive upsurges in investable cash surpluses of the oil exporting countries, and resulted in an expansion of lending to non-oil developing countries by private commercial banks. The sharp change in oil prices, the report points out, also led to a precipitous drop in the savings of the industrial countries in relation to their domestic investment expenditures, with the result that the net flow of their own financial resources into international channels was sharply curtailed. In contrast to the preceding six years, when net capital flows to other countries absorbed an average of 21/2 percent of industrial countries' gross national savings, during 1974-81 these flows absorbed only about 3/4 of 1 percent of the aggregate national saving of the industrial countries, the report

In 1984 the bulk of financing of the current account deficit of the indebted developing countries came from longterm official credits, official transfers, and direct investment, according to the WEO. "At no time since 1973 has the role of private lending institutions in this financing been as small as it is at the present time," it states. The report anticipates that revival of large financial surpluses among the oil exporters is unlikely during the remainder of the current decade. It suggests that the scope for growth in capital flows to developing countries will depend, therefore, "on the ability and willingness of savers and investors in the industrial countries to resume their former role as net suppliers of funds in international markets."



World Oil Situation. In another supplementary section, the WEO notes that in 1984, the annual average export price of the major oil exporting countries was still more than 90 percent higher than in 1978 in real terms (i.e., when deflated by import prices of these countriesdespite a nearly 50 percent decline from 1979 to 1983 in the volume of oil exports of the countries belonging to the Organization of Petroleum Exporting Countries (OPEC). The main reason for the resilience of the oil price has been "the willingness and ability of major oil exporting countries to adjust output to the fall in world oil consumption," the report states. It further suggests that while it is not possible to project the price of oil with any degree of confidence, the oil market is likely to "remain weak during the remainder of 1985 and in 1986-with a possibility of recurrent pressure on spot market prices."

The longer-term outlook, according to the WEO, is for a gradual shift in demand and supply conditions. In particular, the Fund staff anticipates that total oil supplies outside the OPEC area will be expanding at a considerably slower pace than in the recent past. This development, juxtaposed with some increase in world oil demand, should result in the price of oil remaining unchanged in real 1987-90. terms during the report concludes.

Outlook Projects More Balanced Expansion

(continued from front page) those assumed in the baseline scenario. Analysis of these alternative scenarios, the report states, provides "a basis for judgments about the kind of policies that would improve the prospects for sustainable growth and balance of payments stability in the world economy at large."

Short-Term Prospects. Unemployment in Europe is at record postwar levels, even though 1984 marked the third consecutive year of economic recovery for the industrial countries. And with the weighted average growth rate of industrial countries projected to decline in 1985, the report concludes that the remaining labor market slack in European countries will be taken up only very slowly. The WEO finds this development to be "highly unusual by historical standards" and "a distinguishing and troublesome aspect of the present expansion."

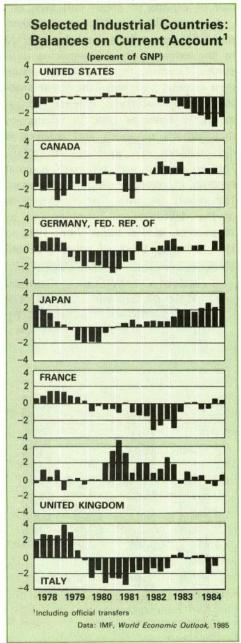
A second worrisome feature of the short-term outlook, according to the report, is that the financial imbalances among industrial countries, notably in budgetary and current account positions, "have continued and in some case intensified." In 1984, the WEO points out, "the major divergence between the external positions of the United States and Japan, which had emerged in 1983, widened markedly." Assuming no change in nominal exchange rates and oil prices, and given the prospect of continued moderate growth in both industrial and developing countries, the staff report projects this trend in the external positions of the major industrial countries to continue over the short term. The deficit in the U.S. current account is projected to increase to \$124 billion in 1985 from \$102 billion in 1984, and Japan's current account surplus is projected to increase to \$40 billion in 1985 from \$35 billion in 1984.

The report points to significant differences in economic policies, particularly fiscal policies, as a major cause of the developments leading to the divergence in current account balances among industrial countries. It asserts that in the United States, tax reductions designed to improve incentives, in conjunction with a rapid increase in expenditures for national defense and debt service, led to a sharp widening of the budget deficit. On

the other hand, the report says, other major countries, notably the Federal Republic of Germany, Japan, and the United Kingdom, introduced substantial measures of fiscal restraint.

Developing Country Prospects. The WEO anticipates a consolidation of economic growth at about 4 percent in 1985 for the developing world as a whole and stabilization of the combined external deficit at about its present level. The ratio of external debt to exports is projected to show a further sizable decline.

The staff notes, however, that these improvements in the aggregated figures hide wide variations in the performance of individual developing countries. A breakdown of developing countries by



financial situation and economic structure not only reveals substantial differences in performance but also sheds some light on the reasons for these differences. The WEO reports, for example, that the combined deficit of countries classified as market borrowers (countries whose borrowing over 1978-82 was preponderantly from private creditors) declined dramatically from \$72 billion in 1981 to \$8 billion in 1984. But the combined deficit of official borrowers (countries that borrowed primarily from official creditors) fell only marginally, from \$19 billion to \$17 billion. As a result, according to the report, "the market borrowers achieved a current account deficit equivalent to only 2 percent of exports of goods and services, whereas the combined deficit of official borrowers remained close to half of exports of goods and services."

A country's current account adjustment, the report finds, was also affected by the extent of its debt-servicing difficulties. Countries that incurred arrears on their external payments—the "debt problem" group—achieved external adjustment 3½ times as great in relation to their exports of goods and services as did countries that were not in arrears. This adjustment was achieved at great expense in terms of imports, however. The report discloses that "the imports of the debt-problem countries fell by 26 percent, in real terms, from 1981 to 1984, whereas those of other indebted

developing countries increased by 8 percent."

The WEO draws two conclusions from this analysis, both of which it considers relevant to the future prospects of developing countries. First, the report finds that "heavy borrowing at market rates carries with it the danger of having to undertake substantial and potentially disruptive adjustment if market conditions change." And second, it finds that "the adjustments that have been undertaken in response to the financing constraints of the post-1982 period appear to have improved the capacity of the countries that have adjusted to benefit from the economic recovery in the industrial world." Medium-Term Scenarios. The baseline scenario developed in the report envisages an annual rate of growth in industrial countries averaging just over 3 percent for 1985-90. In addition, the Fund staff expects fiscal measures in the United States, plus continued adherence to programs to reduce structural fiscal deficits in other countries, to result in some decline in real interest rates over the remainder of the decade. The staff also assumes "a moderate weakening of the U.S. dollar in real terms."

Based on these industrial country developments, the WEO projects a rate of domestic output growth of about 43/4 percent for the indebted developing countries for the balance of the 1980s. The current account deficit of these coun-

tries, expressed as a percentage of exports of goods and services, is projected to remain in the range of 6–8 percent, resulting in a significant decline in the ratio of debt to exports of these countries—from 151 percent at the end of 1984 to 108 percent at the end of 1990.

The report presents four variants of the baseline scenario: in the first two, baseline assumptions for developing countries are retained, while "better" and "worse"

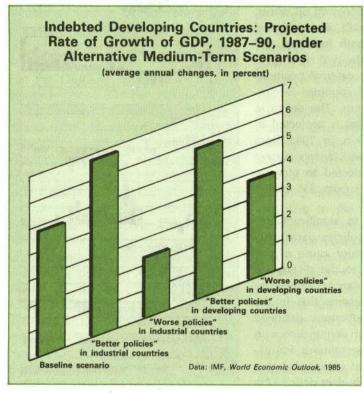
policies, respectively, are assumed for industrial countries; in the third and fourth variants, the baseline assumptions are maintained for industrial countries, but "better" and "worse" policies are assumed for developing countries.

The report defines "better policies" as "policy improvements that would be possible if special determination were to be displayed by a number of countries in dealing with policy weaknesses." On the other hand, "worse policies" are defined as "those involving significant slippages from current and expected policy implementation."

The accompanying chart shows the differences in the projected rate of growth of gross domestic product (GDP) in indebted developing countries during 1987–90 under the alternative mediumterm scenarios. Under the "better policies" in industrial countries scenario, for example, the real rate of growth of GDP is 6.4 percent, compared with 4.8 percent under the baseline scenario. Alternatively, "worse policies" in industrial countries reduce the average annual rate of growth of output of indebted developing countries to 2.3 percent.

A comparison of all five scenarios shows that the worst scenario for indebted developing countries, in terms of growth of output, would be "worse policies" in industrial countries. As a result of the assumptions of this scenario, the growth rate of industrial countries is lower than under the baseline scenario, and interest rates are higher. As a result, the report anticipates, developing countries would face a scarcity of external financing combined with lower export earnings. And lower export volumes, combined with a deterioration in the terms of trade for non-oil primary commodities, higher interest rates and spreads, and lower official development assistance, would cause import volumes of the indebted developing countries to grow annually by almost 5 percentage points less than in the baseline scenario.

The WEO also looks at the effects of alternative policy assumptions on other variables, including rates of growth of imports, ratios of the current account balance to exports, debt-service ratios, and total external debt outstanding. The report discusses at length all the outcomes under the alternative scenarios, presenting them in detail in statistical appendices to the report.



Exchange Rates and Exchange Arrangements, March 29, 19	e Rates and Exchange Arrangemen	nts, March 29, 198
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Member (currency)	Exchange Rate Pegged to	Exchange Rate ¹	Exchange Rate Otherwise Deter- mined ^{2,3}	Member (currency)	Exchange Rate Pegged to	Exchange Rate ¹	Rate Otherwise Deter- mined ^{2,3}	Member (currency)	Exchange Rate Pegged to	Exchange Rate ¹	Rate Otherwise Deter- mined ^{2,3}
fghanistan				Honduras (lempira)	\$	2.00		Sierra Leone			
(Afghani) ⁴			50.60	Hungary (forint)4	bskt	51.0708		(leone)	SDR	6.27042	6.32562
geria (dinar)4	bskt	5.1041	30.00	Iceland (króna)			40.56	Singapore (dollar)	bskt	2.2083	
	DSAL	5.1041		India (rupee)			12.429606	Solomon Islands			
ntigua and Barbuda		0.70		Indonesia (rupiah)4			1,102.00	(dollar)	bskt	1.38947	
(EC\$) ⁵	\$	2.70		A CONTRACTOR OF THE PARTY OF TH				Somalia (shilling)4,7			37.00
rgentina (peso			240.74	Iran, Islamic Rep.	onn	00.20	02 1100	South Africa (rand)			1.90476
argentino)4			342.74	of (rial) ⁴	SDR	92.30	93.1126				172.10
ustralia (dollar)			1.41824	Iraq (dinar)	\$	0.310857		Spain (peseta)			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	L.I.	01 676		Ireland (pound)6			1.0140	Sri Lanka (rupee)	7 1.	0.50	26.95
ustria (schilling)	bskt	21.676		Israel (shekel)4			858.50	Sudan (pound) ⁴	\$	2.50	
ahamas (dollar)4	\$	1.00	0.075	Italy (lira)6			1,991.38	Suriname (guilder)	\$	1.785	
lahrain (dinar)		00.00	0.376	Ivory Coast (franc)	F	50.00		Swaziland			
langladesh (taka)4	bskt	26.50		Jamaica (dollar)4		00.00	5.48	(lilangeni)	R	1.00	
arbados (dollar)	\$	2.0113		Japan (yen)			252.50	Sweden (krona)	bskt	8.8925	
1-1-1-146			62.07	Jordan (dinar)	SDR	0.387747	0.395578	Syrian Arab Rep.			
elgium (franc) ^{4,6}		0.00	62.07	Kampuchea,	SUN	0.307747	0.555570	(pound)4	\$	3.925	
elize (dollar)	\$	2.00						Tanzania (shilling)	bskt	17.8979	
enin (franc)	F	50.00		Democratic				Thailand (baht)	bskt	27.55	
hutan (ngultrum)	Re	1.00		(riel) ^{8,9}				Togo (franc)	F	50.00	
olivia (peso)4	\$ 50	0,000		Kenya (shilling)	SDR	15.896735	16.0367		1	30.00	
				Korea (won)	1846	A CONTRACTOR OF THE PARTY OF TH	850.30	Trinidad and	074	92300 Makes	
lotswana (pula)	bskt	1.71116	7	Kuwait (dinar)	bskt	0.30221		Tobago (dollar)	\$	2.4090	
Brazil (cruzeiro)4.7			4,430.00	Lao People's Dem.		0.00222		Tunisia (dinar)	bskt	0.85605	
Burkina Faso (franc)	F	50.00		Rep. (kip) ⁴		10.00		Turkey (lira)4			492.85
Burma (kyat)	SDR	8.5085	8.58341	Lebanon (pound)8		10.00		Uganda (shilling)4,8			
Burundi (franc)	SDR	122.7	123.780	and the same of the same of the same	Hilly	1		United Arab			
				Lesotho (loti)	R	1.00		Emirates (dirham)			3.671
Cameroon (franc)	F	50.00		Liberia (dollar)	\$	1.00					
Canada (dollar)			1.3670	Libya (dinar)	\$	0.296053		United Kingdom			0.00450
Cape Verde				Luxembourg				(pound)			0.80450
(escudo)	bskt	93.95		(franc)4,6			62.07	United States			
Central African				Madagascar				(dollar)			1.00
Republic (franc)	F	50.00		(franc)	bskt	677.77		Uruguay (new peso)			91.25
Chad (franc)	F	50.00						Vanuatu (vatu)	SDR	100.6	101.486
onau (mane)	of arrea	50.00		Malawi (kwacha)	bskt	1.61708		Venezuela			
Chile (peso)4,7			146.99	Malaysia (ringgit)	bskt	2.5203	120222	(bolívar)4	\$	7.50	
China				Maldives (rufiyaa)	100	Barren 1	7.05	Viet Nam (dong)4	SDR	10.37883	10.4702
(renminbi)4	bskt	2.8199		Mali (franc)	F	50.00		Western Samoa	SUK	10.37663	10.4702
Colombia (peso)4,7		ATTENDED OF	126.27	Malta (lira)	bskt	0.482649		(tala)	bskt	2.31214	
Comoros (franc)	F	50.00	120.27	Mauritania (ouguiya)4.	B bskt			***************************************	nawr	2.31214	
Congo (franc)	F	50.00		Mauritius (rupee)	bskt	15.970		Yemen Arab Rep.		5.860	
Jongo (mane)		50.00		Mexico (peso)4	Bant	10.570	208.48	(rial)	\$	5.860	
Costa Rica (colón)4			49.00	Morocco (dirham)			9.7023	Yemen, People's	Total a	0.015000	
Cyprus (pound)	bskt	0.639593			held	43.852	3.7023	Dem. Rep. (dinar)	\$	0.345399	
Denmark (krone) ⁶	Done	0.00303	11.015	Mozambique (metical)	bskt			Yugoslavia (dinar)4			249.984
Ojibouti (franc)	\$	177.721	11.013	Nepal (rupee)4	bskt	18.30		Zaïre (zaïre)			47.2
Dominica (EC\$) ⁵	\$	2.70		Netherlands (guilder)6			3.4820	Zambia (kwacha)4,8	bskt		
Dollillica (ECD)	*	2.70		New Zealand (dollar)			2.1561	Zimbabwe (dollar)	bskt	1.53728	
Dominican Rep.				Nicaragua				\$ U.S. dollar	R	South African	rand
(peso) ⁴			3.30	(córdoba)4	S	10.00		£ pound sterling	bskt	currency bas than SDR	ket other
			67.175	Niger (franc)	F	50.00		F French franc P Spanish peseta		than SDR	
Ecuador (sucre)4		0.70	07.175	The second second	A I I	00.00		r opanish peseta	Re	Indian rupee	
Egypt (pound)4	3	0.70		Nigeria (naira) ^{4,8}				1 Rates as reported	to the Fun	d and in terms	of currency
El Salvador (colón) ⁴	2	2.50		Norway (krone)	bskt	8.8875		comits man comit line	todi ratos	datarminad by	backate of
Equatorial Guinea		50.00		Oman (rial Omani)	\$	0.345395		2 currencies are in 2 Market rates in ci 3 Under this headir scribe their exch independently or dicators (see foo	urrency u	ts per U.S. do	lar.
(franc) ⁴	F	50.00		Pakistan (rupee)			15.9078	3 Under this heading	ng are liste	d those memb	ers that de-
Tthionia /him		2.07		Panama (balboa)	\$	1.00		scribe their exch	ange rate	arrangements	as floating
Ethiopia (birr)	\$	2.07		Papua New Guinea				dicators (see foo	tnote 7) ar	d certain other	r members
Fiji (dollar)	bskt	1.17661		(kina) ⁸	held			whose exchange scribed in this tab are given for the c and for those tha	arrangeme	nts are not ot	herwise de-
Finland (markka)	bskt	6.428	2.220		bskt	240.00		are given for the	urrencies t	hat are peoged	to the SDR
France (franc) ⁶	HI CONT	86.05	9.4270	Paraguay (guaraní) ⁴	\$	240.00	9 425 57	and for those that	t participa	e in the Europ	ean Mone-
Gabon (franc)	F	50.00		Peru (sol) ^{4,7}			8,425.57	tary System (see	tootnote bi		
Dambie The				Philippines (peso)			18.431	⁴ Member maintain dual exchange m	arket. A de	scription of the	e member's
Gambia, The		F 00		Portugal (escudo) ⁷			171.319	exchange system the Annual Repor	as of Dece	ember 31, 1983	is given in
(dalasi) ⁴	£	5.00		Qatar (riyal)			3.64	change Restriction	ns, 1984.	iye Allaligeme	into and EX-
Germany, Fed. Rep. o)†		NOT ESTA	Romania (leu) ⁴	bskt	12.85	Hall Street	5 East Caribbean of	lollar.	the Endard	Donuklia -
(deutsche mark) ⁶			3.0930	Rwanda (franc) ⁴	SDR	102.71	103.614	Bast Caribbean of Belgium, Denma Germany, Ireland lands are particip vention mechanis and maintain may case of the Italiar transactions in the	I, Italy, Lux	embourg and	the Nether-
Ghana (cedi)			50.00	St. Christopher			100	lands are particip	ating in the	exchange rat	e and inter-
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Grenada (EC\$)4,5	\$	2.70			0.00			case of the Italian	lira, 6 per	ent) for excha	nge rates in
	100			St. Lucia (EC\$)5	\$	2.70		transactions in th	e official n	arkets between	n their cur-
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Guinea (syli)4	SDR	24.6853	24.9026	São Tomé and	75			, cies.			
Guinea-Bissau				Principe (dobra)	SDR	45.25	45.6484	Exchange rates a	adjusted ac	cording to a s	et of indica-
(peso)	SDR	84.054	84.7940	Saudi Arabia (riyal)	NOTICE OF		3.605	8 Exchange rate da	ata not avai	lable.	
	bskt	4.30		Senegal (franc)	F	50.00	11 11 130	9 Information on ex	change an	rangements no	t available.
Guyana (dollar)	DSBI									ata: IMF Trea	

SELECTED TOPICS

1984 Industrial Output Of Developed Countries Showed Rapid Expansion

Production in the industrial countries gathered momentum in 1984, with industrial output expanding by 7.1 percent, compared with 3.1 percent in 1983, according to data in the May issue of *International Financial Statistics*. The aggregate index of industrial production, which incorporates seasonally adjusted data on the manufacturing output of 19 countries, reached a record annual average of 106 (1980=100) in 1984—an increase of 10.4 percent from the trough of 1982.

The 12 countries reporting data for the full year all recorded output gains in 1984, with the sharpest registered by Japan (11.4 percent) and the United States (11.0 percent). U.S. output in 1984—18.1 percent above the 1982 trough—experienced rapid growth during the first three quarters before declining marginally in the last quarter. Japanese output in 1984 was 15.8 percent above 1982 and reflected gains in all four quarters of the year. Canadian output also strengthened in 1984, growing by 8.3 percent, 15.6 percent above the 1982 trough.

In Europe, output gains were more moderate, with the exception of sizable increases in Denmark and Norway. Danish industrial production grew by 10.4 percent in 1984, 14.7 percent above 1982, while in Norway output increased by 6.6 percent, 14.1 percent above 1982. Increases in France, the Federal Republic of Germany, and Italy averaged slightly more than 3 percent—well above 1983 levels—

while output in the United Kingdom grew by a modest 1.0 percent, slowing from 3.0 percent in 1983. Industrial production in Australia has fluctuated sharply, with output falling by 4.9 percent in 1982 and by 8.2 percent in 1983, and recovering strongly (by 7.6 percent) in 1984.

Sturc Lecture . . .

Lord Roll Blames Monetary, Fiscal Policies For Poor Performance of European Economies

Macroeconomic policies—not national characteristics—are at the root of Europe's relatively weak economic record in recent years, according to an eminent British economist. Delivering the second annual Ernest Sturc Memorial Lecture in Washington on April 11, Lord Roll of Ipsden compared European economic performance with that of the United States and Japan and found it "lagging" in several respects:

- Economic growth. During 1983–85, he said, "the U.S. economy will have grown 12.5 percent, the Japanese 12 percent, and the European 6 percent."
- Inflation. Forecasts for 1985, according to Lord Roll, call for inflation rates of 4.5 percent in the United States, 2.5 percent in Japan, and 6.5 percent in Europe.
- Employment. The United States has created 20 million jobs in the past ten years, while Europe has lost 2 million, Lord Roll said. He added that the European jobless rate is expected to be 11.5 percent in 1985, compared with a U.S. rate of 7 percent and 2.5 percent in Japan.
- Capital spending. Investment in manufacturing rose by 86 percent in the U.S. economy from 1973 to 1981, he said, "but only 9 percent in [the Federal Republic of] Germany and 7 percent in France, while it actually declined 15 percent in Britain and 8 percent in Italy."

In searching for explanations of this disparity, Lord Roll said, "the evidence of cultural, social and historically conditioned patterns is too strong to be totally ignored." Nevertheless, he added, it would "be rash to embrace a type of explanation that relies on immeasurable, and clearly variable, sociological or cultural factors" that have no clear or quantitative relationship with the facts to be

of Selected	d Coun	tries	
1980	1981	1982	

	1980	1981	1982	1983	1984
Industrial Countries	-1.0	0.0	-4.0	3.1	7.1
United States	-4.0	3.0	-8.7	6.4	11.0
Canada	-1.0	1.0	-10.9	6.7	8.3
Japan	4.2	1.0	0.0	4.0	11.4
France	-2.0	-2.0	-2.0	1.0	3.1
Germany, Fed. Rep. of	0.0	-2.0	-3.1	0.0	3.2
Italy	5.3	-2.0	-3.1	-3.2	3.3
United Kingdom	-6.5	-3.0	2.1	3.0	1.0

Data: IMF, International Financial Statistics

explained or the remedies to be applied. On the other hand, he noted, the influence of government policy "is very potent on both sides of the Atlantic and the Pacific. . . . Whatever one may think of the importance of some aspects of national character, . . . differences in policy are more important and certainly more effective in the short term."

"My broad conclusion," Lord Roll asserted, ". . . is that policy in the broadest sense, and more particularly macroeconomic policy and its fluctuation from time to time as between Europe and the



Lord Roll

other countries of the Western world, are the most important factors in explaining different performance here and there and at one time compared with another."

Economic Integration. Lord Roll acknowledged the efforts of the European Community (EC) to improve policy actions among its member states. "Nevertheless," he said, "an objective view of the accomplishments of this apparently powerful, and certainly large, complicated and costly apparatus cannot lead to anything but disappointment in even the most enthusiastic supporters of the basic idea of European unity, such as myself."

He singled out the EC's Common Agricultural Policy (CAP) as the most important area of "Community action," but maintained that "it can hardly be said to have been an unqualified success even if one puts aside any doctrinal, or indeed practical, objections to its protectionist characteristics." Taking the audience through a country-by-country review of results under the CAP, Lord Roll noted that "there is fairly widespread discontent of precisely those it is designed to help—the farmers." The review, he said, "makes one wonder whether the whole policy—cost or no cost—is worthwhile."

Apart from agriculture, the British economist asserted, open or covert subsidies or discriminatory practices have led to "flaws in the supposed existence of a

Lecture Memorializes Former Fund Official

The Sturc Memorial Lecture on April 11 was the second in an annual series on international economic relations under the auspices of the School of Advanced International Studies of The Johns Hopkins University. Paul A. Volcker, chairman of the U.S. Federal Reserve Board, introduced the speaker, Lord Roll of Ipsden, whose lecture was entitled "Whither Europe in the World Economy?"

Lord Roll, chairman of S.G. Warburg & Co. Ltd., served previously as director of the Bank of England, chancellor of the University of Southampton, under secretary of the U.K. Treasury, permanent under secretary of state for the Department of Economic Affairs, and U.K. Ex-

free, competitive common market." The EC has tried to foster common projects "to counter the accusation of industrial laggardness," he said, "but so far with only limited success." As for the general instruments of macroeconomic policy, which he said were far more significant for economic performance, "the record is not brilliant either." Judging the EC by what it does rather than what it says, he argued, policy coordination does not get high marks. "Neither when the members pursue different policies, nor when they-as happens from time to timepursue the same, can the community be said to have been successful in that elusive search for sustainable, non-inflationary growth," he said. "The 20 million unemployed are proof of that failure."

Lord Roll expressed doubt that recent proposals of the European Commission for improving both supply-side and demand-side policies would be implemented, "given the often conflicting political constraints perceived by each member government, with its own political life-cycle uppermost in its mind."

Monetary Cooperation. The exchange rate mechanism, Lord Roll said, has played a large part in coordinating national economic policies. He said the European Monetary System (EMS) would get "rather modest marks" when assessed against the "very high ambitions" of some of its early advocates, but its very survival in a turbulent period "is in itself an achievement." Moreover, he added, the EMS "has been a beneficial influence towards a more general fitting together of

ecutive Director in the Fund and World Bank.

The lecture series, honoring the late Ernest Sturc, was established by his family. Mr. Sturc joined the Fund in 1946 and served as Director of the Exchange and Trade Relations Department from 1965 to 1980, when he retired. A native of Czechoslovakia, he represented his country as a delegate to the Bretton Woods Conference in 1944.

Lord Roll's lecture was rescheduled from November 1984 because of illness. The first Sturc lecture was delivered in Washington in November 1983, by Robert V. Roosa, former Undersecretary of the U.S. Treasury (see *IMF Survey*, December 5, 1983, page 374).

the macroeconomic policies of its members."

Lord Roll noted that the United Kingdom is not a member of the EMS, but argued that "today everything points towards the desirability of Britain joining." He took issue with opponents of the move who argue that sterling is a "petrocurrency, thus fluctuating with the price of oil." They have not demonstrated, he said, "that the price of oil has an overwhelming influence on the exchange value of sterling."

A more effective EMS, Lord Roll concluded, "might form another pillar along-side the dollar, on which that better world monetary system can be built. . . . To one who has never thought that European economic integration was an end in itself, this would indeed be a consummation devoutly to be wished."

Non-Oil Developing Areas Register Inflation Rate Of 60.2 Percent in 1984

Average consumer prices in the non-oil developing countries rose sharply in 1984, with the rate of price increase accelerating in non-industrial European countries, the Middle East, and the Western Hemisphere, but rising less rapidly in Africa, according to data in the May issue of *International Financial Statistics*. The weighted average rate of consumer price increase hit a record 60.2 percent; this compared with 48.1 percent in 1983 and marked the third consecutive year of increasing inflation.

Consumer Prices in Non-Oil Developing Countries

(annual percentage change)

	1981	1982	1983	1984
All Countries	31.6	34.1	48.1	60.2
Africa	20.4	15.8	19.6	16.2
Asia	8.9	5.2	5.7	_
Europe	24.8	24.2	23.4	34.9
Middle East Western	34.4	37.2	42.0	80.8
Hemisphere	63.8	79.9	130.5	162.2

Data: IMF, International Financial Statistics

The steepest increase in average inflation was reported by the non-oil developing countries of the Middle East, where the combined inflation rate nearly doubled to a record 80.8 percent, as against 42.0 percent in 1983—the result mainly of a surge in the Israeli inflation rate to 373.8 percent. (The annual inflation rates of Egypt and Jordan, the two other countries reporting full 1984 data, were 17.1 percent and 3.8 percent, respectively.)

Inflation in the developing nations of Europe in 1984 averaged 34.9 percent, compared with 23.4 percent in 1983, slightly below the 1980 record of 35.5 percent. European inflation reflected strong price pressure in Yugoslavia (its 1984 rate was 55.4 percent); moderate increases in Cyprus, Hungary, and Portugal; and continued deflation in Malta.

The rate of inflation in the Western Hemisphere nations increased for the sixth straight year in 1984, reaching 162.2 percent, compared with 130.5 percent in 1983. The high average rate resulted from acceleration of inflation in only 6 of the 21 reporting countries. Especially sharp increases were reported for Argentina (where the rate nearly doubled in 1984 to 626.7 percent), Brazil (196.7 percent, compared with 142.0 percent in 1983), and Jamaica (27.8 percent, compared with 11.6 percent in 1983). Moderately higher increases were reported in Nicaragua, Paraguay, and Uruguay. Inflation increased less rapidly in 1984 in all 15 other reporting countries in the Western Hemisphere, with particular progress recorded in Mexico (65.4 percent, compared with 101.9 percent in 1983) and Costa Rica (12.0 percent, compared with 32.6 percent). Peru's inflation rate remained high in 1984, at 110.2 percent, compared with 111.2 percent in 1983.

Only Africa recorded lower average inflation in 1984. Its average annual rate eased to 16.2 percent, as against 19.6 percent in 1983.

Trade Talks Supported At May Summit Meeting

(continued from front page) can share," the communiqué said, is to "unremittingly" pursue policies conducive to growth and employment. In this context, the heads of state and government agreed to follow "prudent, and, where necessary, strengthened monetary and budgetary policies," and to work toward a reduction in labor market rigidities and in other obstacles to growth.

The leaders also acknowledged that economic links between the developing and industrial countries have been increasing rapidly in recent years. For this reason, they stated, sound economic growth in the developing world will be

dependent on the ability of industrial countries to promote the growth of world trade, to lower interest rates, and to ensure an adequate flow of financial resources to the developing countries. The industrial country leaders pledged at their meeting to continue to work toward the achievement of these goals "in a spirit of true partnership." With respect to the major debtor countries, the communiqué noted that while "far from solved," the problems of these countries "are being flexibly and effectively addressed." In this context, the communiqué emphasized "the crucial role" that the Fund and the World Bank have played in supporting sound financial and economic policies in the debtor countries. These policies, the leaders said, have been instrumental in strengthening the confidence of domestic and foreign creditors and investors, mobilizing domestic savings, and ensuring efficient resource use.

The summit participants argued in their communiqué that it is "essential" to improve the functioning of the international monetary system to make it more stable and effective. They did not take any decision on the matter at their meeting, however, noting that the issue is to be discussed by the finance ministers of the Group of 10 when they meet in Tokyo on June 21.

Other issues addressed in the communiqué included environmental problems and cooperation in the field of science and technology. The leaders agreed to meet next year in Japan.

Currency Units per SDR

			APF	RIL				MA	Y	
Currencies	23	24	25	26	29	30	1	2	3	6
Deutsche mark	3.03049	3.08872	3.07820	3.09715	3.07635	3.06292		3.10423	3.13293	3.17159
French franc	9.25524	9.44147	9.38663	9.44557	9.38718	***	* * *	9.46515	9.54182	9.67534
Japanese yen	248.471	246.999	247.663	247.952	vot, z. men	250.023	248.838	248.309	Ding and	ALCOHOL: S
Pound sterling	0.785432	0.800974	0.813616	0.820358	0.803953	0.796570	0.802607	0.807684	0.810770	
U.S. dollar	0.998677	0.987601	0.986509	0.982379	0.987656	0.991172	0.986083	0.983597	0.979653	0.976173
Argentine peso	413.817	425.617	429.398	431.873	438.529	AN AN AN		449.907		464.502
Australian dollar	1.56901	1.50434	2.7	1.50096	1.50100	1.51950	1.51635	1.51323	1.48096	1.46683
Austrian schilling	21.2758	21.5939	21.6164	21.7754	21.6168	21.5322		21.8201	21.9971	22.2997
Bahrain dinar	0.375503	0.371338	0.370927	0.369375	0.371359	0.372681	0.370767	0.369832	0.368350	0.367041
Bangladesh taka	26.4649	26.1714	26.1425	26.0330	26.6667	26.7616	26.6242	26.5571	26.4506	26.3567
Belgian franc	61.1590	62.3275	61.9355	62.3516	61.9557	61.7054	art. program	62.4682	62.9390	63.7441
Brazilian cruzeiro	4813.62	1789.86	4804.30	4813.66	4869.14	4916.21		4898.31	4898.27	4910.15
Canadian dollar	1.35610	1.35163	1.34836	1.34134	1.35141	1.35404	1.34955	1.35048	1.35319	1.34849
Colombian peso	130.947	129.741	129.874	129.625	130.637	131.410	STREET	130.720	130.509	130.339
Danish krone	10.8706	11.0118	11.0982	11.1647	11.1087	11.1011	11.1748	11.1810		11.3895
Ecuadoran sucre	67.0861	66.3421	66.2687	65.9913	66.3458	66.5820	66.2401	66.0731	65.8082	65.5744
Finnish markka	6.32862	6.37003	6.41428	6.45718	6.42470	6.38909		6.43568	1111	6.54719
Guatemalan guetzal	0.998677	0.987601	0.986509	0.982379	0.987656	0.991172	0.986083	0.983597	0.979653	0.976173
Indian rupee	12.3313	12,4551	12.4890	12,4694	12.3005	12.3867	12.4404	12.5191	12.5264	
Indonesian rupiah	1104.54	1093.27	1093.05	1089.46	1095.31	1099.21	1094.55	1092.78	1089.37	1086.48
Iranian rial	92.3000	92.3000	92.3000	92.3000	92.3000	92.3000	92.3000	92.3000	92.3000	92.3000
Iraqi dinar	0,310446	0.307003	0.306664	0.305380	0.307020	0.308113	0.306531	0.305758	0.304532	
Irish pound	0.966306	0.987601	0.981113	0.989803	0.983721	0.977969	0.990043	0.995544	1.00220	1.01158
Italian lira	1938.93	1979.65		1977.14	1966.42	1957.56		1980.47	1987.42	2008.96
Kuwaiti dinar	0.300582		0.297916	c 3(1.1.18)	0.298855	0.299195	0.298310	0.297754	gests.	0.296757
Libyan dinar	0.295661	0.292382	0.292059	0.290836	0.292399	0.293439	0.291933	0.291197	0.290029	0.288999
Malaysian ringgit	2.47103	2.44925	2.45562	2.45457	2.45897	2.45216		2.43529	2.44374	2.44385
Maltese lira	0.476354	0.476779	0.479377	0.480686	0.481220	0.478619		0.479172	0.480458	0.484117
Mexican peso	213.447	211.287	211.261	210.583	212.336	213.300	212.412	212.083	211.439	ODE . TAI
Nepalese rupee	17.7765	17.5793	17.5599	17.6828	18.1729	18.2376	17.9467	17.9998	17.9276	17.8640
Netherlands guilder	3.43095	3.49710	3.47892	3.50562	3.48346	R.F. SISI	3.49271	3.50751	3.53655	3.58207
Norwegian krone	8.77338	8.82915	8.89634	8.94456	8.88150	8.84621		8.91139	8.93444	9.04912
Omani rial	0.344938	0.341112	0.340735	0.339309	0.341131	0.342346	0.340588	0.339729	0.338367	0.337165
Pakistan rupee	15.7370	15.5624	15.7228	15.6570	15.8102	15.8665	15.7850	15.7452	15.6821	15.6264
Portuguese escudo	170.016	172.513	Partition and	173.260	172.474	171.638		174.368	174.447	176.165
Qatar riyal	3.63518	3.59487	3.59089	3.57586	3.59507	3.60787	3.58934	3.58029	3.56594	3.55327
Saudi Arabian riyal	3.60023	3.56030	3.55636	3.54148	3.56050	3.57318	3.55483	3.54587	3.53165	3.51910
Singapore dollar	2.20508	2.18951	2.18956	2.19071	2.19635	2.19792		2.18998	2.19129	2.19346
South African rand	1.90952	1.92515	1.92302	1.92058	1.92902	1.92274	1.95071	1.96131	1.95735	1.98490
Spanish peseta	169.376	172.040	171.950	173.327	172.142	171.522		Will to the	175.113	177.371
Sri Lanka rupee	27.1440	26.8627	26.8330	26.7698	26.9136	27.0590		26.9014	26.7935	wurtensch-
Swedish krona	8.82980	8.87508	8.92297	8.95586	8.93779	8.88536		8.95122	8.96823	9.07402
Swiss franc	2.50918	2.57122	2.56492	2.58611	2.58124	2.56268	Tugada arg	2.60407	2.63184	2.66935
Trinidad and Tobago dollar	2.40581	2.37913	2.37650	2.36655	2.37926	2.38773	2.37547	2.36949	2.35998	2.35160
U.A.E. dirham	3.66614	3.62548	3.62147	3.60631	3.62569	3.63859	3.61991	3.61078	3.59631	3.58353
Venezuelan bolívar	7.49008	7.40701	7.39882	7.36784	7.40742	7.43379	7.39562	7.37698	7.34740	7.32130

Note: The value of the SDR in terms of the U.S. dollar is determined as the sum of the dollar values, based on market exchange rates, of specified quantities of the first 5 currencies shown above. The value of the SDR in terms of any currency other than the U.S. dollar is derived from that currency's exchange rate against the U.S. dollar and the U.S. dollar value of the SDR.

An exception is the Iranian rial, the value of which is officially expressed directly in terms of the rials per SDR.

Data: IMF Treasurer's Department

FUND ACTIVITIES

Drawings by Fund Members in First Quarter Well Below Totals for Same Period of 1984

The further slowing of Fund member drawings in March 1985—the SDR 123.1 million figure was well below February drawings—left total drawings for the first quarter of 1985 at SDR 974.1 million, compared with SDR 1.8 billion in the corresponding quarter of 1984. While drawings during the first quarter were far lower than in 1984, there was a larger proportion of drawing under one of the Fund's less conditional (compensatory financing) facilities.

Of drawings made during the first three months of 1985, 61 percent were under stand-by arrangements, subject to strong economic policy conditionality, and 39 percent were under the compensatory financing facility. Virtually all of the drawings in the first quarter of 1984, by comparison, were made under standby and extended arrangements.

As repurchases (or repayments) by Fund members exceeded drawings in March, net new drawings in that month were negative; during January–March 1985, net drawings amounted to SDR 172.4 million, compared with SDR 1.4 billion in the first quarter of 1984.

The preceding figures exclude reserve tranche drawings, which are essentially drawings on members' liquid reserves held with the Fund. Such drawings to-

Stand-By and Extended Arrangements in Effect as of March 31

Member		ate of		Ex	piratio	on	Total Amount Agreed	Undrawn Balance
Stand-By Arrange	ements						4,509,160	3,105,743
Argentina	Dec.	28,	1984	Mar.	27,	1986	1,419,000	1,182,500
Belize	Dec.	3,	1984	Mar.	31,	1986	7,125	4,750
Central African								
Republic	July	6,	1984	July	5,	1985	15,000	7,000
Costa Rica	Mar.	13,	1985	Apr.	12,	1986	54,000	40,000
Dominica	July	18,	1984	July	17,	1985	1,400	430
Ecuador	Mar.	11,	1985	Mar.	10,	1986	105,500	84,400
Gambia, The	Apr.	23,	1984	July	22,	1985	12,830	10,200
Ghana	Aug.	27,	1984	Dec.	31,	1985	180,000	120,000
Haiti	Nov.	7,	1983	Sept.	30,	1985	60,000	39,000
Ivory Coast	Aug.	3,	1984	May	2,	1985	82,750	20,690
Jamaica	June	22.	1984	June	21,	1985	64,000	36,000
Kenya	Feb.	8,	1985	Feb.	7,	1986	85,200	55,400
Liberia	Dec.	7,	1984	June	6,	1986	42,780	34,280
Mali	Dec.	9,	1983	May	31,	1985	40,500	6,500
Mauritius	Mar.	1.	1985	Aug.	31.	1986	49,000	42,000
Niger	Dec.	5.	1984	Dec.	4,	1985	16,000	9,600
Peru	Apr.	26,	1984	July	31,	1985	250,000	220,000
Philippines	Dec.	14,	1984	June	13,	1986	615,000	530,000
Senegal	Jan.	16,	1985	July	15,	1986	76,600	54,000
Somalia	Feb.	22.	1985	Feb.	21.	1986	22,100	20,100
Sudan	June	10000	1984	June		1985	90,000	70,000
Togo	May	7.	1984	May	6,	1985	19,000	
Turkey	Apr.	4.	1984	Apr.	3,	1985	225,000	56,250
Uruguay	Apr.	22,	1983	Apr.	21,	1985	378,000	226,800
Western Samoa	July	9.	1984	July	8.	1985	3.375	843
Yugoslavia	Apr.	18,	1984	Apr.	17.	1985	370,000	90,000
Zambia	July	26,	1984	Apr.	30,	1986	225,000	145,000
Extended Arrang	ements	8					7,750,000	2,765,995
Brazil	Mar.	1,	1983	Feb.	28,	1986	4,239,375	1,496,250
Malawi	Sept.		1983	Sept	. 18,	1986	100,000	66,000
Mexico	Jan.	1,	1983	Dec.		1985	3,410,625	1,203,745
Total							12,259,160	5,871,738

Data: IMF Treasurer's Department

taled SDR 13.2 million in March 1985, and SDR 26.1 million during January—March, the latter comparing with SDR 371.2 million during the first quarter of 1984.

As of March 31, 1985, there were 27 stand-by arrangements and 3 extended arrangements in effect with the Fund. At month's end there was an undrawn balance of SDR 5.9 billion, out of a total of SDR 12.3 billion committed by the Fund.

PRESS RELEASE

Yugoslavia: Stand-By Arrangement

The Fund has approved a stand-by arrangement for the Government of Yugoslavia, authorizing purchases up to the equivalent of SDR 300 million over the next 12 months, in support of the Government's economic and financial program. Purchases under this arrangement, which is equivalent to 48.9 percent of Yugoslavia's quota, will be financed in equal parts from the Fund's ordinary resources and borrowed resources. Yugoslavia's outstanding financial obligations to the Fund resulting from past operations and transactions currently total the equivalent of SDR 1,907.1 million.

Faced with a rapidly deteriorating external financial situation, the Yugoslav authorities have adopted policies in recent years, supported by the Fund, designed to correct the sizable imbalances that had developed. Substantial progress was made in 1983–84 as the current account of the balance of payments in convertible currencies moved from a deficit of US\$1.6 billion in 1982 to a surplus of US\$865 million in 1984.

The main objective of the Yugoslav authorities' current economic and financial program, which this stand-by arrangement supports, is to consolidate the progress made so far in restoring external equilibrium and to lay the basis for sustainable economic growth. This entails a basic two-part approach: (1) the continuation of the policies that have brought about more realistic pricing within the economy as a whole; and (2) the introduction of structural measures to allow price signals to be transmitted efficiently. The adjustment gains made in 1984 give scope for some resumption of growth in investment in 1985, which is necessary if the upward trend in exports is to be maintained. This in turn depends on the progressive removal of impediments, to allow decisions regarding savings and investment to be made on the basis of sound economic principles, and the present program, as well as earlier programs, seeks to foster progress toward these medium-term goals.

Press Release No. 85/16, April 29

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FUND TRANSACTIONS IN JANUARY, FEBRUARY, AND MARCH

General Re			ount		JAN	FEB	MAR		JAN	FEB	MAR		JAN	FEB	MAR
(million	SDR equiv	valent)		El Salvador	5.4			Swaziland		1.0		General Res	ources		
	JAN	FEB	MAR	Equatorial	-			Tanzania	1.9	1.1		Account		607.8	132.3
				Guinea	0.8	1.2		Thailand	23.3	5.1	15.6	710000111	.,002.0		
Purchases1	640.2	223.6	136.3	Ethiopia	0.0	3.9	2.1	Togo	1.7		0.9	Receipts	2.628.8	1.814.9	344.3
Argentina	511.5			Grenada	0.2	0.1	0.2	Turkey	8.8	34.0	26.1	Argentina	371.9	.,	
Belize		1.2		Guatemala		11.9	1000000	Uganda	3.1	3.8	8.1	Brazil	64.1	58.1	
Burma		6.9		Guinea-Bissar	u 0.2			Western	3-11	15710	100	Canada	59.0	50.1	
Central Africa	an Rep.	3.0		Guyana	1.0			Samoa	0.4			Ecuador	33.0		10.6
Costa Rica			14.0	Haiti	,		0.7	Yugoslavia	0.1	69.4	9.4		60.0		10.0
Ecuador			21.1	Honduras	1.6		0.7	Zaïre	8.8	6.9	8.5	France	60.0		
-iji	4.7			India		33.2		Zambia	10.5	0.0	0.0	Germany, Fe			
vory Coast			20.7	Indonesia ²	114.6	00.2		Zimbabwe	4.7		2.1	Rep. of	83.4		
Jordan	57.4			Ivory Coast	2.7		23.3	ACCRETATION OF THE PROPERTY OF				Indonesia			10.9
Kenya		29.8		Jamaica	15.7		2.1	S	DR Dep	artmen	t	Italy		77.9	
Korea		95.9		Kenya	2.2		5.5		(million S	SDRs)		Ivory Coast			20.7
Madagascar		6.0		Korea	20.0	59.5	10.0					Japan		65.3	
Mauritius			14.5	Lao	20.0	39.3	10.0	Uses	2,628.8	1,814.9	344.3	Jordan	57.4		
Morocco	50.0	40.0		People's				Argentina	348.7			Korea	90.0	35.5	10.0
Mozambique		NAME OF	13.2		0.4	10	0.4	Austria			15.0	Mauritius	00.0	00.0	11.0
Niger			3.2	Dem. Rep. Liberia	0.4	1.0	1.1	Brazil	63.7	57.3		Mexico	52.3		11.0
Senegal	10.6		12.0		60	10	1.1	Canada	61.7	37.4		Morocco	32.0		15.2
Somalia			34.6	Madagascar	6.0	1.0	4.0	France	211 22-11	29.0			FI SIN-		26.5
Togo			3.0	Malawi		2.3	1.6	Germany, F	-ed			Mozambique		70.0	
Nestern				Malaysia				Rep. of	ou.	79.2		Saudi Arabi	a 115.0	79.3	33.4
Samoa		0.8		Mali	4.5		0.6	India	116.5			Somalia			16.2
Yemen				Mauritania	1.5	No. of the	1.1			00.0	17.1	Thailand	57.3		16.0
Arab Rep.	6.0			Mauritius	6.6	1.1	6.4	Ivory Coas			17.1	Turkey	87.3		
Zaïre	0.0	40.0		Morocco			10.7	Jordan	57.7			United			
		40.0		Nepal			1.3	Korea	76.7	71.7		Kingdom	110.0	33.8	13.2
Repur-				Nicaragua	2.1			Mexico	54.2			United State	s 84.1	286.9	
chases	261.5	304.9		Pakistan			15.7	Morocco			15.0	Yugoslavia	107.7		
Bangladesh		3.3	3.5	Panama	V. E. SEL	9.4		Mozambiqu	ue eu		26.5	Other partic	The second second		cribed
Bolivia		1.6	4.1	Papua New G	iuinea	6.6	1000	Peru		30.3		holders	467.5		
Brazil			64.5	Peru		19.2	4.6	Saudi Arab	ia 150.0			General Re		400.0	70.5
Burma	1.1		2.3	Philippines	1000	140441001	44.5	Somalia			15.1			628.7	83.7
Central Africa			1277.014	Romania	9.2	15.2	29.5	Thailand	43.6		15.6	Account	845.2	020.7	03.7
Republic	1.6	0.5	0.5	St. Lucia	0.1	0.3		Turkey	77.9		10.0				
Chad	0.9			St. Vincent			0.2				29.2	Note: Compone		not add to	totals show
Costa Rica			3.8	Senegal		0.3	8.5	United Kin		49.5	29.2	1 Includes drawi	nas in the	reserve tran	nche.
Cyprus		1.1		Sierra Leone	1.8	1.1	0.1	United Sta		100.1		² Indonesian rup	iah equiva	lent to SDR	114.6 millio
Dominica		0.3		Solomon Islan	nds		0.1	Yugoslavia				used in operat			
Dominican F	epublic		23.2	Somalia	2.6	0.6	0.7	Other parti				repurchase obli	gations.		
Egypt		5.6		Sri Lanka		3.3	3.1	holders	431.0	585.3	78.5		Data: IMF	Treasurer's	Departmen

SPRING MEETINGS

Joint Press Conference . . .

Key Meetings Leaders Respond to Questions on Surveillance, Trade, and External Debt

Following are excerpts from the edited transcript of a joint press conference held on April 19 following the spring meetings of the ministerial-level advisory committees of the Fund and the World Bank. Hosting the conference were H. O. Ruding, Chairman of the Interim Committee of the [Fund's] Board of Governors on the International Monetary System; Ghulam Ishaq Khan, Chairman of the Development Committee (the Joint Ministerial Committee of the Bank and the Fund on the Transfer of Real Resources to Developing Countries); Fund Managing Director J. de Larosière; and World Bank President A. W. Clausen. The press communiqués issued by the two committees

were published in the April 29 issue of the IMF Survey.

MR. RUDING: To begin with, I was struck by the very high degree of mutual understanding among all 22 members of the Committee, which I think resulted in a feeling of the need for shared responsibilities between developing countries and developed countries in order to resolve the various problems. . . . Second, . . . the new procedures and format of our meeting provided an opportunity for a frank and extremely informal dialogue, much better than what we were used to in the past. It really was an exchange of views among ministers and Governors, and I consider that

a success. And thirdly, I think that we are now sure of a much improved coordination between the Interim Committee and the Development Committee.

The membership unanimously stressed a number of positive elements in the recent and current economic financial developments in the world. . . . There was a strong feeling that recovery was expected to be sustained. . . . A number of problems were also mentioned: that in many developing countries the level of economic growth has not yet achieved an acceptable pace; that the terms of trade are still weak for many; and that in industrial countries unemployment is still the major problem; and also many stressed the exchange rate volatility.

I think that the main theme . . . [was] a clear consensus among all members of what I would like to call a three-track policy approach that to a large extent is already under way. The first element is a clear need for adjustment by the debtor countries, many of them being developing countries, where action is needed by those countries themselves.

And it was said that adjustment is essential and indeed unavoidable—that word was used. I would like to stress that it was the unanimous feeling that this adjustment in debtor countries is necessary for the restoration of growth inside their economies but also for the restoration of creditworthiness in order to encourage the resumption of spontaneous lending by commercial banks as well as flows from official sources. In the same context much attention was paid to the necessity of a return of flight capital to a number of indebted countries.

The second element, the second track, relates to necessary adjustment by the industrial countries, many of them being creditor countries. The membership stressed the special responsibility of the major industrial countries to achieve sustainable non-inflationary growth as well as open markets, capital, and, in particular, trade markets, with general action needed by industrial countries at large to combat protectionism. Next, the reduction of fiscal deficits. . . . Thirdly, the need for greater exchange rate stability, and fourthly-that relates in particular to a number of European countries-the removal of structural economic rigidities in their economies.

A third element—the third track of our approach—was the need expressed by all



H. O. Ruding

members for adjustment and economic recovery in developing indebted countries to be supported by the creditor countries through new lending on their side and through a willingness to restructure

outstanding debt. Much progress was made at this meeting concerning the important matter of . . . multiyear rescheduling arrangements, . . . on a case-bycase basis and provided that sufficient adjustment by the debtor country has been achieved, and all that in close collaboration with the IMF. Those elements were unanimously stressed.

In that connection, too, I think another interesting element was agreed upon—the desirability and the need for a resumption of export credit cover—again subject to satisfactory adjustment.

There emerged clear support for

strengthening Fund surveillance over economic and financial policies of all member countries in a uniform, evenhanded way, and also support for the continued active role of the IMF both as a catalyst for financial flows to debtor countries as well as in its role as a policy advisor—that is, the drafting of adjustment programs.

On the important matter of SDR allocation, there did not seem to be any change as compared to our previous meeting. The matter will be considered again at our next meeting in Seoul, but it was stressed that the SDR constitutes an integral part of the structure of the Fund. There we could reach agreement, but it was not yet possible to reach the necessary degree, the high degree of support required for a new SDR allocation.

My final remark relates to the international monetary system. The communiqué contains a very short and clear text, which unavoidably is a compromise, which says that "it was agreed that the Committee would review these issues" (i.e., the improvements of the international monetary system) "at its next meeting in Seoul." This means that all relevant studies concerning this matter will be taken up. It is clear that this comprises the Group of 10 studies that will be discussed in Tokyo at the end of June as well as proposals separately made by the Group of 24.

MR. KHAN: This joint press conference, which is perhaps unique in the history of these two institutions, . . . is also a manifestation of the growing cooperation between the two committees, the Interim Committee and the Development Committee, as indeed between the Fund and the Bank. . . .

With regard to the work, this was an extended meeting. Central to the concerns of the [Development] Committee was the issue of securing sustained global economic growth. . . . The Committee underscored the importance of building a still more open internatrading system, rolling protectionism, and moving ahead with new trade liberalization moves, to restore global growth on a sustained basis. This demands a viable multilateral system, and I am personally in favor of a new round of negotiations under the auspices of the GATT [General Agreement on Tariffs and Trade]. This was one of the issues which took considerable time and resolution in the informal meetings in the Development Committee. And I am glad to report that, despite the serious differences with which we started, we were able to resolve the issue to the satisfaction of all concerned.

The Committee also noted that such a new round of negotiations should start as early as possible with concentration initially on the unfinished business from the previous rounds. This was one of the sticking points. And there needs to be urgent action on such matters as safeguard clauses and the clearly harmful area of discriminatory nontariff barriers such as the Multifiber Arrangement.

The Committee was also of the view that there needs to be immediate action to secure additional capital flows to developing nations. As you may have noticed, over the years—particularly during the last two years—flows of capital to the developing countries have diminished quite considerably, whether official development assistance, multilateral institutions, private and equity capital flows, or export credits.

The Committee was of the view that securing additional capital flows can be achieved by steps to encourage both private and official flows. In this context the Committee considered that the establishment of the Multilateral Investment Guarantee Agency (with a widely

acceptable charter on which the World Bank has been working for some time now) can make a significant contribution to the strengthening of the international investment environment in stimulating private



Ghulam Ishaq Khan

flows. The Committee also stressed that the export credit system needs to be strengthened.

With regard to official capital flows, let me first of all underline the great needs of the poorest nations. The International Development Association (IDA) needs the strongest support. We are deeply concerned about the grave situation in sub-Saharan Africa. . . . In this context, the Special Facility, on which we had agreed at the last meeting of the Development Committee and which was pursued so assiduously by Bank management, is in a position to start disbursing.

Official flows to more creditworthy nations were also considered essential to enable them to adjust to today's global economic challenges, to secure long-term growth, and to strengthen their creditworthiness. . . . It was also stressed that it was imperative to ensure that the World Bank has the full capacity to respond swiftly and effectively to the growing needs of the developing nations. MR. CLAUSEN: There was very broad support [in the Development Committee] for an enlarged role of the Bank. . . . We have the political support to move forward with a Multilateral Investment Guarantee Agency, . . . for the roles that we have outlined for the Bank's future work, . . . [and] to do all that we can to stimulate growth in the poorest nations, with particular emphasis on sub-Saharan Africa. And on this latter matter . . . agreement was reached on the resolution establishing the implementing procedures of the facility. . . . We will be sending that to the Board next week, so that we will be in operation before July 1, our target date. We also have the political support to remain fully able to meet the growing needs of the middle-income countries.

QUESTION: How would you describe the debt situation at the present time? The communiqué of the Interim Committee says that external debt problems remain "serious." How serious is "serious"? And what did this week's meeting do to relieve the pressures on the developing countries with debt problems?

MR. DE LAROSIERE: The important thing to note here is that there has been progress in the way the debt problem has been dealt with, and the Interim Committee and the Development Committee have recognized this. There has been an improvement in general economic conditions; world trade has expanded; there has been a sharp reduction in the current account of the balance of payments of indebted countries, actually a very dramatic decrease of these imbalances; and there has been continued collaboration between the creditors and the debtors and a continued implementation of adjustment programs.

Over the past year or so, the system has become more flexible and more diversified. A number of countries have shown their ability to implement adjustment programs, which is reflected [not only] in their external current accounts

but also in their general economic performance. Those countries have, in some cases, obtained from the banking community multiyear arrangements that make it easier for them to return to more normal relations with the financial institutions and with the markets. Some of these countries have a Fund program. This is, for example, the case of Mexico; it is also the case of Ecuador. And one has not: that is the case of Venezuela. But we have been able to put in place at the request of the Venezuelan authorities a mechanism of consultation, which, in a way, permits the Venezuelan authorities to benefit from technical assistance and monitoring expertise of the International Monetary Fund. I think that is a rather interesting diversification of procedures.

The case-by-case approach has been reaffirmed all along during these meetings as being the concrete way of making progress, and the officials that were around the table have agreed that they should build on that experience. I thought the relevant paragraph of the communiqué on their readiness to join with the banking community in multi-year rescheduling agreements was significant and not a hollow sentiment.

Another idea was that when a country is moving toward adjustment and has rescheduled its external debt, then export-guarantee cover should be resumed in favor of it. There is a sentence in the communiqué which may well mark a turning point in the policies regarding these matters. So I would think that the meeting has been very productive.

QUESTION: What is your answer to the criticism that when you are unable to spend even \$11 billion out of the \$13 billion that the World Bank could have spent, . . . you don't really need to expand the capital base?

MR. CLAUSEN: It is true that this year our lending commitments . . . will be down a little bit from what they were last year, but our projection . . . is that the demand . . . in the years ahead will become stronger. . . . It's a momentary pause.

QUESTION: I would like to clarify the wording of paragraph 6 of the [Development Committee] communiqué. Does it mean there can be no full GATT round until the 1982 work program is completed, or could there be a GATT round not involving every country . . . without that program having been completed?

MR. KHAN: OECD [Organization for Eco-

nomic Cooperation and Developmentl countries have already decided on starting discussions preparing for a new round of trade negotiations. The communiqué issued by the Group of 24 lays out that until such time as certain conditions are satisfied, they [the developing countries] would not participate. The attempt of the Committee was to bridge the gap between these two opposite views. And paragraph 6 reflects the consensus that we arrived at. Essentially it means that there is a stage-by-stage approach. The developing countries would not be convinced of the seriousness and the usefulness of the new round till such time as they have an indication that the developed world is prepared to deliver on its past promises. So that you can take as the first stage the standstill on protectionism, the rollback of protectionism, and the fulfillment of the unfinished task of the Tokyo Round. As a matter of fact, the new round cannot start because the same problems are involved unless you finish the business in hand first; so one round would lead and automatically merge into the other. This is my interpretation of this situation.

QUESTION: When looking at the consensus expressed in this communiqué, can one assume that from now on the notion of a political solution is buried and that we now are entering a phase in tackling the consequences of the debt crisis with an acknowledgment by all parties concerned of the contractual arrangements?

MR. DE LAROSIERE: You have to look at this communiqué as a whole. What it says is that the debt problem has indeed to be tackled in a technical fashion, case by case, and taking into account the particular circumstances of each case. Now that does not mean that one should ignore the sometimes difficult circumstances of each case. On the contrary, one has to take them into account and find a solution that is workable, and that is a very important notion indeed that is highlighted in this communiqué.

Now these adjustment efforts have political consequences and social dimensions; there is no doubt about that. And an allusion to this [is] to be found in the communiqués of both the Interim Committee and of the Development Committee. An interesting notion that comes out of these meetings is that not only the debtor countries or the developing coun-

tries but all countries have a responsibility to move toward the goal of this exercise, which is sustainable growth in the medium/long run. And the industrial countries have a responsibility to improve the general environment in which these adjustment efforts are taking place.

If you look at the communiqué, you see that the notion of the special responsibility of the major industrial countries to pursue policies that will eventually lead to sustainable non-inflationary growth is well established. Their responsibilities toward curbing protectionism, or reversing protectionism, are very clearly indicated in the Development Committee communiqué, as are also the importance of lowering interest rates through the right type of policy mix, the importance of reviving growth where the rigidities of labor and financial and goods markets nake that difficult, the importance of seeking greater exchange rate stability, and the importance of providing adefinancial flows-in particular quate through debt rescheduling, new money, and official development assistance. All that converges toward a common sense of responsibility. In that light, if you had asked me to sum up the whole session, I would have put it that a collaborative exercise has taken place, and that it sets

MR. RUDING: I fully share the analysis just given by the Managing Director, in a very able way, of the thinking of the members of the Committee. It is striking hat the word "political" is so frequently mentioned in this connection. I understand that in a way all these problems are political. Most of the members are finance ministers and they know from their own experience how difficult it is to make changes in their domestic economies. But here, the word political is used in a different vein, namely that the problem as such should become politicized.

That was not the spirit of thinking that I detected. On the contrary, most members said that the case-by-case approach is a very practical one because each country is different, and that makes it dangerous to generalize. These matters are technical, and I do not mean technical in a negative sense, but in an economic and financial sense; they require analysis by experts rather than sweeping statements. It was stressed rightly by a number of members that this is basically

an international financial, and to some extent monetary, problem, and we should try to find solutions within the framework of the existing multilateral financial institutions—that is, the IMF and the World Bank and their committees.

MR. KHAN: In the Development Committee there was a recognition that there has been overlending on the part of the developed countries and their banks, and there has been overborrowing on the part of the borrowing countries. Now to that extent the two have a shared responsibility; they have to cooperate in resolving the debt issue. . . . What the institutions adopting this case-by-case approach have done is to enable those countries to service the debt in time, with the result that the crisis in the global financial structure which was looming large at one time has been resolved.

But debt pressures, dormant for the time being, still remain. And it was recognized that the resolution of the problem will have certain political and social consequences that should be taken care of. It is in that context that both communiqués lay stress on improving the ability of countries to service their debts in time. I think it was considered that politicizing the problem would be counterproductive, because essentially it is a financial ... and contractual problem between the bankers and the borrowers. QUESTION: Can you list for me some of the major issues that are left over from the Tokyo Round that the developing countries want to get out of the way before a new round begins?

MR. KHAN: One was lifting of restrictions on trade that [are] against or that are not sanctioned by the GATT rules. There was agreement on their rollback in due course. . . . There is the Multifiber Arrangement on textiles, which is totally against the GATT rules but was negotiated outside them. This arrangement would be expiring in the middle of next year. Now this is again something which has to be negotiated. There was the question of safeguards, and there was the question of nascent industry protection.

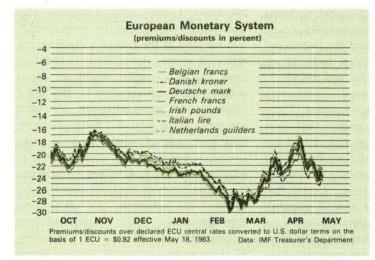
QUESTION: Paragraph 8 of the Development Committee communiqué about IDA says that the Executive Board should begin consideration of a broad array of possibilities to meet the needs of the low-income countries by way of IDA assistance. Could you define this broad array of possibilities?

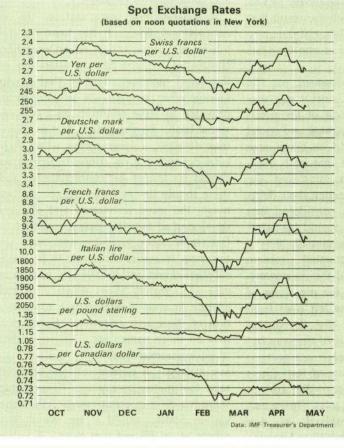
MR. KHAN: I think this paragraph says two things. One is that the review which was decided at the previous meeting, the mid-year review, should be completed on time, and this applies strictly to IDAwhether the funds supplied for the IDA 7 replenishment were adequate, and what can be done to augment them. The second part asks "management and the Executive Board to start consideration of a broad array of possibilities for addressing future needs of the poor countries for concessional resources. . . ." Now there they can consider terms starting with zero interest rate and 40-50 years repayment, all the way to commercial lending terms, and something in between.

A separate task force was set up on concessional flows. It has been on the job for two years, and its report would be completed in time for consideration at the Seoul meetings. Out of that would emerge what resources are required to be provided to these countries on a concessional basis. So the idea is that as countries develop, a stage comes when their total dependence on concessionary flows should no longer be countenanced, and there should be some burden sharing between the more developed and the less developed of the developing countries.

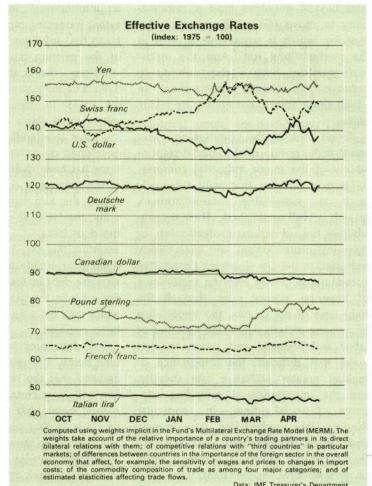
QUESTION: Since Germany and Japan are the main countries able now to promote substantial and anti-inflationary growth in case U.S. growth slows down, first, did anyone in your meetings raise the question of these two countries? If any did, why do these names not appear in either of your communiqués?

MR. RUDING: A number of members did raise that matter by saying: "Assume that there is a drop in economic growth in the United States, would it be useful that others try to fill out that gap?" A rather balanced economic discussion emerged. First, a certain drop in American growth rates was already expected and taken care of in the calculations in the World Economic Outlook prepared by the staff. Second, there was a widely shared thought that we should try to aim for a sustainable non-inflationary growthwhich should not be a kind of finetuning, as has been the case in the past, but rather more a structural economic policy that is consistent and does not change from day to day. I did not detect a tendency toward a revival of the old locomotive theory that was prevailing a number of years ago.











Selected Fund Rates

Rate of **SDR** Interest Rate of Week Beginning and Charges Remuneration $7.28^2 / 7.42^3$ April 29 8.09 May 6 8.05 7.38 May 13 8.03 7.36

¹ Rate of SDR interest and charges and rate of remuneration are calculated weekly, utilizing a combined market interest rate. To obtain the latest weekly rates, call (202) 473-7171. ² April 29–30 ³ Beginning May 1

IMF Survey (ISSN 0047-083X), Vol. 14, No. 10, May 13, 1985. The IMF Survey is published by the International Monetary Fund 23 times a year, ordinarily on alternate Mondays, in addition to an annual Supplement on the Fund published in September. Editions are also published in French (Bulletin du FMI) and - Palatin dal EAAN The opinions and materials contained in the IMF

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).C. 20431, U.S.A. Telephone: JI; MCI: 64111 INTERFUND 89524 INTERFUND WSH.

Data: IMF Treasurer's Department

All EGYEA Staff

David Hughart, a longtime colleague in the Division who is now with the Resident Mission in Bangladesh, plans to visit Washington July 7-13 with his wife and daughter. He would like to "house-sit" during his visit and has asked me to find out if there is anyone in the Division who will be away during that period and would be interested in Dave sitting house for them. Please let me know and I will pass on the information to him.

Thanks.

Masood

MAhmed:aaf

OFFICE MEMORANDUM

DATE: May 10, 1985

TO: Mr. Jean-Loup Dherse, Vice President, EISVP

FROM: Masood Ahmed, Acting Chief, EGYEA

(Wheet

SUBJECT: Meeting with Mr. Georges Fournier

- 1. Subsequent to our meeting, Julio Gamba and I had a long and productive discussion with Mr. Fournier. He was particularly interested in the rationale, scope and operating methods of ESMAP which we described to him and also provided some documentation on. We also explored the question of energy efficiency in transport in more detail. I explained to him that this was a relatively new field of activity under ESMAP and that we would welcome any guidance in terms of:
 - (a) a sharing of the experience of French transport companies (autobus operators, freight companies, etc.) who have successfully implemented energy savings programs;
 - (b) any documentation on the impact of alternative incentive and fiscal measures on energy efficiency in the transport sector; and
 - (c) the names of consultants or other experts with demonstrated expertise in this field.

He has kindly agreed to follow up on this through his contacts in the French Energy Managers Association and will get back to us in a month or so with his findings.

- 2. Finally, we talked briefly about the Elf-Aquitaine Scheme whereby energy efficiency investments are made in individual factories of the Group on a reimbursable-upon-results basis. We suggested to Mr. Fournier that the extension of this arrangement to companies outside the Elf group could be of great interest in LDCs, particularly in Africa. This type of arrangement could help to overcome the common problem whereby a profitable energy conservation project cannot be implemented because the company's overall financial and liquidity position is too weak to incur the necessary investment expenditure. He will explore this possibility within his company.
- We agreed that Julio or I would meet with him during one of our forthcoming trips to Paris to continue this exchange of ideas.

cc: Messrs. Gamba (IND); Saunders (EGY)

MAhmed:aaf

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W. Washington, D.C. 20433 (202) 477-1234 Cable Address INTBAFRAD Cable Address INDEVAS

May 7, 1985

Mr. Behram N. Kursunoglu
Forum Chairman
Ninth Annual International Scientific Forum
on the Silent Energy Revolution
Riso National Laboratory
Post Box 49
IK 4000 Roskilde
Denmark

Dear Mr. Kursunoglu:

Thank you for your letter of April 30, 1985 inviting me to participate in your Forum in Copenhagen, Denmark, October 14-18, 1985. I regret I will not be able to attend due to previous engagements but do wish you all success.

Yours sincerely,

Masood Ahmed

Deputy Division Chief

Energy Assessments Division

Energy Pepartment



Center for Theoretical Studies

University of Miami PO. Box 249055 Coral Gables, Florida 33124 305/284-4455

Ninth Annual INTERNATIONAL SCIENTIFIC FORUM ON THE SILENT ENERGY REVOLUTION

October 14-18, 1985 Copenhagen, Denmark



Risø National Laboratory

Postbox 49

DK-4000 Roskilde, Denmark Phone (02) 371212, Telex 43116 Cable address: Risatom

April 30, 1985

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Jean Couture

European Subcommittee Chmn.
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Linda Scott University of Miami Mr. Masood Ahmed Energy Department The World Bank 1818 H Street, N.W. Washington, D.C. 20433

Dear Mr. Ahmed:

On behalf of the Planning Committee, I am pleased to extend to you our cordial invitation to participate in our Forum in Copenhagen, Denmark, October 14-18, 1985. I have enclosed the preliminary program and a registration form. A hotel reservation form is enclosed; please note that the deadline is July 20, 1985.

The names without asterisks in the enclosed preliminary program are listed as a result of the Committee's recommendations in its February meeting, and those people will be invited to participate in the indicated capacity. If you have any opinions or suggestions to improve the program content, I would like to hear from you. The preliminary program will be updated at eight-week intervals and will be sent to you at your request. In the meantime, the enclosed registration form should be completed and returned to us at your earliest convenience.

I look forward to seeing you at the Forum in Copenhagen.

Sincerely yours,

Behram N. Kursunog u

Forum Chairman

Enclosures
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Center for Theoretical Studies

University of Miami P.O. Box 249055 Coral Gables, Florida 33124 305/284-4455

Ninth Annual INTERNATIONAL SCIENTIFIC FORUM ON THE SILENT ENERGY REVOLUTION

October 14-18, 1985 Copenhagen, Denmark



Risø National Laboratory Postbox 49 DK-4000 Roskilde, Denmark Phone (02) 371212, Telex 43116

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May 1, 1985

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University of Miami

Mr. Julian Bharier Chief (Acting) Energy Assessments Division Energy Department The World Bank 1818 H Street, N.W. Washington, D.C. 20433

Dear Mr. Bharier:

On behalf of the Planning Committee, I am pleased to extend to you our cordial invitation to participate in our Forum in Copenhagen, Denmark, October 14-18, 1985. I have enclosed the preliminary program and a registration form. A hotel reservation form is enclosed; please note that the deadline is July 20, 1985.

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I look forward to seeing you at the Forum in Copenhagen.

Sincerely yours

Behram N. Kursunoglu

Forum Chairman

Enclosures

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Ninth Annual INTERNATIONAL SCIENTIFIC FORUM

ON THE SILENT ENERGY REVOLUTION

October 14-18, 1985 Copenhagen, Denmark

PRELIMINARY PROGRAM---May 1, 1985 (The next program will be issued July 1, 1985)

SUNDAY, October 13, 1985

PM

Registration and Get-Together Party at the Royal Danish Academy of Sciences and Letters

MONDAY, October 14, 1985

AM

PROLOGUE

*Knud Enggaard; Minister of Energy, Denmark *Behram N. Kurşunoğlu; University of Miami, USA *Niels E. Busch; Risø National Laboratory, Denmark

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*Bent Elbek; The Niels Bohr Institute of Physics, Denmark Organizers:

*Niels E. Busch; Risø National Laboratory, Denmark

Dissertators: Abraham Pais; The Rockefeller University, USA

"Niels Bohr - Life and Work"

Sir John Hill; Former Chairman of UKAEA, United Kingdom

Bertrand L. Goldschmidt; CEA, France

*Bent Elbek; The Niels Bohr Institute of Physics, Denmark

"The Heritage of Niels Bohr"

Annotaators:

To Be Announced (TBA)

Reporter:

*Knud Møllenbach; Risø National Laboratory, Denmark

THE CAUSES OF THE REVOLUTION

PM SESSION 2. THE DRIVING FORCES OF ENERGY INTERACTION

(Interdependency of Price, Supply, Demand, and Multiple Primary Energies)

Phil Oxley; Tenneco Oil Exploration and Production, USA Moderator:

*Glen E. Schuler; Tennessee Gas Transmission, USA Organizers:

*Tor Ragnor Gerholm; University of Stockholm, Sweden

Dissertators: John Lichtblau; Petroleum Industry Research Foundation, USA

Danny J. Boggs; U.S. Department of Energy, USA

Thomas W. Cunnington; Cyton Corporation, USA Annotators:

Albert J. Sobey; General Motors Corporation, USA

Robert L. Hirsch; ARCO Resources Technology, USA

Reporter: TBA

18:30 hrs Reception by the Lord-Mayor of Copenhagen and Buffet at the Town Hall

TUESDAY, October 15, 1985

II. MANIFESTATIONS OF THE REVOLUTION: SUBTLE AND OBVIOUS

SPECIFIC STRUCTURAL CHANGES: PETROCHEMICALS AND REFINING AM SESSION 3.

(Rationalization of Excess Capacities and the Shifting Feedstocks and

Product Slates: Implications for World Energy Markets) *Haldor Topsøe; Haldor Topsøe A/S, Denmark Moderator:

Nazli Choucri; Massachusetts Institute of Technology, USA Organizers:

TBA (from Couture)

Dissertators: J. Wallace Hopkins; International Energy Agency, France

*Emma B. Brossard; Louisiana State University, USA

Annotators: TBA

John Savoy; Sun Company, Inc., USA Reporter:

SESSION 4. SPECIFIC STRUCTURAL CHANGES: ENERGY INVESTMENTS - BANKING CONTROL (Complexities of Energy Financing in an Unstable Environment: Forces for Stabilization and Destabilization)

Moderator: *Jean Couture; Institut Français de l'Énergie, France
Organizers: *A. J. Meyer II; The Chase Manhattan Bank, N. A., USA

*David H. Knapp; Brown Brothers Harriman & Company, USA

Dissertators: TBA

Annotators: *Mariano Bauer; Universidad Nacional Autonoma, México Reporter: Christian de Fernoyl; Banque Nationale de Paris, France

21:00 hrs

PM

Distinguished Lecturer (Recent Developments in the Field of Genetics; Information Processes; or Toward the Frontiers of High-Energy Physics)

WEDNESDAY, October 16, 1985

AM SESSION 5. OIL AND GAS MOVING NORTH

(The North Sea: Impacts on the World Oil Market. Political Aspects of the International Gas Trade. The Viability of Arctic Technology)
Moderator:

J. Wallace Hopkins: International Energy Agency, France

Organizers: Henrik Ager-Hanssen; Statoil, Norway

Thomas K. Perkins; ARCO Resources Technology, USA

Dissertators: Charles F. Cook; Phillips Petroleum Company, USA

Annotators: *Pekka Jauho, Technical Research Center of Finland, Finland

*Nicole Jestin-Fleury; Ministère de l'Economie, France *Jon Berg; Institute for Energy Technology, Norway

Reporter: TBA

PM --- (FREE AFTERNOON)

THURSDAY, October 17, 1985

III. THE NEW ENERGY WORLD

AM SESSION 6. MANAGING TECHNOLOGICAL HAZARDS

(How to Better Anticipate, Prevent, and React; the Rewards of Preparation)
Moderator: *Knud Østergaard; Technical University of Denmark, Denmark

Organizers: *Pierre Tanguy; I.P.S.N., France

*Nelson Sievering: IAEA, Austria

Dissertators: TBA

Annotators: *Veikko Palva; Technical Research Center of Finland, Finland

*Jørgen Henningsen, Danish Environmental Protection Agency

Reporter: *Lars Åke Nöjd; Studsvik Energiteknik AB, Sweden

SESSION 7. ENERGY RESEARCH AND DEVELOPMENT: LESSONS LEARNED AND LESSONS IGNORED

(Analysis of Large Energy Investments Over the Last 10 Years)
Moderator: *Ove W. Dietrich; Ministry of Energy, Denmark
Organizers: Eric Reichl; Greenwich, Connecticut, USA

*Kjell Håkansson; Studsvik Energiteknik AB, Sweden

Dissertators: TBA

Annotators: *Robert M. Herzog: Resource Management Technologies, Inc., USA

*Mogens Larsen; Danish Board of District Heating, Denmark

*Børge Madsen; Vestas K/S, Denmark

*Jon Berg; Institute for Energy Technologies, Norway

Reporter: *Ersel A. Evans; Westinghouse Hanford Co., USA

18:30 hrs Forum Banquet in the Main Hall at the University of Copenhagen

FRIDAY, October 18, 1985

AM. SESSION 8. NUCLEAR AND NON-NUCLEAR R & D FRONTIERS

> (Efficient Use of R & D Funding, International Cooperation in Energy Research, and Integration of the Rewards of the Information Revolution)

Moderator: Umberto Colombo; ENEA, Italy

C. Pierre Zaleski; University of Paris-Dauphine, France Organizers:

Anthony J. Favale; Grumman Aerospace Corporation, USA

*Robert Hofstadter: Stanford University, USA Dissertators:

*Behram N. Kurşunoğlu; University of Miami, USA

*Marcelo Alonso; Florida Institute of Technology, USA Annotators:

*Umberto L. Businaro; FIAT Delegation to Europe, Brussels,

*Nils-Godtfred Aamodt: Institute for Energy Technology, Norway

*Hans Larsen; Risø National Laboratory, Denmark Reporter:

*Nazli Choucri; Massachusetts Institute of Technology, USA Forum Rapporteurs:

*Jacques Lesourne; Conservatoire National des Arts

et Metiers. France

13:00 hrs Forum Officially Adjourns

Moderator: Organizes a session or appoints organizers who select Dissertators, suggest

Annotators, and allocate times for presentations. Delivers a paper in own

session, if desired, or makes general opening remarks.

Organizer: Selects Dissertators, suggests Annotators, and allocates times for presentations.

Presents a paper in a given session and submits it for publication in the Dissertator:

Forum proceedings at the conclusion of the Forum.

Comments on the dissertators' presentations or asks questions on the same Annotator:

upon invitation by the moderator.

Submits two or three pages summing up the fundamental points of the Reporter:

presentations of the Moderator and Dissertators in that session for the

use of the Forum Rapporteurs for their Forum Summary presentation following

the last session.

Prepare and present a summary of the entire Forum. Rapporteurs:

*The people listed with asterisks have agreed to serve in the indicated capacities. The others were suggested for invitation by the Forum Planning Committee.



Ninth Annual INTERNATIONAL SCIENTIFIC FORUM ON THE SILENT ENERGY REVOLUTION

October 14-18, 1985 Copenhagen, Denmark



REGISTRATION FORM

I PLAN TO ATTEND //	// I DO NOT PLAN TO ATTEND
Registration Fee \$350.00*	
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DEPARTURE DATE & APPROX. TIME	
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U.S.A.

*Registration fee refunds will be made to the extent that excess funds are available to share among the cancellees.

International Scientific Forum on The Silent Energy Revolution



A group travel arrangement at a very favourable price has been organized in cooperation with SAS - Scandinavian Airlines - as follows:

October 12, 1985, at 7.40 p.m.: Departure from New York, arrival at Copenhagen on October 13 at 8.10 a.m. (European time).

October 20, 1985, at 12.40 p.m.: Departure from Copenhagen, arrival at New York on October 20 at 4.10 p.m. (US Eastern time).

If you wish to join this travel arrangement, a cheque for D.kr.(Danish kroner) 7.420,-, (the sum must be paid in D.kr. In March 1985 the sum is equivalent to approximately US \$ 600) must be received by Spadille Congress Service, Sommervej 3, DK-3100 Hornback, Denmark, not later than May 15, 1985.

This arrangement is subject to the condition that at least 30 persons sign up for it. By mid September, you will either receive your ticket or, if the condition above is not met, we will notify you about the cancellation of the arrangement. In the latter case, the full amount paid will be refunded at the registration upon your arrival in Copenhagen.

Yes, I/we want to join the g (Names of all participants m	t as described.	
Name:		
Address:		
Name:	A Property of the Control of the Con	
Address:		
Name:		
Address:		
Number of persons:		
□ × 7.420,- D.kr. =	D.kr. is enclosed	
	(signature)	

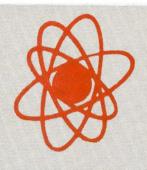
International Scientific Forum on The Silent Energy Revolution



HOTEL RESERVATION FORM

Please use block letters! Please indicate number of participants for each arrangement.	
Surname:First name:	
Title/position:Institute:	
Address:	
Post code, city:Country:	
Name of accompanying person(s):	
☐ Yes I/we will participate at the Forum Banquet on October 17th ☐ Yes I/we will participate at the North Zealand Tour, D.kr. 315,- p ☐ Lunch during the conference	D.kr. 300,-
possible (equivalent to one night). Number of nightsOctober, 1985 Departure onOctober, 1985	
Hotel d'Angleterre, Kgs. Nytorv 34, DK-1050 Copenhagen K: Bath and toilet included. Breakfast not included.	
\square Single room: D.kr. 1.025,- \square Double room: D.kr. 1.350,	- D.kr
Copenhagen Admiral Hotel, Toldbodgade 24-28, DK-1253 Copenh Bath and toilet included. Breakfast not included.	agen K:
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Hotel Codan, Sankt Annæ Plads 21, DK-1250 Copenhagen K: Bath and toilet included. Breakfast not included.	
☐ Single room: D.kr. 585,- ☐ Double room: D.kr. 770,	- D.kr
Hotel Comfort, Løngangsstræde 27, DK-1468 Copenhagen K: Bath and toilet included. Breakfast included.	
☐ Single room: D.kr. 342,- ☐ Double Room: D.kr. 540),- D.kr
Grand	total D.kr.
Date:Signature:	
grand total payable to: PRIVATB	total has been transferred to: ANKEN, Hornbaek 2260, Iornbaek, Denmark o. 45 39 04
Each participant will receive a written confirmation of his/her regis	tration upon payment of the grand

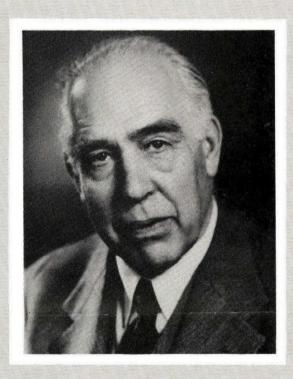
SPADILLE CONGRESS SERVICE, 3, Sommervej, DK-3100 Hornbaek, Denmark before July 20, 1985



INVITATION

The ninth annual International Scientific Forum on

THE SILENT ENERGY REVOLUTION 14 - 18 OCTOBER 1985 IN COPENHAGEN, DENMARK



Dedicated to the Centennial of the Danish Physicist NIELS BOHR
The ninth annual International Scientific Forum is organized by:



Center for Theoretical Studies, University of Miami, Coral Gables, Florida 33124, USA and



Risø National Laboratory, DK-4000 Roskilde, Denmark in cooperation with:

Niels Bohr Institute, Blegdamsvej 17, DK-2100 Copenhagen Ø, Denmark.

The International Scientific Forum is a prestigious annual Forum on energy. Its primary purpose is to address, from scientific and engineering points of view, critical energy issues of vital interest to society and governments worldwide.

A critical issue is defined as one that presently affects us, or will affect us in the future, which we must address now. Issues are technical, economic, and institutional.

The Forum Planning Committee comprises several Nobel Laureates and representatives of industry, government and academia from countries throughout the world. It is a working committee responsible for the program content and follow-up issues. In its work the Forum Planning Committee is assisted by a number of advisors, a European Subcommittee and, this year, a Danish National Committee.

The members of these committees are listed below.



BEHRAM N. KURSUNOGLU

The European Sub-Committee: N. E. BUSCH, Risø National Laboratory,

The Forum Planning Committee: MARCELO ALONSO, Executive Director of MARCELO ALONSO, Executive Director of FITRE, Florida Institute of Technology; Formerly Director of Scientific and Technological Affairs, OAS., USA.
HANS A. BETHE, Theoretical physicist; Nobel Laureate; Cornell University, USA.
NIELS E. BUSCH, Physicist; Director General, Rise National Laboratory, Denmark.
NAZLI CHOUCRI, Political scientist; Massachusetts, Institute of Technology; 1983 Forum chusetts Institute of Technology; 1983 Forum

chusetts Institute of Technology; 1983 Forum Rapporteur, USA.
CHARLES F. COOK, Physicist; Vice President, Research and Development, Phillips Petroleum Company, USA.
JEAN COUTURE, Engineer; President, Institut Français de l'Energie; Formerly Secretary of Energy for France.
HON. DANTE B. FRASCELL, Member of Congress of the United States, House of Representatives.

presentatives. WOLF HÄFELE, Theoretical physicist; Kernforschungsanlage Jülich GmbH, West

Germany.

ROBERT L. HIRSCH, Vice President and Manager; Exploration and Production Research, ARCO Resources Technology, USA.

ROBERT HOFSTADTER, Experimental physicist; Nobel Laureate; Stanford University USA.

SITY, USA.

BEHRAM N. KURSUNOGLU, Theoretical physicist; Forum Chairman, Center for Theoretical Studies, University of Miami, USA.

WILLIS E. LAMB, Jr., Experimental physicist; Nobel Laureate; University of Arizona,

JACQUES LESOURNE, Conservatoire National des Arts et Metiers, Paris, France,

1982 Forum Rapporteur.
A. J. MEYER II, Physicist; energy economist; Vice President, The Chase Manhattan Bank,

N.A., USA.

DIXY LEE RAY, Biologist; Formerly Governor of the State of Washington, and formerly Chairman of the U.S. Atomic Energy Com-

Chairman of the U.S. Atomic Energy Commission, USA.
ALEXANDER SCHEINDLIN, Director, Institute for High Temperatures, USSR Academy of Sciences, USSR.
HOWARD SHAPAR, Director General, Nuclear Energy Agency OECD, France.
NELSON F. SIEVERING, Jr., Deputy Director General for Administration; International Atomic Energy Agency Austria nal Atomic Energy Agency, Austria.

EDWARD TELLER, Theoretical physicist; Hoover Institution, Stanford University; Formerly member of the Manhattan Project,

ALVIN M. WEINBERG, Theoretical physicist; Director, Institute for Energy Analysis,
Oak Ridge Associated Universities, USA.
EUGENE P. WIGNER, Theoretical physicist;
Nobel Laureate; Princeton University; Formerly member of the Manhattan Project,

USA. C. PIERRE ZALESKI, Nuclear engineer; Director, Association Nationale de la Recherche Technique, France.

The Forum Planning Committee

advisors are: MARIANO BAUER, Director, Programa MARIANO BACER, Director, Programa Universitario de Energia, Universidad Nacional Autonoma de México, Mexico. THOMAS W. CUNNINGTON, President, Cyton Corporation, USA. BENT ELBEK, Professor, Niels Bohr BENT ELBEK, Professor, Niels Bohr Institute, Denmark.

ERSEL A. EVANS, Vice President and Laboratory Technical Director, Westinghouse Hanford Company, USA.

ANTHONY J. FAVALE, Deputy Director, Advanced Energy Systems/Fusion Projects, Grumman Aerospace Corporation, USA.

KJELL HAKANSSON, President, Studsvik Energiteknik AB, Sweden.

ROBERT M. HERZOG, President, Resource Management Technologies, Inc., USA.

DAVID H. KNAPP, Energy economist, Brown Brothers Harriman & Company, USA.

KNUD MØLLENBACH, Executive secretary, Risø National Laboratory, Denmark.

JEAN PELLERIN, Commissariet á l'Energie Atonique, Paris, France. JEAN PELLERIN, Commissariet a l'Energie Atoinique, Paris, France. JOHN SAVOY, Director, Environmental Assessment, Sun Company, Inc., USA. GLEN E. SCHULER, Energy/Resource eco-nomist, Tennessee Gas Transmission, USA. ALBERT J. SOBEY, Director, Energy & Advanced Product Economics, General Mo-RONALD S. WISHART, Jr., Vice President, Federal Government Relations, Union

JEAN COUTURE (chairman), l'Institut Francais de l'Energi, France, M. DUPAS, Centre National d'Etudes Scientifiques, France.
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National Liberatury, Desmayl), National Laboratory, Denmark. J. PELLERIN, Commissariat á l'Énergie Atomique, France.
C. SALVETTI, Comitato Nazionale per l'Energia Nucleare e le Energie Alternative, (ENEA), Italy.
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The BP Energy Foundation of the Academy for Futures Studies supports innovators in the energy field as well as publications and conferences on Energy Policies. The Foundation was established through a gift from The British Petroleum Company, Denmark.

The International Scientific Forum on Energy

The International Scientific Forum on Energy is an annual review of world energy issues, and discussion on new ideas from a global standpoint, that began in 1977.

The uniqueness of our Forum lies in its scientific, independent, international, interdisciplinary structure and in the participation of people of great achievement in academia, industry, and government.

These Fora, wich have previously been held in South Florida (1977, 1978, 1980 and 1984), Nice (1979), Mexico City (1981), Paris (1982), and New York City (1983) focus on the

analyses of various energy scena-

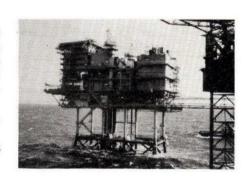
The highlights of the past eight Fora include the 1981 forecast, made in Mexico City, predicting the 1982-83 oil glut and the corresponding fall in crude oil prices. Recommendations for nuclear energy, including the waste problem, have been made. Special attention was paid to the interrelationship of the different energy sources and the impact of the utilization of a given source of energy on environment, economics and, on occasion, on the international polical scene.



The Silent Energy Revolution

The global energy scene is constantly changing. While the press and the public focus its attention on a few spectacular events, a number of major structural changes develop unattended. These changes take place in areas of particular interest to the business and scientific communities as well as public authorities.

In some countries up to 50% of the primary fuel supplies will change over a few years. Are these changes government policy or market driven? Financing of large energy installations changes. Who is in control? New technologies enter the scene. Is it science push or market pull? These are some of the critical issues to be addressed at this 1985 Forum.



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PROGRAMME - International Scientific Forum on The Silent Energy Revolution

SUNDAY, October 13, 1985	MONDAY, October 14, 1985	TUESDAY October 15, 1985	WEDNESDAY, October 16, 1985	THURSDAY, October 17, 1985	FRIDAY, October 18, 1985
9.00 hrs. Legistration and informal reception at the Coyal Danish Academy of Sciences and Letters.	O9.00 hrs. Prologue Knud Enggaard; Minister of Energy, Denmark Behram N. Kursunoglu; University of Miami, USA Niels E. Busch; Risø National Laboratory, Denmark SESSION 1. Tribute to Niels Bohr His Life and Work; The Heritage of Niels Bohr Moderators: Hans A. Bethe; Cornell University, USA Organizers: Bent Elbek; Niels Bohr Institute, Denmark Niels E. Busch; Risø National Laboratory, Denmark Reporter: Knud Møllenbach; Risø National Laboratory, Denmark I The Causes of the Revolution 14.00 hrs SESSION 2. The Driving Forces of Energy Interaction Interdependency of Price, Supply, Demand and Multiple Primary Energies. Moderator: To be announced Organizers: Glen E. Schuler; Tennessee Gas Transmission, USA Tor Ragnar Gerholm; University of Stockholm, Sweden Annotators: Thomas W. Cunnington; Cyton Corporation, USA Albert J. Sobey; General Motors Corporation, USA Reporter: Robert L. Hirsch; ARCO Resources Technology, USA 18.30 hrs. Reception by the Lord-Mayor of Copenhagen and Buffet at the Town Hall.	II Manifestation of the Revolution: Subtle and Obvious 09.00 hrs SESSION 3. Specific Structural Changes: Petrochemicals and Refining Rationalization of Excess Capacities and The Shifting Feedstocks and Product Slates: Implications for World Energy Markets Moderator: Haldor Topsøe, Haldor Topsøe A/S, Denmark Organizers: Nazli Choucri; Massachusetts Institute of Technology, USA Annotators: To be announced Reporter: John Savoy, Sun Company, Inc., USA 14.00 hrs SESSION 4. Specific Structural Changes: Energy Investments - Banking Control Complexities of Energy Financing in an Unstable Environment: Forces for lization and Destabilization Moderator: Jean Couture; Institut Francais de l'Energi, France Organizers: A. J. Meyer II; The Chase Manhattan Bank, USA David H. Knapp; Brown Brothers Harriman & Company, USA Annotators: Mariano Bauer; Universidad Nacional Autonoma, Mexico Marcelo Alonso; Florida Institute of Technology, USA Reporter: To be announced 21.00 hrs. Lecture on Recent Developments in the Field of Genetics; Information Processes; or Toward the Frontiers of High-Energy Physics. (Distinguished lecturer to be announced.)	O9.00 hrs. Oil and Gas moving North The North Sea: Impacts on the World Oil Market. Political Aspects of the International Gas Trade. The Viability of Arctic Technology. Moderator: To be announced Organizers: To be announced Annotators: Pekka Jauho; Technical Research Centre of Finland Nicole Jestin-Fleury; Ministère de l'Economie, France Jon Berg; Institute for Energy Technology, Norway Reporter: To be announced 14.00 hrs. Tour of Rise National Laboratory. Sightseeing in the historical town Roskilde. Vi the Viking Ship Museum and Ro. de Cathedral.	III The New Energy World 09.00 hrs - SESSION 6. Managing Technological Hazards How to Better Anticipate, Prevent, and React; The Rewards of Preparation Moderator: Knud Østergaard; Technical University of Denmark Organizers: Pierre Tanguy; Institut de Pretection et de Sûreté Nucleaire, France. Nelson Sievering; International Atomic Energy Agency; Austria Annotators: Veikko Palva; Technical Research Centre of Finland Jørgen Henningsen, Danish Environmental Protection Agency Reporter: Lars Åke Nöjd; Studsvik Energiteknik AB, Sweden 14.00 hrs - SESSION 7. Energy Research and Development: Lessons Learned and Lessons Ignored Analysis of Large Energy Investments Over the Last 10 Years Moderator: Ove W. Dietrich; Ministry of Energy, Denmark (from June 1, 1985 SEAS Ltd., Denmark) Organizers: Eric Reichl; Greenwich, Connecticut, USA Kjell Håkansson; Studsvik Energiteknik AB Sweden Annotators: Robert M. Herzog; Resource Management Technologies Inc., USA Mogens Larsen; Danish Board of District Heating Jon Berg; Institute for Energy Technologies, Norway Birger Madsen; Vestas A/S, Denmark Reporter: Ersel A. Evans; Westinghouse Hanford Co., USA 18.30 hrs. FORUM BANQUET in the Main Hall at the University of Copenhagen.	Nuclear and Non-Nuclear R & D Frontiers Efficient Use of R & D Funding. International Cooperation in Energy Researd Integration of the Rewards of the Information Revolution Moderator: Umberto Colombo; Comitato Nazionale l'Energia Nucleare e le Energie Altertive (ENEA), Italy Organizers: C. Pierre Zaleski; Université de Paris (Paris-Dauphine), France Anthony J. Favale; Grumman Aerospac Corporation, USA Annotators: Umberto L. Businaro; FIAT Delegation Europe, Brussels Nils-Godtfred Aamodt; Institute for Energian Selegation (Paris Paris Nazional Laboratory Denmark) Forum Rapporteurs: Nazli Choucri; Massachusetts Institut Technology, USA Jacques Lesourne; Conservatoire National August Lesourne; Conservatoire National August English Adjourns. Forum Officially Adjourns.
FORUM ORGANIZATION Moderator: Organizes a session or appoints Organizers who select Dissertators, suggest Annota- tors, and allocate times for presentations. Delivers a paper in own session, if desired, or makes general opening remarks.	Organizer: Selects Dissertators, suggests Annotators, and allocates times for presentation.	Dissertator: Present a paper in a given session and submits it for publication in the Forum proceedings at the conclusion of the Forum.	Annotator: Comments on the Dissertators' presentations or asks questions on the same upon invitation by the moderator.	Reporter: Submits two or three pages summing up the fundamental points of the presentations of the Moderator and Dissertators in that session for the use of the Forum Rapporteurs for their Forum Summary presentation following the last session.	Rapporteurs: Prepare and present a summary of the entire Forum.

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General Information

Addresses

The International Scientific Forum on Energy.

The Planning Committee Chairman Behram N. Kursunoglu Center for Theoretical Studies University of Miami, P.O.B. 249055 Coral Gables, Florida 33124, USA. Phone: 305/284-4455

The ninth International Scientific Forum on Energy c/o Spadille Congress Service 3, Sommervej, DK-3100 Hornbaek Denmark, Phone: +45 2 202496.

The Danish National Committee
Knud Møllenbach
Risø National Laboratory
P.O.B. 49, DK-4000 Roskilde,
Denmark.
Phone: +45 2 37 12 12, telex 43116
cable address: risatom

Locations

Registration on October 13, at 19:00 hrs: Royal Danish Academy of Sciences and Letters H.C.Andersens Boulevard 35, DK-1553 Copenhagen V.

Sessions on October 14, 15, 17 & 18 Eigtved's Warehouse Asiatisk Plads 2, DK-1448 Copenhagen K.

Sessions on October 16: Rise National Laboratory DK-4000 Roskilde Transportation to and from Rise will be provided.

Registration and hotel reservations:

In USA, Canada, Japan and Latin America:

Registration Form and fee in US\$ must be returned to the Center for Theoretical Studies, University of Miami, P.O.Box 249055, Coral Gables, Florida 33124, USA.

Block reservations have been made in selected Copenhagen hotels. To take advantage here of hotel reservation form and deposit must be returned to Spadille Congress Service, 3, Sommervej, DK-3100 Hornback, Denmark before July 20, 1985. Hotel accommodation cannot be guaranteed for reservations and payments received after this date.

Note: October is within the high season for tourism in Copenhagen. The hotel deposit will be transferred to the hotel upon your arrival, and in turn will be deducted from your hotel bill.

Elsewhere in the world:

Blok reservations have been made in selected Copenhagen hotels. To take advantage hereof registration and hotel reservation accompanied by payment must be returned to the Congress Bureau: Spadille Congress Service, Sommervej 3, DK-3100 Hornbaek, Denmark before July 20, 1985.

Note: October is within the high season for tourism in Copenhagen. The Hotel deposit will be transferred to the hotel upon your arrival, and in turn will be deducted from your hotel

Cheques and payment orders sent to Spadille Congress Service must be made out in Danish currency (Danish »kroner«).

Personal cheques drawn on non-Danish banks cannot be accepted. Please clearly endorse your remittance with the designation Scientific Forum on Energy. Names and addresses on cheques should be typed or written in block letters.

The exchange rate is approximately 1 US\$ = 12 D.kr. (March 1985)

Refunds:

In case of cancellation before July 20, 1985 the registration fee and hotel deposit after deduction of a handling charge of D.kr. 500, or US\$ 50 per person will be refunded. After that date no refunds can be made.

Please note that Danish currency is required for all payments e.g., of incidental expenses at the conference secretariat and that personal cheques and credit cards cannot be accepted.

Exchange of currency cannot be made at the conference secretariat but a bank is available at the conference centre.

Confirmation:

Each participant will receive a written confirmation of registration and hotel reservation from Spadille Congress Service upon payment of the grand total.

Registration fee includes:

- registration
- abstracts
- informal reception, Sunday Ocotber 13, 1985.
- The Forum Banquet
- reception at the Copenhagen Town Hall
- refreshments
- lunches, Monday through Friday
- transportation to Risø and return

Number of participants:

Because of space limitations, the number of participants is limited to approximately 250. Early registration is therefore strongly recommended.

Accompanying persons

Accompanying persons are welcome at the receptions Sunday and Monday and the Forum Banquet on Thursday.

A North Zealand Tour will be arrang-

ed - see below.

Please indicate your interest on the registration/hotel reservation form.

North Zealand Tour:

The tour goes through delightful countryside to Frederiksborg Castlebuilt in magnificent renaissance style by King Christian IV. After lunch we will visit »Louisiana«

After lunch we will visit »Louisiana« in Humlebæk, which is the largest museum of modern art in northern Europe.

Duration 7 hours, price per person D.kr. 315 (lunch included).
Limited number of participants

Limited number of participants. Departure from Hotel d'Angleterre, Kgs. Nytorv at 09.30.

Sponsored by:



A/S Niro Atomizer

305, Gladsaxevej DK-2860 Søborg Denmark

Phone + 45 1 69 10 11 Telex 15603 Telefax + 45 1 69 14 14 The Niro Atomizer Spray Drying Absorption (SDA) process has already been used successfully on 25 plants creating clean environment for more than $7000\mathrm{MW}_{\mathrm{e}}$ generating plants.

Further activities include: Industrial drying plants, evaporators and extractors.

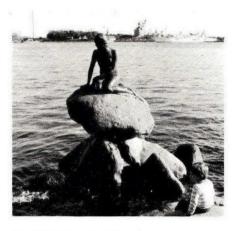
Copenhagen and Eigtved's Warehouse

The major part of the Forum will be held in Copenhagen, the capital city of Denmark. Copenhagen is a modern metropolis with about 1.5 milllion inhabitants. It is large enough to support cultural activities of an international standard, with three symphony orchestras, the Royal Danish Ballet and Opera, more than a dozen theatres and a wealth of cinemas, many fine museums, etc. But it is also small enough to have largely avoided the typical big-city problems of pollution, traffic congestion and violent crime. Most of the inhabitants speak at least one foreign language.

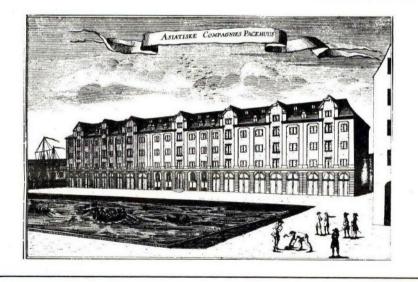
The Forum will take place in the heart of the city at the historic Eigtveds Pakhus (Eigtved's Warehouse), built during the years 1748-50.

The project was conceived and supervised by the master builder Nicolai Eigtved, who was appointed by the King. The owner of the building was the Asiatic Company. The four storeys served as a warehouse, but some of the rooms on the ground floor were used as exhibition halls where people could see the costly and exotic goods brought home by the ships of the company.

The Government acquired the warehouse and surrounding areas in 1972. At that time it was shabby and neglected, but it was still used as a warehouse. However, in 1976 it was decided to restore the old building, and in 1980 the first conference rooms in Eigtveds Pakhus were taken into use. It was ready with furniture, technical and audio-visual installations at the beginning of 1982 and total renovation of the sandstone facade was finished in 1984. The conference facilities at Eigtveds Pakhus are very attractive and well suited for the Forum.









Sponsored by:



Risø National Laboratory P.O.Box 49 DK-4000 Roskilde Denmark

Phone + 45 2 37 12 12 Telex 43116 Telefax + 45 2 36 06 09 Risø is a state-owned non-profit research center.
Risø is responsible for a wide range of R&D programmes and consultancy services within the fields of:
Energy Technology, Safety and Environment, Materials and Processes, Radiation Applications and Biotechnology.

Risø National Laboratory

Located in picturesque surroundings on the banks of Roskilde Fjord, close to the historical city of Roskilde, Risø National Laboratory is the largest research institute in Denmark. A visit is planned for the Forum.

The Laboratory was founded on the initiative of Niels Bohr, the first chairman of the Danish Atomic Energy Commission, to engage in research and development in the peaceful utilization of atomic energy for





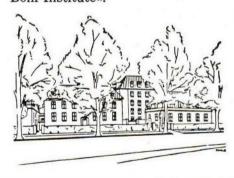
the benefit of the community. Today the total staff at Risø numbers 1000 and in 1984 the annual budget was about 300 million D.kr. (roughly 30 million ECU or US\$). International collaboration makes a vital contribution to Risø's research program.

From the beginning, the activities of the Laboratory included research in many fields of nuclear science, basic and applied research in physics, chemistry, meteorology, metallurgy, agriculture, etc. In 1976 the scope of the program was broadened to include non-nuclear energy research and this activity has expanded rapidly in recent years. The program includes energy research, development and demonstration, environmental and safety research, advanced materials research, radiation research and bio-technological research. Risø operates experimental facilities of a high international standard.



Niels Bohr Institute

Niels Bohr was appointed Professor of Physics at the University of Copenhagen in 1916. This led in 1921 to the foundation of the »Institute of Theoretical Physics«. Today this institute is known as the »Niels Bohr Institute«.

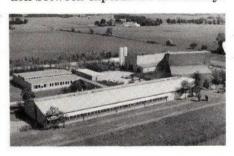


From the early years the Institute has been an important international scientific center. It is the home of the "Copenhagen School" of quantum physics and has been the cradle of many new ideas in physics. The Institute has fostered several Nobel Laureates, most recently Aage Bohr and Ben Mottelson.

The Institute is still located at the original site on Blegdamsvej in Copenhagen. Since 1961 it has in addition operated a Tandem Accelerator Laboratory sited next to Risø National Laboratory.

Today the staff of the Institute numbers about 130 persons and the an-

nual budget amounts to 45 million D.kr. (roughly 4.5 million ECU or US\$). The areas of research are low and medium energy nuclear physics, particle physics and astrophysics. In the tradition of Niels Bohr all activities are pursued in close collaboration between experiment and theory.



Frontcoverphoto: @ NBI Photo

International Scientific Forum on The Silent Energy Revolution



A group travel arrangement at a very favourable price has been organized in cooperation with SAS - Scandinavian Airlines - as follows:

October 12, 1985, at 7.40 p.m.: Departure from New York, arrival at Copenhagen on October 13 at 8.10 a.m. (European time).

October 20, 1985, at 12.40 p.m.: Departure from Copenhagen, arrival at New York on October 20 at 4.10 p.m. (US Eastern time).

If you wish to join this travel arrangement, a cheque for D.kr.(Danish kroner) 7.420,-, (the sum must be paid in D.kr. In March 1985 the sum is equivalent to approximately US \$ 600) must be received by Spadille Congress Service, Sommervej 3, DK-3100 Hornback, Denmark, not later than May 15, 1985.

This arrangement is subject to the condition that at least 30 persons sign up for it. By mid September, you will either receive your ticket or, if the condition above is not met, we will notify you about the cancellation of the arrangement. In the latter case, the full amount paid will be refunded at the registration upon your arrival in Copenhagen.

Yes, I/we want to join the group travel arrang	rement as described.	
(Names of all participants must be filled in).		
Name:		
Address:		
Name:		
Address:		
Name:		
Address:		
Number of persons:		
□ × 7.420,- D.kr. =	D.kr. is enclosed	
	(signature)	

International Scientific Forum on The Silent Energy Revolution



HOTEL RESERVATION FORM

Please use block letters! Please indicate number of participar	nts for each arrangement.	
Surname:	First name:	
Title/position:	Institute:	
Address:		
Post code, city:	Country:	
Name of accompanying person(s):_		
☐ Yes I/we will participate at the F☐ Yes I/we will participate at the N☐ Lunch during the conference	Forum Banquet on October 17th Worth Zealand Tour, D.kr. 315,- pr.person	n D.kr. 300,-
Hotel reservation: The necessary deposit must be sent possible (equivalent to one night). Number of nights	October, 1985	
Hotel d'Angleterre, Kgs. Nytorv 3 Bath and toilet included. Breakfast		
☐ Single room: D.kr. 1.025,-	☐ Double room: D.kr. 1.350,-	D.kr.
Copenhagen Admiral Hotel, Toldh Bath and toilet included. Breakfast	oodgade 24-28, DK-1253 Copenhagen Ka	
☐ Single room: D.kr. 550,-	☐ Double room: D.kr. 705,-	D.kr.
Hotel Codan, Sankt Annæ Plads 2 Bath and toilet included. Breakfast		
☐ Single room: D.kr. 585,-	☐ Double room: D.kr. 770,-	D.kr.
Hotel Comfort, Løngangsstræde 2 Bath and toilet included. Breakfast		
☐ Single room: D.kr. 342,-	☐ Double Room: D.kr. 540,-	D.kr.
	Grand total	D.kr.
Date:	Signature:	
☐ I enclose a cheque in the amou grand total payable to: SPADILLE CONGRESS SEE 3, Sommervej, DK-3100 Horn Denmark	PRIVATBANKEN RVICE DK-3100 Hornbael	k, Denmark
total. Please return this form to:	ten confirmation of his/her registration	

This form is **valid only** in USA, Canada, Japan and Latin America. Participants from other countries, please contact: SPADILLE CONGRESS SERVICE, 3, Sommervej, DK-3100 Hornbaek, Denmark.

before July 20, 1985



Center for Theoretical Studies

University of Miami P.O. Box 249055 Coral Gables, Florida 33124 305/284-4455

Ninth Annual INTERNATIONAL SCIENTIFIC FORUM ON THE SILENT ENERGY REVOLUTION

October 14-18, 1985 Copenhagen, Denmark



Risø National Laboratory

Postbox 49 DK-4000 Roskilde, Denmark Phone (02) 371212, Telex 43116 Cable address: Risatom

April 30, 1985

of doort realer

Planning Committee: Behram N. Kurşunoğlu

Forum Chairman University of Miami Jean Couture

European Subcommittee Chmn. Institut Français de l'Énergie Marcelo Alonso

Florida Institute of Technology Hans A. Bethe

Cornell University

Niels E. Busch Risø National Laboratory, Denmark Nazli Choucri

Massachusetts Institute of Technology Charles F. Cook

Phillips Petroleum Company Dante B. Fascell

Congress of the United States Wolf Häfele Kernforschungsanlage Jülich

W. Germany

Robert L. Hirsch ARCO Resources Technology Robert Hofstadter

Stanford University Willis E. Lamb, Jr. Iniversity of Arizona ies Lesourne aris, France

A. J. Meyer II The Chase Manhattan Bank, N. A. Dixy Lee Ray

Fox Island, Washington Alexander Scheindlin USSR Academy of Sciences Howard K. Shapar OECD, Paris

Nelson F. Sievering, Jr. IAEA. Vienna **Edward Teller**

Hoover Institution, Stanford Alvin M. Weinberg Oak Ridge Associated Universities

Eugene P. Wigner Princeton University C. Pierre Zaleski

University of Paris-Dauphine

Committee Advisors: Mariano Bauer

Universidad Nacional, México Thomas W. Cunnington Cyton Corporation Frsel A. Evans

Westinghouse Hanford Company ony J. Favale rumman Aerospace Corporation

Kyun Håkansson Studsvik Energiteknik AB, Sweden

Robert M. Herzog Resource Management Technologies

David H. Knapp Brown Brothers Harriman & Co.

Commissariat à l'Énergie Atomique John Savoy

Sun Company, Inc.

Glen E. Schuler, Jr. Tennessee Gas Transmission Albert J. Sobey General Motors Corporation

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Linda Scott University of Miami Mr. Masood Ahmed Energy Department The World Bank 1818 H Street, N.W. Washington, D.C. 20433

Dear Mr. Ahmed:

On behalf of the Planning Committee, I am pleased to extend to you our cordial invitation to participate in our Forum in Copenhagen, Denmark, October 14-18, 1985. I have enclosed the preliminary program and a registration form. A hotel reservation form is enclosed; please note that the deadline is July 20, 1985.

The names without asterisks in the enclosed preliminary program are listed as a result of the Committee's recommendations in its February meeting, and those people will be invited to participate in the indicated capacity. If you have any opinions or suggestions to improve the program content, I would like to hear from you. The preliminary program will be updated at eight-week intervals and will be sent to you at your request. In the meantime, the enclosed registration form should be completed and returned to us at your earliest convenience.

I look forward to seeing you at the Forum in Copenhagen.

Sincerely yours,

Behram N. Kursunoglu

Forum Chairman

Enclosures

ISF:BN:1m

NOOMING MYD DMIL 632 MYL -3 6M IS: 31 EECELNED PM SESSION 4. SPECIFIC STRUCTURAL CHANGES: ENERGY INVESTMENTS - BANKING CONTROL (Complexities of Energy Financing in an Unstable Environment: Forces for Stabilization and Destabilization)

*Jean Couture; Institut Français de l'Énergie, France Moderator: *A. J. Meyer II: The Chase Manhattan Bank, N. A., USA Organizers:

*David H. Knapp; Brown Brothers Harriman & Company, USA

Dissertators:

*Mariano Bauer: Universidad Nacional Autonoma, México Annotators: Christian de Fernoyl; Banque Nationale de Paris, France Reporter:

21:00 hrs

Distinguished Lecturer (Recent Developments in the Field of Genetics; Information Processes; or Toward the Frontiers of High-Energy Physics)

WEDNESDAY, October 16, 1985

SESSION 5. OIL AND GAS MOVING NORTH AM

> (The North Sea: Impacts on the World Oil Market. Political Aspects of the International Gas Trade. The Viability of Arctic Technology) Moderator: J. Wallace Hopkins; International Energy Agency, France

Organizers: Henrik Ager-Hanssen; Statoil, Norway

Thomas K. Perkins; ARCO Resources Technology, USA

Dissertators: Charles F. Cook; Phillips Petroleum Company, USA

*Pekka Jauho, Technical Research Center of Finland, Finland Annotators:

> *Nicole Jestin-Fleury; Ministère de l'Economie, France *Jon Berg; Institute for Energy Technology, Norway

Reporter: TBA

--- (FREE AFTERNOON)

THURSDAY, October 17, 1985

III. THE NEW ENERGY WORLD

AM MANAGING TECHNOLOGICAL HAZARDS

> (How to Better Anticipate, Prevent, and React; the Rewards of Preparation) Moderator: *Knud Østergaard; Technical University of Denmark, Denmark

Organizers: *Pierre Tanguy; I.P.S.N., France *Nelson Sievering; IAEA, Austria

Dissertators:

*Veikko Palva: Technical Research Center of Finland, Finland Annotators:

*Jørgen Henningsen, Danish Environmental Protection Agency

*Lars Ake Nojd; Studsvik Energiteknik AB, Sweden Reporter:

PM SESSION 7. ENERGY RESEARCH AND DEVELOPMENT: LESSONS LEARNED AND LESSONS IGNORED

> (Analysis of Large Energy Investments Over the Last 10 Years) Moderator: *Ove W. Dietrich; Ministry of Energy, Denmark

Eric Reichl; Greenwich, Connecticut, USA Organizers: *Kjell Håkansson; Studsvik Energiteknik AB, Sweden

Dissertators:

Annotaators: *Robert M. Herzog: Resource Management Technologies, Inc., USA

*Mogens Larsen; Danish Board of District Heating, Denmark

*Børge Madsen; Vestas K/S, Denmark

*Jon Berg: Institute for Energy Technologies, Norway

Reporter: *Ersel A. Evans: Westinghouse Hanford Co., USA

18:30 hrs Forum Banquet in the Main Hall at the University of Copenhagen Ninth Annual INTERNATIONAL SCIENTIFIC FORUM

ON THE SILENT ENERGY REVOLUTION

October 14-18, 1985 Copenhagen, Denmark

PRELIMINARY PROGRAM---May 1, 1985 (The next program will be issued July 1, 1985)

SUNDAY, October 13, 1985

PM Regist

Registration and Get-Together Party at the Royal Danish Academy of Sciences and Letters

MONDAY, October 14, 1985

AM

PROLOGUE

*Knud Enggaard; Minister of Energy, Denmark *Behram N. Kurşunoğlu; University of Miami, USA *Niels E. Busch; Risø National Laboratory, Denmark

SESSION 1. TRIBUTE TO NIELS BOHR

His Life and Work; The Heritage of Niels Bohr

Moderator: Hans A. Bethe; Cornell University, USA

Organizers: *Bent Elbek; The Niels Bohr Institute of Physics, Denmark

*Niels E. Busch; Risø National Laboratory, Denmark

Dissertators: Abraham Pais; The Rockefeller University, USA

"Niels Bohr - Life and Work"

Sir John Hill; Former Chairman of UKAEA, United Kingdom

Bertrand L. Goldschmidt; CEA, France

*Bent Elbek; The Niels Bohr Institute of Physics, Denmark

"The Heritage of Niels Bohr"

Annotators:

To Be Announced (TBA)

Reporter:

*Knud Møllenbach; Risø National Laboratory, Denmark

I. THE CAUSES OF THE REVOLUTION

PM SESSION 2. THE DRIVING FORCES OF ENERGY INTERACTION

(Interdependency of Price, Supply, Demand, and Multiple Primary Energies)

Moderator: Phil Oxley; Tenneco Oil Exploration and Production, USA

Organizers: *Glen E. Schuler; Tennessee Gas Transmission, USA

*Tor Ragnor Gerholm; University of Stockholm, Sweden

Dissertators: John Lichtblau; Petroleum Industry Research Foundation, USA

Danny J. Boggs; U.S. Department of Energy, USA

Annotators: Thomas W. Cunnington; Cyton Corporation, USA

Albert J. Sobey; General Motors Corporation, USA

Robert L. Hirsch; ARCO Resources Technology, USA

Reporter: TBA

18:30 hrs Reception by the Lord-Mayor of Copenhagen and Buffet at the Town Hall

TUESDAY, October 15, 1985

II. MANIFESTATIONS OF THE REVOLUTION: SUBTLE AND OBVIOUS

AM SESSION 3. SPECIFIC STRUCTURAL CHANGES: PETROCHEMICALS AND REFINING

(Rationalization of Excess Capacities and the Shifting Feedstocks and

Product Slates: Implications for World Energy Markets)

Moderator: *Haldor Topsøe; Haldor Topsøe A/S, Denmark

Organizers: Nazli Choucri; Massachusetts Institute of Technology, USA

TBA (from Couture)

Dissertators: J. Wallace Hopkins; International Energy Agency, France

*Emma B. Brossard; Louisiana State University, USA

Annotators: TBA

Reporter: John Savoy; Sun Company, Inc., USA

FRIDAY, October 18, 1985

AM SESSION 8. NUCLEAR AND NON-NUCLEAR R & D FRONTIERS

(Efficient Use of R & D Funding, International Cooperation in Energy Research, and Integration of the Rewards of the Information Revolution)

Moderator: Umberto Colombo; ENEA, Italy

Organizers: C. Pierre Zaleski; University of Paris-Dauphine, France

Anthony J. Favale; Grumman Aerospace Corporation, USA

Dissertators: *Robert Hofstadter; Stanford University, USA

*Behram N. Kurşunoğlu; University of Miami, USA

Annotators: *Marcelo Alonso; Florida Institute of Technology, USA

*Umberto L. Businaro; FIAT Delegation to Europe, Brussels,

*Nils-Godtfred Aamodt; Institute for Energy Technology, Norway

Reporter: *Hans Larsen; Risø National Laboratory, Denmark

Forum Rapporteurs: *Nazli Choucri; Massachusetts Institute of Technology, USA

*Jacques Lesourne; Conservatoire National des Arts

et Metiers, France

13:00 hrs Forum Officially Adjourns

* * * *

Moderator: Organizes a session or appoints organizers who select Dissertators, suggest

Annotators, and allocate times for presentations. Delivers a paper in own

session, if desired, or makes general opening remarks.

Organizer: Selects Dissertators, suggests Annotators, and allocates times for presentations.

Dissertator: Presents a paper in a given session and submits it for publication in the

Forum proceedings at the conclusion of the Forum.

Annotator: Comments on the dissertators' presentations or asks questions on the same

upon invitation by the moderator.

Reporter: Submits two or three pages summing up the fundamental points of the

presentations of the Moderator and Dissertators in that session for the use of the Forum Rapporteurs for their Forum Summary presentation following

the last session.

Rapporteurs: Prepare and present a summary of the entire Forum.

*The people listed with asterisks have agreed to serve in the indicated capacities. The others were suggested for invitation by the Forum Planning Committee.



Ninth Annual INTERNATIONAL SCIENTIFIC FORUM ON THE SILENT ENERGY REVOLUTION

October 14-18, 1985 Copenhagen, Dehmark



REGISTRATION FORM

I PLAN TO ATTEND / I DO NOT PLAN TO ATTEND
Registration Fee \$350.00*
NAME_
INSTITUTION
INSTITUTION ADDRESS
CITY, STATE, ZIP CODE, COUNTRY
TELEX NUMBERTELEPHONE (& Area Code)
ARRIVAL DATE & APPROXIMATE TIME
DEPARTURE DATE & APPROX. TIME
HOTEL RESERVATIONS MADE? YESNOWHERE?
WILL YOU BE ACCOMPANIED BY WHOM/FULL NAME
(for social function name tags, etc.)
NOTATIONS
Please return this completed form and your check or money order made payable to:

CENTER FOR THEORETICAL STUDIES

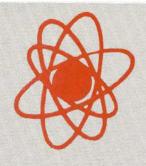
and mail to: Center for Theoretical Studies

University of Miami P. O. Box 249055

Coral Gables, Florida 33124

U.S.A.

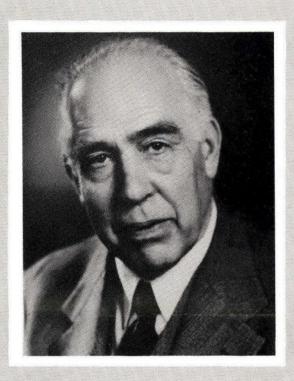
*Registration fee refunds will be made to the extent that excess funds are available to share among the cancellees.



INVITATION

The ninth annual International Scientific Forum on

THE SILENT ENERGY REVOLUTION 14 - 18 OCTOBER 1985 IN COPENHAGEN, DENMARK



Dedicated to the Centennial of the Danish Physicist NIELS BOHR

The ninth annual International Scientific Forum is organized by:



Center for Theoretical Studies, University of Miami, Coral Gables, Florida 33124, USA and



Risø National Laboratory, DK-4000 Roskilde, Denmark in cooperation with:

Niels Bohr Institute, Blegdamsvej 17, DK-2100 Copenhagen Ø, Denmark.

The International Scientific Forum is a prestigious annual Forum on energy. Its primary purpose is to address. from scientific and engineering points of view, critical energy issues of vital interest to society and governments worldwide.

A critical issue is defined as one that presently affects us, or will affect us in the future, which we must address now. Issues are technical, economic, and institutional.

The Forum Planning Committee comprises several Nobel Laureates and representatives of industry, government and academia from countries throughout the world. It is a working committee responsible for the program content and follow-up issues. In its work the Forum Planning Committee is assisted by a number of advisors, a European Subcommittee and, this year, a Danish National Committee.

The members of these committees are listed below.



BEHRAM N. KURSUNOGLU

The European Sub-Committee: N. E. BUSCH, Risø National Laboratory,

The Forum Planning Committee: MARCELO ALONSO, Executive Director of MARCELO ALONSO, Executive Director of FITRE, Florida Institute of Technology; Formerly Director of Scientific and Techno-logical Affairs, OAS., USA. HANS A. BETHE, Theoretical physicist; Nobel Laureate; Cornell University, USA. NIELS E. BUSCH, Physicist; Director General, Risø National Laboratory, Denmark. NAZLI CHOUCRI, Political scientist; Massachusetts Institute of Technology; 1983 Forum Rapporteur, USA. CHARLES F. COOK, Physicist; Vice President, Research and Development, Phillips Petroleum Company, USA. JEAN COUTURE, Engineer; President, Institut Francais de l'Energie; Formerly

Secretary of Energy for France. HON. DANTE B. FRASCELL, Member of Congress of the United States, House of Representatives.
WOLF HÄFELE, Theoretical physicist

Kernforschungsanlage Jülich GmbH, West

ROBERT L. HIRSCH, Vice President and Manager; Exploration and Production Research, ARCO Resources Technology, USA. ROBERT HOFSTADTER, Experimental physicist; Nobel Laureate; Stanford Univer-. USA

BEHRAM N. KURSUNOGLU, Theoretical physicist; Forum Chairman, Center for Theoretical Studies, University of Miami, USA. WILLIS E. LAMB, Jr., Experimental physicist; Nobel Laureate; University of Arizona, USA.

JACQUES LESOURNE, Conservatoire National des Arts et Metiers, Paris, France, 1982 Forum Rapporteur. A. J. MEYER II, Physicist; energy economist; Vice President, The Chase Manhattan Bank,

N.A., USA.
DIXY LEE RAY, Biologist; Formerly Governor of the State of Washington, and formerly
Chairman of the U.S. Atomic Energy Com-

Chairman of the U.S. Atomic Energy Commission, USA.
ALEXANDER SCHEINDLIN, Director, Institute for High Temperatures, USSR Academy of Sciences, USSR.
HOWARD SHAPAR, Director General, Nuclear Energy Agency OECD, France.
NELSON F. SIEVERING, Jr., Deputy Director General for Administration; International Atomic Energy Agency, Austria. nal Atomic Energy Agency, Austria.

EDWARD TELLER, Theoretical physicist; Hoover Institution, Stanford University; Formerly member of the Manhattan Project,

ALVIN M. WEINBERG, Theoretical physicist; Director, Institute for Energy Analysis, Oak Ridge Associated Universities, USA. EUGENE P. WIGNER, Theoretical physicist; Nobel Laureate; Princeton University; Formerly member of the Manhattan Project,

C. PIERRE ZALESKI, Nuclear engineer; Director, Association Nationale de la Recherche Technique, France.

The Forum Planning Committee advisors are:

MARIANO BAUER, Director, Programa Universitario de Energia, Universidad Nacional Autonoma de México, Mexico. THOMAS W. CUNNINGTON, President, Cyton Corporation, USA. BENT ELBEK, Professor, Niels Bohr BENT ELBEK, Professor, Niels Bohr
Institute, Denmark.
ERSEL A. EVANS, Vice President and Laboratory Technical Director, Westinghouse
Hanford Company, USA.
ANTHONY J. FAVALE, Deputy Director,
Advanced Energy Systems/Fusion Projects,
Grumman Aerospace Corporation, USA.
KJELL HAKANSSON, President, Studsvik
Energiteknik AB, Sweden.
ROBEET M. HERZOG, President Resour-ROBERT M. HERZOG, President, Resource Management Technologies, Inc., USA.
DAVID H. KNAPP, Energy economist,
Brown Brothers Harriman & Company, USA.
KNUD MØLLENBACH, Executive secretary, Risø National Laboratory, Denmark.
JEAN PELLERIN, Commissariet á l'Energie JEAN PELLEKIN, Commissariet at Energie Atonique, Paris, France. JOHN SAVOY, Director, Environmental Assessment, Sun Company, Inc., USA. GLEN E. SCHULER, Energy/Resource eco-nomist, Tennessee Gas Transmission, USA. ALBERT J. SOBEY, Director, Energy & Advanced Product Economics, General Mo-tors Corporation, USA. Corporation, USA. RONALD S. WISHART, Jr., Vice President, Federal Government Relations, Union Carbide Corporation, USA.

JEAN COUTURE (chairman), l'Institut Francais de l'Energi, France, M. DUPAS, Centre National d'Etudes Scientifiques, France. B. ELBEK, Niels Bohr Institute, Denmark. JEAN-CLAUDE GUIBAL, Commission of the European Communities, Belgium. Mme NICOLE JESTIN-FLEURY, Ministère de l'Economie, France. H. J. LAUE, International Atomic Energy Agency, Austria.

JACQUES LESOURNE, Conservatoire
National des Arts et Metiers, France.
Mme THERÈSE DE MAZANCOURT, Electricité de France, France. K. MØLLENBACH (secretary), Risø National Laboratory, Denmark. J. PELLERIN, Commissariat á l'Énergie Atomique, France. C. SALVETTI, Comitato Nazionale per

l'Energia Nucleare e le Energie Alternative, (ENEA), Italy. H. SHAPAR, Organization for Economic Co-operation and Development/Nuclear Energy

Agency, France. C. PIERRE ZALESKI, Nuclear engineer;

Director, Association Nationale de la Recherche Technique, France.

The Danish National Committee: NIELS E. BUSC, Director General, Risø

BENT ELBEK (chairman), Professor, Niels Bohr Institute OVE W. DIETRICH, Director, Ministry of Energy. JENS LINDHARD, Professor, University A. R. MACKINTOSH, Professor, University of Copenhagen. KNUD MØLLENBACH (secretary), Executive Secretary, Risø National Laboratory. J. ROSTRUP-NIELSEN, Dr. Techn., Haldor Topsøe Ltd. POUL SACHMANN, Director, ELSAM (The Jutland-Funen Electricity Consortium). CARL WANDEL, Professor, University of

Århus. KNUD ØSTERGAARD, Professor, Technical University of Denmark

Sponsored by:



BP Energy Foundation

of the Academy for Futures Studies 7. Trommesalen DK-1614 Copenhagen V Denmark

Phone + 45 1 31 40 49

The BP Energy Foundation of the Academy for Futures Studies supports innovators in the energy field as well as publications and conferences on Energy Policies. The Foundation was established through a gift from The British Petroleum Company, Denmark.

The International Scientific Forum on Energy

The International Scientific Forum on Energy is an annual review of world energy issues, and discussion on new ideas from a global standpoint, that began in 1977.

The uniqueness of our Forum lies in its scientific, independent, international, interdisciplinary structure and in the participation of people of great achievement in academia, industry, and government.

These Fora, wich have previously been held in South Florida (1977, 1978, 1980 and 1984), Nice (1979), Mexico City (1981), Paris (1982), and New York City (1983) focus on the

analyses of various energy scena-

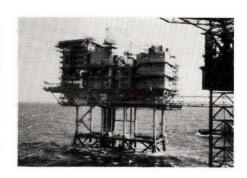
The highlights of the past eight Fora include the 1981 forecast, made in Mexico City, predicting the 1982-83 oil glut and the corresponding fall in crude oil prices. Recommendations for nuclear energy, including the waste problem, have been made. Special attention was paid to the interrelationship of the different energy sources and the impact of the utilization of a given source of energy on environment, economics and, on occasion, on the international polical scene.



The Silent Energy Revolution

The global energy scene is constantly changing. While the press and the public focus its attention on a few spectacular events, a number of major structural changes develop unattended. These changes take place in areas of particular interest to the business and scientific communities as well as public authorities.

In some countries up to 50% of the primary fuel supplies will change over a few years. Are these changes government policy or market driven? Financing of large energy installations changes. Who is in control? New technologies enter the scene. Is it science push or market pull? These are some of the critical issues to be addressed at this 1985 Forum.



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PROGRAMME - International Scientific Forum on The Silent Energy Revolution

SUNDAY, October 13, 1985	MONDAY, October 14, 1985	TUESDAY October 15, 1985	WEDNESDAY, October 16, 1985	THURSDAY, October 17, 1985	FRIDAY, October 18, 1985
19.00 hrs. Registration and informal reception at the Royal Danish Academy of Sciences and Letters.	O9.00 hrs. Prologue Knud Enggaard; Minister of Energy, Denmark Behram N. Kursunoglu; University of Miami, USA Niels E. Busch; Risø National Laboratory, Denmark SESSION 1. Tribute to Niels Bohr His Life and Work; The Heritage of Niels Bohr Moderators: Hans A. Bethe; Cornell University, USA Organizers: Bent Elbek; Niels Bohr Institute, Denmark Niels E. Busch; Risø National Laboratory, Denmark Reporter: Knud Møllenbach; Risø National Laboratory, Denmark I The Causes of the Revolution 14.00 hrs. SESSION 2. The Driving Forces of Energy Interaction Interdependency of Price, Supply, Demand and Multiple Primary Energies. Moderator: To be announced Organizers: Glen E. Schuler; Tennessee Gas Transmission, USA Tor Ragnar Gerholm; University of Stockholm, Sweden Annotators: Thomas W. Cunnington; Cyton Corporation, USA Albert J. Sobey; General Motors Corporation, USA Reporter: Robert L. Hirsch; ARCO Resources Technology, USA 18.30 hrs. Reception by the Lord-Mayor of Copenhagen and Buffet at the Town Hall.	II Manifestation of the Revolution: Subtle and Obvious 09.00 hrs SESSION 3. Specific Structural Changes: Petrochemicals and Refining Rationalization of Excess Capacities and The Shifting Feedstocks and Product Slates: Implications for World Energy Markets Moderator: Haldor Topsøe, Haldor Topsøe A/S, Denmark Organizers: Nazli Choucri; Massachusetts Institute of Technology, USA Annotators: To be announced Reporter: John Savoy, Sun Company, Inc., USA 14.00 hrs SESSION 4. Specific Structural Changes: Energy Investments - Banking Control Complexities of Energy Financing in ar Unstable Environment: Forces for \$ lization and Destabilization Moderator: Jean Couture; Institut Francais de l'Energi, France Organizers: A. J. Meyer II; The Chase Manhattan Bank, USA David H. Knapp; Brown Brothers Harriman & Company, USA Annotators: Mariano Bauer; Universidad Nacional Autonoma, Mexico Marcelo Alonso; Florida Institute of Technology, USA Reporter: To be announced 21.00 hrs. Lecture on Recent Developments in the Field of Genetics; Information Processes; or Toward the Frontiers of High-Energy Physics. (Distinguished lecturer to be announced.)	O9.00 hrs. Oil and Gas moving North The North Sea: Impacts on the World Oil Market. Political Aspects of the International Gas Trade. The Viability of Arctic Technology. Moderator: To be announced Organizers: To be announced Annotators: Pekka Jauho; Technical Research Centre of Finland Nicole Jestin-Fleury; Ministère de l'Economie, France Jon Berg; Institute for Energy Technology, Norway Reporter: To be announced 14.00 hrs. Tour of Rise National Laboratory. Sintseeing in the historical town Roskilde. In the Viking Ship Museum and Roskilde Cathedral.	III The New Energy World 09.00 hrs - SESSION 6. Managing Technological Hazards How to Better Anticipate, Prevent, and React; The Rewards of Preparation Moderator: Knud Østergaard; Technical University of Denmark Organizers: Pierre Tanguy; Institut de Pretection et de Sûreté Nucleaire, France. Nelson Sievering; International Atomic Energy Agency; Austria Annotators: Veikko Palva; Technical Research Centre of Finland Jørgen Henningsen, Danish Environmental Protection Agency Reporter: Lars Åke Nöjd; Studsvik Energiteknik AB, Sweden 14.00 hrs - SESSION 7. Energy Research and Development: Lessons Learned and Lessons Ignored Analysis of Large Energy Investments Over the Last 10 Years Moderator: Ove W. Dietrich; Ministry of Energy, Denmark (from June 1, 1985 SEAS Ltd., Denmark) Organizers: Eric Reichl; Greenwich, Connecticut, USA Kjell Håkansson; Studsvik Energiteknik AB Sweden Annotators: Robert M. Herzog; Resource Management Technologies Inc., USA Mogens Larsen; Danish Board of District Heating Jon Berg; Institute for Energy Technologies, Norway Birger Madsen; Vestas A/S, Denmark Reporter: Ersel A. Evans; Westinghouse Hanford Co., USA 18.30 hrs. FORUM BANQUET in the Main Hall at	Nuclear and Non-Nuclear R & D Frontiers Efficient Use of R & D Funding. International Cooperation in Energy Research Integration of the Rewards of the Information Revolution Moderator: Umberto Colombo; Comitato Nazionale pl'Energia Nucleare e le Energie Altertive (ENEA), Italy Organizers: C. Pierre Zaleski; Université de Paris (Paris-Dauphine), France Anthony J. Favale; Grumman Aerospace Corporation, USA Annotators: Umberto L. Businaro; FIAT Delegation de Europe, Brussels Nils-Godtfred Aamodt; Institute for Enertechnology, Norway Reporter: Hans Larsen; Risø National Laboratory, Denmark Forum Rapporteurs: Nazli Choucri; Massachusetts Institute Technology, USA Jacques Lesourne; Conservatoire Nationales Arts et Metiers, France 13.00 hrs. Forum Officially Adjourns.
FORUM ORGANIZATION Moderator: Organizes a session or appoints Organizers who select Dissertators, suggest Annota- tors, and allocate times for presentations. Delivers a paper in own session, if desired, or makes general opening remarks.	Organizer: Selects Dissertators, suggests Annotators, and allocates times for presentation.	Dissertator: Present a paper in a given session and submits it for publication in the Forum proceedings at the conclusion of the Forum.	Annotator: Comments on the Dissertators' presentations or asks questions on the same upon invitation by the moderator.	the University of Copenhagen. Reporter: Submits two or three pages summing up the fundamental points of the presentations of the Moderator and Dissertators in that session for the use of the Forum Rapporteurs for their Forum Summary presentation following the last session.	Rapporteurs: Prepare and present a summary of the entire Forum.

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General Information

Addresses

The International Scientific Forum on Energy.

The Planning Committee Chairman Behram N. Kursunoglu Center for Theoretical Studies University of Miami, P.O.B. 249055 Coral Gables, Florida 33124, USA. Phone: 305/284-4455

The ninth International Scientific Forum on Energy c/o Spadille Congress Service 3, Sommervej, DK-3100 Hornback Denmark, Phone: +45 2 202496.

The Danish National Committee Knud Møllenbach Risø National Laboratory P.O.B. 49, DK-4000 Roskilde, Denmark. Phone: +45 2 37 12 12, telex 43116 cable address: risatom

Locations

Registration on October 13, at 19:00 hrs: Royal Danish Academy of Sciences and Letters H.C. Andersens Boulevard 35, DK-1553 Copenhagen V

Sessions on October 14, 15, 17 & 18 Eigtved's Warehouse Asiatisk Plads 2, DK-1448 Copenhagen K.

Sessions on October 16: Risø National Laboratory DK-4000 Roskilde Transportation to and from Risø will be provided.

Registration and hotel reservations:

In USA, Canada, Japan and Latin America:

Registration Form and fee in US\$ must be returned to the Center for Theoretical Studies, University of Miami, P.O.Box 249055, Coral Gab-les, Florida 33124, USA.

Block reservations have been made in selected Copenhagen hotels. To take advantage here of hotel reservation form and deposit must be re-turned to Spadille Congress Service, 3, Sommervej, DK-3100 Hornback, Denmark before July 20, 1985.

Hotel accomodation cannot be guaranteed for reservations and payments received after this date.

Note: October is within the high season for tourism in Copenhagen. The hotel deposit will be transferred to the hotel upon your arrival, and in turn will be deducted from your ho-

Elsewhere in the world:

Blok reservations have been made in selected Copenhagen hotels. To take advantage hereof registration and hotel reservation accompanied by payment must be returned to the Congress Bureau: Spadille Congress Service, Sommervej 3, DK-3100 Hornbaek, Denmark **before July 20**,

Note: October is within the high season for tourism in Copenhagen. The Hotel deposit will be transferred to the hotel upon your arrival, and in turn will be deducted from your hotel

Cheques and payment orders sent to Spadille Congress Service must be made out in Danish currency (Danish »kroner«).

Personal cheques drawn on non-Danish banks cannot be accepted. Please clearly endorse your remittance with the designation Scientific Forum on Energy. Names and address-es on cheques should be typed or written in block letters.

The exchange rate is approximately 1 US\$ = 12 D.kr. (March 1985)

Refunds:

In case of cancellation before July 20, 1985 the registration fee and hotel deposit after deduction of a handling charge of D.kr. 500,- or US\$ 50 per person will be refunded. After that date no refunds can be made.

Please note that Danish currency is required for all payments e.g., of incidental expenses at the conference secretariat and that personal cheques and credit cards cannot be

Exchange of currency cannot be made at the conference secretariat but a bank is available at the confe-

Confirmation:

Each participant will receive a written confirmation of registration and hotel reservation from Spadille Congress Service upon payment of the grand total.

Registration fee includes:

- registration
- abstracts
- informal reception, Sunday Ocotber 13, 1985.
- The Forum Banquet
- reception at the Copenhagen Town Hall
- refreshments
- lunches, Monday through Friday
- transportation to Risø and return

Number of participants:

Because of space limitations, the number of participants is limited to approximately 250. Early registration is therefore strongly recommended.

Accompanying persons

Accompanying persons are welcome at the receptions Sunday and Mon-day and the Forum Banquet on Thursday. A North Zealand Tour will be arrang-

ed - see below.

Please indicate your interest on the registration/hotel reservation form.

North Zealand Tour:

The tour goes through delightful countryside to Frederiksborg Castle built in magnificent renaissance style by King Christian IV

After lunch we will visit »Louisiana« in Humlebæk, which is the largest museum of modern art in northern Europe.

Duration 7 hours, price per person D.kr. 315 (lunch included). Limited number of participants. Departure from Hotel d'Angleterre, Kgs. Nytorv at 09.30.

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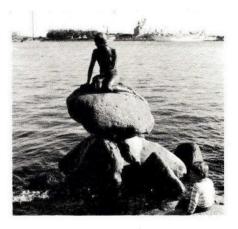
Copenhagen and Eigtved's Warehouse

The major part of the Forum will be held in Copenhagen, the capital city of Denmark. Copenhagen is a modern metropolis with about 1.5 milllion inhabitants. It is large enough to support cultural activities of an international standard, with three symphony orchestras, the Royal Danish Ballet and Opera, more than a dozen theatres and a wealth of cinemas, many fine museums, etc. But it is also small enough to have largely avoided the typical big-city problems of pollution, traffic congestion and violent crime. Most of the inhabitants speak at least one foreign language.

The Forum will take place in the heart of the city at the historic Eigtveds Pakhus (Eigtved's Warehouse), built during the years 1748-50.

The project was conceived and supervised by the master builder Nicolai Eigtved, who was appointed by the King. The owner of the building was the Asiatic Company. The four storeys served as a warehouse, but some of the rooms on the ground floor were used as exhibition halls where people could see the costly and exotic goods brought home by the ships of the company.

The Government acquired the warehouse and surrounding areas in 1972. At that time it was shabby and neglected, but it was still used as a warehouse. However, in 1976 it was decided to restore the old building, and in 1980 the first conference rooms in Eigtveds Pakhus were taken into use. It was ready with furniture, technical and audio-visual installations at the beginning of 1982 and total renovation of the sandstone facade was finished in 1984. The conference facilities at Eigtveds Pakhus are very attractive and well suited for the Forum.









Sponsored by:



Risø National Laboratory P.O.Box 49

P.O.Box 49 DK-4000 Roskilde Denmark

Phone + 45 2 37 12 12 Telex 43116 Telefax + 45 2 36 06 09 Risø is a state-owned non-profit research center.

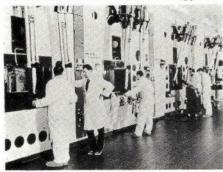
Risø is responsible for a wide range of R&D programmes and consultancy services within the fields of:

Energy Technology, Safety and Environment, Materials and Processes, Radiation Applications and Biotechnology.

Risø National Laboratory

Located in picturesque surroundings on the banks of Roskilde Fjord, close to the historical city of Roskilde, Risø National Laboratory is the largest research institute in Denmark. A visit is planned for the Forum.

The Laboratory was founded on the initiative of Niels Bohr, the first chairman of the Danish Atomic Energy Commission, to engage in research and development in the peaceful utilization of atomic energy for





the benefit of the community. Today the total staff at Risø numbers 1000 and in 1984 the annual budget was about 300 million D.kr. (roughly 30 million ECU or US\$). International collaboration makes a vital contribution to Risø's research program.

From the beginning, the activities of the Laboratory included research in many fields of nuclear science, basic and applied research in physics, chemistry, meteorology, metallurgy, agriculture, etc. In 1976 the scope of the program was broadened to include non-nuclear energy research and this activity has expanded rapidly in recent years. The program includes energy research, development and demonstration, environmental and safety research, advanced materials research, radiation research and bio-technological research. Risø operates experimental facilities of a high international standard.



Niels Bohr Institute

Niels Bohr was appointed Professor of Physics at the University of Copenhagen in 1916. This led in 1921 to the foundation of the »Institute of Theoretical Physics«. Today this institute is known as the »Niels Bohr Institute«.



From the early years the Institute has been an important international scientific center. It is the home of the "Copenhagen School" of quantum physics and has been the cradle of many new ideas in physics. The Institute has fostered several Nobel Laureates, most recently Aage Bohr and Ben Mottelson.

The Institute is still located at the original site on Blegdamsvej in Copenhagen. Since 1961 it has in addition operated a Tandem Accelerator Laboratory sited next to Risø National Laboratory.

Today the staff of the Institute numbers about 130 persons and the annual budget amounts to 45 million D.kr. (roughly 4.5 million ECU or US\$). The areas of research are low and medium energy nuclear physics, particle physics and astrophysics. In the tradition of Niels Bohr all activities are pursued in close collaboration between experiment and theory.



Frontcoverphoto: @ NBI Photo

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL DEVELOPMENT ASSOCIATION

1818 H Street, N.W. Washington, D.C. 20433 (202) 477-1234 Cable Address: INTBAFRAD Cable Address: INDEVAS

May 7, 1985

Mr. George C. Bremner
Managing Director
Fordyce Securities Limited
Fulmar House
Sandyhill Road
Banff. AB4 1BE
Banffshire
Scotland

Dear Mr. Bremner:

Thank you for your letter of April 18, 1985 and your interest in the energy pre-investment projects in developing countries. I am enclosing a copy of our Quarterly Information Brief which outlines all the activities currently in progress. Please let us know if you find any projects of special interest to you and send us curricula vitae of qualified staff.

Once again, thank you for your interest in our Program.

Yours sincerely,

Masood Ahmed

Deputy Division Chief

Energy Assessments Division

Energy Department

Enclosure

Magood. Pls Landle.



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18th April 1985.

Telex 73315 Chacom G.

The Energy Assessments Division, World Bank, 1818 H Street, N.W., Washington DC 20433, U.S.A.

Dear Sir.

We shall be most obliged if you could send us full details of energy pre-investment projects by the World Bank in developing countries for 1985.

We have clients in the U.S.A. who have developed and installed with considerable success the Fire-Brite Water/Oil Emulsifier System for oil fired boilers in ships and industrial purposes with energy savings of 3 to 5 and up to 10%. Full details and prices are available.

We have other clients who have developed and tested a new automated coal fired space heating system which compared to oil and electricity can reduce fuel costs by approx. 50%, operate for two months unattended and provide automatic coal feed and ash disposal. The first model has 100,000 BTU/Hr output but five further models are planned up to 1,000,000 BTU/Hr to cater for both light industry as well as domestic users.

Our clients can supply a whole range of coal mining and preparation plants both new and used and we enclose details of some of the units available.

We have also experts consultants who can advise of the exploration and extraction of coal and other minerals if you have any specific requirements.

We look forward to your early reply.

Yours sincerely,

George C. Bremner. Managing Director.

New and used coal mining and preparation plant & machinery.

- a) Complete process plant which has hardly been used and has been idle for the past three years for the treatment of raw material from coal tips. When working it could produce processed coal at the rate of 30 tons per hour at approximately 10% moisture. The plant is now available for sale in the U.S.A. at a price indication of USD425,000 negotiable.
- b) A new technology for the treatment of coal fines. This technique provides a totally adequate mechanism for the restructuring of coal fines from approx. 1/8" to -325 on a continuous basis using specific chemistry developed by their own laboratory. The end product is extremely hard and totally transferable with a minimum of fines. The geometry of the end product can be designed for total utility as required by the burning configuration whether it be stoker or stove. The product is totally waterproof and sulphur absorbent, chemistry can be added to reduce the SO₂ emission levels if required. The plant for making this end product is modular and capacities from 10 to 30 ton per hour per line. The price range would be USD900,000.00 and USD1.3 million depending on the nature of the raw feedstock and sizes.
- c) Used coal Briquetting plant new in 1982 and run for only 12 months in outstanding condition. The plant could be easily dismantled and transported. Original cost about USD1.6 million. Price indication USD550,000 subject to negotiation. The plant is a continuous automated process.
- d) Used nearly new large coal wasking plant complete. Full details and price available to firm buyers only.
- e) Our clients can offer a whole range of reconditioned coal mining plant and machinery surplus to requirement. Full details and prices available to firm buyers only.
- f) Our manufacturers in the U.K. can quote for all types of coal mining plant and machinery for specific requirements including the design and manufacture of Longwall underground mining systems for coal and other deposits. These systems are tailor made to suit local geological and other conditions. Also new Preparation plant including treatment plant, conveyors, effluent treatment plant, elevators, magnetic recovery systems and separators, screening equipment, vacuum filters, wash boxes, jig washing units, crushing, grinding and classification, mineral dressing plant, belt conveyors, coal breakers, mine hoists, hydraulic power packs, mobile plants, stackers, winches, and coal preparation plants using a variety of process technologies such as coal utilisation, combustion, gasification and Liquefaction etc.
- g) New MRF (Multi Roller Filter System is available to handle diffilcult to dewater slurries and where market trends dictate, to produce a filter cake with high content of of dry solids. Full details and prices available.

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1818 H Street, N.W. Washington, D.C. 20433 U.S.A. (202) 477-1234 Cable Address: INTBAFRAD Cable Address: INDEVAS

Ms. Eileen Drew
Head of Documentation Centre
Trinity College
University of Dublin
Dublin
Ireland

Dear Ms. Drew,

Enclosed you will find copies of the Assessment Reports for Botswana, Burundi, Lesotho, Ethiopia, Malawi, Niger, Zambia, Zimbabwe and Morocco, as well as copies of the Status Reports for Burundi and Malawi which are the only ones available at the present time.

Best regards,

Willem Floor

Energy Assessments Division

World Bank

Attachments

WF:mac



INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

CENTRE DE RECHERCHES POUR LE DÉVELOPPEMENT INTERNATIONAL

24 April 1985

Mr. Masood Ahmed
Deputy Division Chief
Energy Assessments Division
Energy Department
The World Bank
1818 H Street N.W.
Washington, D.C. 20433
U.S.A.

yh.

Dear Mr. Ahmed,

Thank you very much for your letter of 8 April and for the complete set of ESMAP Activity Completion Reports which arrived safely. We would appreciate receiving copies of any future reports that you publish as well.

Thank you for your kind assistance.

With best wishes.

Yours sincerely,

Allan D. Sauder Research Officer Research Programs

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February 25, 1985

FEB 2 7 REC'D

Mr. Gus Speth President, World Resources Institute 1735 New York Avenue, N. W. Washington, DC 20006

Dear Gus:

Thank you for your letter of January 28 and for the terms of reference for John Horberry. His will be a major task and to make it easier I set out below the names, designations and telephone numbers of the people who can be most helpful as primary contacts in providing information for WRI.

G. Edward Schuh, Monty Yudelman's successor as Director of the Agriculture and Rural Development Department, and I have agreed to put his Assistant Director, Don Pickering, in charge of coordinating this activity. Mr. Pickering has already spoken to Mr. Horberry on the proposed modus operandi, and advised him that John Spears will act as coordinator until Pickering's return from mission in early March.

Contact people for Horberry are listed below as per the numbered paragraphs of his terms of reference:

- Guy Le Moigne, Irrigation Adviser, 676-1762
 Clive Collins, Irrigated Field Crops Adviser, 676-1763
- 2. Julian Bharier, Chief Energy Assessment Division, 477-2781
- Jack van Holst Pellekaan, Acting Division Chief, AGREP, 676-1740
 Alfredo Sfeir-Younis, Senior Resource Economist, AGREP, 676-1741
- 4. John Spears, Forestry Adviser, 676-1760
- 5. Michael Cernea, Rural Sociology Adviser, 676-1774
- 6. James Lee, Environment Adviser, 477-5351

They are advised, by copy of this letter, of the purpose and scope of the study and of my support for the WRI initiative. Information will be provided as freely as possible within the limitations imposed by the need to respect the confidentiality of certain material affecting our borrowers, as laid down in the Bank's Administrative Manual. This is essentially an unplanned, unbudgeted task for our staff and I am desirous that the demands

on their time and resources be kept to a minimum. Information will be provided as freely as possible within the limitations imposed by the need to respect the confidentiality of certain material affecting our borrowers and the privileged nature of relationships with the Bank's member countries.

I enjoyed our discussion of the possibility of including a section on improving environmental management in a forthcoming World Development Report. This is a topic well worth "brainstorming" as you suggest, and I look forward to receiving some notes indicating more precisely what you have in mind. These could then perhaps be used as an agenda for a discussion between relevant members of our staff on the subject.

Yours sincerely,

S. Shahid Husain Vice President

Operations Policy

cc and cleared with Messrs. Schuh, AGRDR
Rovani, EGYDR
Lee, PPDES
Koelle, IPAPI

cc: Messrs. Le Moigne, Collins, van Holst Pellekaan, Sfeir-Younis, Spears, Cernea, (AGR), Bharier, (EGY), Blinkhorn (IPAPA); Lee (PPDES) -

JSpears:ewg

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DR, AMR MOHIE ELDIN, MANAGER ECONOMICS DEPARTMENT, THE INDUSTRIAL BANK OF KUWAIT, KUWAIT. RE YOUR TELEX 12/1281. MR. SHERBINY IS TRAVELLING ON OFFICIAL BUSINESS AND WILL RETURN TO WASHINGTON ON MARCH 4. IF YOU REQUIRE HIS C.V. BEFORE THAT DATE, PLEASE ADVISE AND I WILL ASK HIM TO CONTACT YOU DIRECTLY FROM MOROCCO. REGARDS, MASOOD AHMED, DEPUTY CHIEF, ESMAP ENERGY DEPARTMENT, WORLD BANK.

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February 8, 1985

Dr. Kheireldin Haseeb, Director Center for Arab Unity Studies P.O. Box 113-6001 Hamra, Beirut, LEBANON

Dear Dr. Haseeb:

Many thanks for your letter of January 21 inviting me to the Sanaa Seminar on "Independent Development in the Arab World". Much as I am honored by the invitation and would like very much to participate, the timing of the Seminar (10-15 March) conflicts with present work assignments. I shall therefore have to decline the invitation, but trust that you will keep in mind for future functions.

Thanks and best wishes for a successful seminar.

Sincerely yours,

Naiem A. Sherbiny Senior Economist

naim Sherbing

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1818 H Street, N.W. Washington, D.C. 20433

(202) 477-1234 Cable Address: INTBAFRAD Cable Address: INDEVAS

February 8, 1985

H. E. Sheikh Nasser Mohamad Al Ahmad Al Sabah Chairman, Petroleum Information Committee of the Arab Gulf States P.O. Box 193 Safat, Kuwait

Your Excellency:

At the suggestion of Dr. Ibrahim Shihata, I am writing this letter to explore the interest of the Petroleum Information Committee of the Arab Gulf States in sponsoring the publication of a book I am preparing, to be entitled "Arab Manpower and Migration".

The book examines the manpower situation in a number of Arab countries, and the resultant migration flows of recent years. The analysis is carried out at two levels: aggregated for cross-country comparisons, and sectoral for in-depth country-specific case studies. The former is done for labor exporters and labor importers alike; the latter for Kuwait and Saudi Arabia in particular. Furthermore, the analysis uses past trends of the 1960s and 1970s to assess future developments through 1990.

The book's plan is to have five chapters in three parts as follows:

Part I: The Framework

Chapter 1: Arab Manpower and Migration in Perspective

Part II: Country Case Studies

Chapter 2: Growth, Structural Change, and Employment in the Kuwait Economy

Chapter 3: Development and the Labor Market in Saudi Arabia

Part III: Cross-Country Studies

Chapter 4: Labor and Capital Flows in the Arab World: A Critical View

Chapter 5: Expatriate Labor Flows to the Arab Oil Countries in the 1980s.

Chapters 3 and 5 have already been published: Chapter 3 in the <u>Journal of Arab Affairs</u>, Spring 1984, and Chapter 5 in the <u>Middle East Journal</u>, Autumn 1984. Chapter 4 will appear in the Industrial Bank of Kuwait Series, <u>IBK Papers</u>, in early 1985. Chapter 1 is to be written specially for the book, and Chapter 2 is being reviewed for publication in the <u>International Journal of Middle Eastern Studies</u>. For your information, I am enclosing offprints of Chapters 3 and 5.

Naturally, the individual chapters as they stand are independent articles. However, efforts are needed to restructure these articles into unified book form. In case of your approval to sponsor the book publication, I shall be happy to complete the manuscript and forward it for external review, if desired, or directly for the publisher. I shall also be happy to provide any information readily which you deem necessary to reach a favorable decision. In responding, kindly indicate the word "Personal" on the envelope and correspondence.

With best regards I remain,

Sincerely yours,

Naiem A. Sherbiny Senior Economist

naiem Sherbony

Enclosures

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5 February 1985

Dear Mr. Willoughby,

Preparatory Advisory Team Meeting

It was indeed very unfortunate that you were unable to participate in the above meeting which was held at Bangkok on 28 December 1984.

Copies of the printed report of that meeting have just become available and I am forwarding one to you under separate cover by airmail. Your comments, if any, would be most welcome.

Activity A-4 "Assistance in Strengthening Overall Energy Planning and Policy Analysis Capability and Master Plan" is currently under consideration by UNDP Headquarters. In case of a favourable response from UNDP, the first regular workshop under that activity could be held at AIT, Bangkok, during June/July this year. This workshop would constitute the first interaction between Government national focal points, funding agencies as well as donor countries, and implementing agencies, in order to constructively assess issues in the energy sector for the Asia region. We very much look forward to your association and participation.

With warm regards,

Yours sincerly,

Filino Harahap Senior Co-ordinator Regional Energy Development Programme

Mr. Christopher R. Willoughby Director The Economic Development Institute (EDI) of the World Bank 1818 H. Street, N.W. Washington D.C. 20433

U.S.A.

.c.c. Mr. Julian Bharier, Chief, Energy Assessment Division IBRD, Washington, D.C.

REGIONAL ENERGY DEVELOPMENT PROGRAMME (RAS/84/001)

ASSESSMENT OF ENERGY ISSUES

REPORT OF THE
PREPARATORY ADVISORY TEAM MEETING
OF THE REGIONAL ENERGY DEVELOPMENT PROGRAMME
28 DECEMBER 1984

RAS/84/001/A-4/1984

JANUARY 1985



LIST OF NATIONAL FOCAL POINTS FOR REDP

(as designated by respective governments)

			The State of the second		
Afghanistan		Mr. Ebadi Head, General Directorate of Energy Industry, Transport and Communications Department Kabul	Malaysia	1	Ms. Leong So Seh Principal Assistant Director Economic Planning Unit Prime Ministers Department Jalan Dato Onn
Bangladesh	.*	Mr. M.K. Anwar Secretary Energy Division Ministry of Energy and Mineral Resources Dhaka	Maldives	1	Mr. Ismail Abdul Gadir Senior Project Officer Ministry of Planning & Development Male
Bhutan	:	(To be designated)	Mongolia		State Committee for External Economic Relations C/O United Nations Development Programme
					P.O. Box 49/207 Ulanbator
Brunei	:	(To be designated)	Nepa1	1	Mr. Shiva Nath Sharma Executive Director Energy Division of Water and Energy Commission Kathmandu
Burma		(To be designated)	Pakistan	:	Mr. M. Sohail Qureshi Director General Energy Resources, and Secretary National Energy Policy Committee
					Ministry of Petroleum and Natural Resources Islamabad
China	#	Mr. Bu Zhaomin Director Department of International Relations Ministry of Foreign Economic Relations and Trade Beijing	Philippines .	:	Mr. Gary S. Makasiar Chief, Planning Service Office of the Minister Ministry of Energy 7901 Makati Avenue Makati, Metro Manila
Democratic Kampuchea	:	(To be designated)	Republic of Korea		Mr. Dong-Kyu Lee Director Planning Division Ministry of Energy and Resources Seoul
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India	. !!	Mr. Y.P. Gambhir Director Department of Power Ministry of Energy Shram Shakti Bhawan			Secretary Ministry of Power and Energy and Chairman, Ceylon Electricity Board P.O. Box 540 Colombo 2
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		Department of Mines and Energy R.I. Directorate General of Electric Power and New Energy Jl Rasuna Said Blok X-2/07 Jakarta 12950	Viet Nam	1	Director International Relations Department Ministry of Power Hanoi
Iran	:	Deputy Minister for Energy Ministry of Power Tehran			
Lao People's Democratic Republic	:	(To be designated)			

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC Regional Energy Development Programme (REDP)

REPORT OF THE PREPARATORY ADVISORY TEAM MEETING

ATTENDANCE AND ORGANIZATION OF THE MEETING

1. The meeting of the Preparatory Advisory Team of the Regional Energy Development Programme was held in Bangkok on 28 December 1984 with the support of the Government of France and UNDP.

Attendance

2. The meeting was attended by eleven energy experts both from the Asia region, and those with extensive experience in Asia. Six energy experts were from ESCAP member countries, and five from relevant regional or international institutions/agencies. Also participating in the meeting were the representative of UNDP, representatives of the ESCAP Secretariat, and the Senior Co-ordinator of REDP. The list of participants appears as Annex I.

Opening of the Meeting

- 3. The Executive Secretary of ESCAP, Mr. S.A.M.S. Kibria, welcomed the energy experts and other participants of the meeting. In his opening statement, the Executive Secretary said that the presence of the energy experts in the meeting was a clear indication of their interest and support to regional-level initiatives for fostering intercountry co-operation in the field of energy. He highlighted the importance of the meeting as the preparatory stage to seek the assessment and advice of the experts in giving perspective to the appropriate form of co-operative partnership framework the Asian region should assume in carrying out future energy programmes at the regional level.
- 4. The Executive Secretary reiterated the emphatic formulation given by the REDP Steering Committee in its first session in May 1983

on the long-term objective of REDP, that is, to foster intercountry co-operation among the participating countries of Asia in the ESCAP region in the planning and management of the energy sector with special emphasis on augmenting rural energy supplies through local resources, including new and renewable energy sources. He further said that activities of REDP are of catalytic nature aimed at promoting increasing technical and economic co-operation among participating member countries of the Asia region.

- The statement of the Executive Secretary referred the experts 5. to the recommendations of the Commission, at its fortieth session in April 1984 that the Secretariat plan ahead for the continued regional intercountry interagency programme beyond 1986, in particular for the medium-term, 1987-1991, and that the Steering Committee of REDP, in consultation with the Executive Secretary of ESCAP, develop the premises and framework for such a programme. He informed the meeting that the secretariat had followed up the Commission's recommendation by preparing an issues paper for the consideration of the REDP Steering Committee, and its associated Tripartite Review at their second sessions, in August and September 1984. He noted that both these sessions had endorsed proposals contained in the said paper, and requested the Senior Co-ordinator, in conjunction with an assessment team, to follow up on these proposals to develop the premises, framework and contents of a cycle II (1987-1991) programme for REDP.
- He also mentioned that the Steering Committee had directed the 6. Senior Co-ordinator to enlarge phase II activity A-3.1 of its subprogramme A, "Energy Planning, Policy Analysis and Management", to include the interest of member countries outside the group of least developed countries. Also, that the Senior Co-ordinator in conjunction with a team from the Asian Institute of Technology, developed this request into a proposal for an additional activity entitled "Assistance in Strengthening Overall Energy Planning and Policy Analysis Capability and Master Plan", which had been submitted to UNDP for approval. The main thrust of this proposed activity would be to establish a continuous tripartite forum of three joint workshops with the purpose of projecting a medium-term (1987-1991) energy sector programme and the co-operative partnership framework for Asia to implement that programme. The forum would involve national focal points, UNDP and potential cooperating donors, and an Assessment/Advisory Team and executing agencies.

The workshops would automatically perform a planning function for the REDP.

- 7. In conclusion, the Executive Secretary said that the preparatory advisory team meeting had been organized as a forerunner to the proposed additional activity, in order to seek assessment and advice on the following questions:
 - (1) The formation of the advisory/assessment team, which would become the pool and resource of expertise for the proposed activity;
 - (2) The format and structure of the three joint workshops;
 - (3) The areas to be researched in the coming six months as substantive preparation for the first workshop.
- 8. He expressed appreciation to UNDP and the Government of France for their support, and thanked all participants for their time and effort towards the meeting.

Chairman of the meeting and agenda

- 9. Mr. T.L. Sankar was unanimously elected chairman of the meeting, which had before it the following agenda:
 - 1. Inauguration
 - Reflections and course of action on conclusions and recommendations of the second session of the Regional Energy Development Programme (REDP) Steering Committee held 29-30 August 1984
 - 3. Discussion of subject matter and structure for the first workshop under proposed additional REDP phase II activity under Sub-programme A, entitled Assistance in Strengthening Overall Energy and Policy Analyses Capability and Master Plan
 - 4. Energy issues in light of energy transition scenarios from 5 ESCAP countries: Results of Scenario Studies conducted by IDEA, Inc.

- 5. Energy Economy Patterns Forum 1986 (REDP Activity A-3.3) in light of 3 and 4 above
- 6. General discussion, with motion to endorse 3 and 5 above and to suggest expanded studies (IDEA, Inc.) and local arrangements (TERI) for proposed 1986 forum
- 7. Adoption of conclusions and recommendations
- Agenda item 2 Reflections and course of action on conclusions and
 recommendations of the second session of the Regional
 Energy Development Programme (REDP) Steering Committee
 held 29-30 August 1984
- 10. The Senior Co-ordinator introduced agenda item 2 referring to document Regional Energy Development Programme (RAS/84/001): Conclusions and Recommendations Reports of the Steering Committee, Inter-agency Inter-institutional Working Group, and Tripartite Review (held at Bangkok from 29 August to 3 September 1984), especially "Issues for an inter-country inter-agency energy sector programme for Asia for the period 1987-1991 (pages 25-32)", "Recommendations for the second cycle (1987-1991) of REDP (pages 12-15)", and "Conclusions of the Tripartite Review meeting (pages 40-41)".
- 11. The representative of UNDP emphasized the two questions raised at the second session of the REDP Steering Committee, viz:
 - (a) what specific areas needed further technical assistance after 1986?
 - (b) does the future work consist of well-defined programmes with finite dimensions and measurable impacts?

He further reiterated that the expertise and leadership for the regional co-operation to continue beyond 1986 should come from the region itself and not from an external agency to ensure the establishment of a self-sustaining regional co-operative programme. With regard to his question about the role of the preparatory advisory team, the Senior Co-ordinator replied that it was to project a medium-term (1987-1991) energy sector programme and the co-operative partnership framework for Asia to implement the programme in conjunction with the national focal points, UNDP and potential co-operating

donor countries.

- 12. Based on the conclusions and recommendations contained in the reports, the Team emphasized the need to continue the Regional Energy Development Programme beyond 1986. It also welcomed the indication of UNDP that a similar level of resources made available during cycle I was likely to continue in cycle II (1987-1991) in this key field of great importance to the region provided that a justification for further assistance was made.
- Agenda item 3 Discussion of subject matter and structure for the

 first workshop under proposed additional REDP phase II

 activity under Sub-programme A entitled "Assistance
 in Strengthening Overall Energy and Policy Analyses
 Capability and Master Plan"
- 13. The Senior Co-ordinator introduced agenda item 3 referring to the paper on Assistance in Strengthening Overall Energy Planning and Policy Analysis Capability and Master Plan as a new activity A-4, in the REDP phase II. He also explained that the proposed activity had been formulated in compliance with special requests of some developing Asian countries for participation in A-3.1 in the REDP phase II designed to provide assistance to two LDC's in strengthening overall energy planning and policy analysis capability and master plan as well as to develop a well-defined programme for the cycle II. While implementing those proposed activities under the REDP phase II, assessment of the impacts of the REDP phase II activities and the perspective of REDP beyond 1986 could be done in collaboration with UNDP and donor countries as well as the implementing agencies such as ESCAP, ILO, FAO, UNESCO, UNIDO, and ADB.
- 14. Referring to the introductory paper on Assistance in Strengthening Overall Energy Planning and Policy Analysis Capability and Master Plan, the Senior Co-ordinator outlined the general structure of the proposed activity which would encompass an advisory/assessment team, three studies to be produced by AIT and presented to the three tripartite workshops, and finally, the publication of conclusions and recommendations of the workshops.

- 15. The Senior Co-ordinator identified a number of topics for selection as research areas for the first study. They included:
 - general matters of energy policy
 - experience in energy master plan
 - role of modelling
 - interactions between energy and the economy
 - role of international consultants
 - energy pricing policies
 - energy and rural development
 - training in planning and policy
 - implementation of conservation policies
 - collaboration in large projects
 - financial limits to rate of adjustments

It was suggested that the first workshop should deal with general matters of energy policy, while the second and third would focus on specific themes of common regional interest and a framework for co-operative partnership and future collaboration respectively.

- 16. The composition of the workshops would be tripartite, comprising (a) REDP national focal points, (b) funding agencies and interested donor countries, and (c) the advisory team plus representatives of REDP implementing agencies. The workshops would be designed to up-date knowledge on the latest progress in energy planning and management, to compare analyses and exchange implementation experience, and to disucss common issues and problems emanating from energy policy design or implementation, as well as to serve as a forum, as experts and technocrats, for national focal points. Each workshop would last four days. Concerning the timing, the Senior Co-ordinator suggested that the first workshop be convened in six months hence, with the second and third workshop also following at six-month intervals, in order to be completed before the autumn Meeting of Aid Co-ordinators (MAC), in 1986.
- 17. The Senior Co-ordinator called on the meeting to deliberate on priority topics for the studies and workshops, on the function of the advisory team and the availability of experts, as well as on the proposed timing of the activity.

- 18. On the basis of its discussion on the various issues, the meeting arrived at the following agreements.
- 19. The procedure of arriving at the action plan for REDP cycle II with the help of an Advisory Team which would have the benefit of three workshops, and the response to the workshop results given by various agencies involved in REDP, was accepted as a very interesting and innovative approach. The first workshop could provide an occasion to review all the on-going research and programme activities on subjects which are identified as broad areas of concern. The second workshop, on the basis of the results of the first workshop, could define the specific issues or programmes which could be of interest for REDP cycle II. The third workshop could provide an opportunity to identify the countries interested in each sub-programme or activity, and the agencies which would be involved and their respective roles/ responsibilities in the proposed regional co-operative partnership framework.
- 20. It was agreed that as the second workshop would require a detailed paper to be prepared on the identified issues there should at least be a nine-month interval between the first and the second workshops.
- 21. The third workshop could be held as early as necessary after the second workshop so as to complete the project document for cycle II of REDP before the Meeting of the Aid Co-ordinators (MAC) in the fall of 1986. The first workshop could be organized for a period of four or five days and could discuss the following issues:

A. Global issues

- (i) Market for and trade in hydrocarbon fuels, 1985-2000: uncertainties regarding the international price of oil, availability and price of alternative fuels like coal or gas and other related issues;
- (ii) Global and regional economic situation its impact on the energy sector: the trade expansion potential in the different countries and the likely scenarios of trade-flows within the region;

- (iii) The investment funds available to the energy sector in the context of anticipated global financial climate;
 - (iv) The emerging trends in the ESCAP region with regard to energy: exchange of technology and opportunities for suppliers' credit and contractual services for hydropower exploration and development;

B. National-level issues

- (v) Energy macro links review of the economic impact of the oil price increase: the impact on employment, the country experiences in economic restructuring/ structural adjustments;
- (vi) Process of decision-making in energy and energy related sectors: the inventory of tools of analyses like modelling used in different countries, experience in implementing the decisions;
- (vii) Review of demand management experiences in the countries of the region with specific reference to the incentives, and institutional arrangements for conservation of energy: identification of constraints in implementing policy and programmes of increasing energy productivity;
- (viii) Review of experiments and experiences in rural energy planning with special reference to decentralized energy supplies.
- 22. The second and third workshops would result in the identification of specific themes of common regional interest. While the second workshop would concern more with themes, the third workshop would work out the details of the framework for co-operative partnership and future collaboration for the cycle II programme.
- 23. Though the agenda for workshop II will flow from the discussions at workshop I, it was suggested that in order to have adequately researched papers ready for consideration in workshop II some studies could be initiated from now on so that the results could be presented at workshop II. The issues suggested for such action are: (i) strategies for supply planning in the energy sector integration of central and decentralized sub-systems: systems compatible with urban

and rural demand structures; (ii) data base for energy sector management - regional co-operation potential; (iii) the capital shortages for energy sector investments, possible methods of regional co-operation to augment investment funding.

- 24. The experts present in the Preparatory Advisory Meeting as well as those who indicated their willingness, though not participated in the meeting, could be considered as available to assume membership of the Advisory Team. The REDP secretariat would get other names also, if necessary, and constitute the Team. The members on the Advisory Team even if drawn from national governmental agencies, funding agencies, or other institutions, would be participating in their personal capacities. They would serve on the Advisory Team on no-fee basis. Their services would also be available for commenting on any of the proposals or papers produced for the workshops through direct communications from the activity secretariat.
- 25. The Asian Institute of Technology (AIT) would serve as the principal agency to lead and provide research support to the Advisory Team and act as the implementing consultant agency. Considering the diversity of issues to be discussed AIT would avail of the services of any institution or agency, as appropriate, in preparing the necessary documentation.
- Agenda item 4 Energy issues in light of energy transition scenarios

 from 5 ESCAP countries: Results of Scenario Studies

 conducted by IDEA, Inc.
- 26. The IDEA, Inc. study "Long-term Energy Scenario for 5 Asian Countries" was introduced by Dr. Romir Chatterjee, President, IDEA, Inc., training the history of this project, originating in 1981 and finally completed in September-October 1984 with financial support from USAID.
- 27. While the results of the study, he emphasized, were evaluating economically an enhanced oil substitution strategy through domestic energy resources development in the light of oil price and financing scenarios in five regional countries with different resource endowments and industrial capacity they were interesting inasmuch as such resource developments were shown to be viable under quite robust assumptions, and it was those assumptions which need to be varied so

that a parametric appreciation of uncertainties is achieved. The parameterization of inputs allows for this, and further studies with updated information can easily be done. Some probabilistic requirements (especially in the oil sector) may also enhance confidence in the results.

- 28. Dr. Vinod Mubayi then introduced in detail sample results for Sri Lanka and India. It was shown that while in the former resource development investments were perhaps less viable (due to the lack of resources that can be developed at reasonable cost), in the latter country investments in gas development (and oil, to the extent reserves allow) was viable under a wide range of assumptions concerning oil prices and finance availabilities. Thailand was in a similar position while Indonesia had different problems. The development of oil for export and development of substitution of energy for domestic use in Indonesia (such as natural gas and geothermal energy) could lead to a substantial boost of oil export potential (qualified, again, by the extent of reserves).
- 29. Dr. Mubayi also described the parametrization of model inputs, some important ones including the percentage of local components of energy development investments (0 to 100 percent country-specific) and the investment cost of barrels per day capacity for oil and per kilowatt of hydroelectric capacity. These numbers were again site-specific, and can (do) vary in time. The secretariat commented that an expose of typical values of those parameters for the countries studied would improve the transparency of the results (this was agreed to be added for the final full report).
- 30. What was emphasized was that the IDEA, Inc. approach was an exercise in what could be called "Intermediate Strategic Planning" from the point of view that it avoids the long lead-times and complexities of large energy master plan or other optimization type models, while giving meaningful answers to "what/if" type questions of concern to governments as an on-going process.
- 31. Comments by Dr. V.V. Desai, Dr. R.K. Pachauri, Dr. M. Munasinghe and Dr. T.L. Sankar, emphasized the usefulness of the results inasmuch as the aspirations of regional governments for

energy self-sufficiency have been shown to be economically justified by those results. Some reservations concerning the aggregation of input parameters were, however, expressed. A heirarchical structure of interlinked models was then described by Dr. Munasinghe that could overcome some of those difficulties by following these principles:

- a) "consistency";
- b) "specificity" (of questions and answers);
- c) "scenario" (if then) type analyses.
- 32. The three levels of heirarchical models used in Sri Lanka were:
 - i) Energy economy macro models (including sectors such as energy, industry, transport and agriculture);
 - ii) The IDEA, Inc. model "RESGEN", for analyses similar to that presented at this meeting;
- 33. The key to success was to use the values from higher-level models consistently in lower-level models (and vice versa). The utility of "back-of-the-envelope" type calculations for validation purposes was emphasized.
- and a discussion of this approach as contrasted with large scale energy master plan type modelling then followed, with a view expressed, that these simpler models could be used as checks of the large (often unwieldy and time-consumming) master plan models in a manner similar to the back-of-the-envelope calculations used to check (validate) the former. The concept of master plan models was not seriously questioned, but the need for a process of decision-making based on simpler models was emphasized, so that flexible response to day-to-day decision needs could be provided. The communications aspects in that respect were emphasized (thus the need for transparency of parameters!).
- 35. In his summary, the chairman (T.L. Sankar) emphasized the following areas where he would like to see more studies and possible improvements on the IDEA, Inc. approach:

- a) Quality constraints on financing: does financing the energy sector not compete in different terms than some of the other sectors? To be specific, what was an acceptable level of investments into the energy sector? Twelve percent of public investments (a "rule-of-thumb" seen in many reports)? Or the 25 per cent of public investments recently advocated in India? Where would that leave other vital sectors of the economy? Are we not "starving" other sectors?
- b) The long gestation period of resource development investments leads to "bunching" effect in financing, thus inflationary/ deflationary pressures might ensue. Does the model treat such effects, or does it parametrize these away?
- c) Energy substitution is only one form of factor substitution in economic management. Should we not consider the more general problem?
- 36. He emphasized that the "heirarchical" modelling approach might get around some of these problems in a collaborative decision-making context.
- 37. Mr. Vinod Mubayi, in his reply, emphasized that the objective of this modelling exercise was historically determined in 1981, where the most important objective was seen to be oil substitution. He emphasized, however, that the same methodology can be used for the analysis of other objectives (job creation, etc.) and could be considered a simple extension through application of the same methodology to present day problems (soft oil prices).
- 38. The meeting appreciated the offer by IDEA, Inc. to transfer the methodology and software to institutions within the region.
- 39. The meeting suggested that efforts be undertaken to identify institutions which would further the work in this field by making use of IDEA Inc.'s offer.

Agenda item 5 - Energy Economy Patterns Forum 1986

- 40. The activity A-3.3 Establishment of a forum to examine the regional/sub-regional energy economy patterns, under REDP phase II, was introduced by the secretariat. This activity is to be executed by the Natural Resources Division of ESCAP and has the objective "to hold one forum at a major energy planning institution in the region in September 1986 with a specific topic of current interest for discussion. REDP funds will be used for organizing the forum and conduct some studies to promote fruitful discussion".
- 41. As the theme topic for the forum had not yet been decided, and the forum will have a strong linkage to the proposed A-4 activity earlier introduced, advice and suggestions on that were sought from the meeting. An offer by TERI to organize the forum including the studies to be carried out in connection with it had been received earlier. The secretariat also suggested that the study conducted by IDEA Inc. on the energy transition scenario of some Asian countries, commissioned by ESCAP and supported by USAID, could become one aspect of the studies for the forum. Other issues included analyses of areas such as energy planning policy and management and training needs in the region for energy planning.
- 42. The Director of TERI explained that the communication (with the secretariat) was of preliminary nature and the ideas contained had still to be worked out in detail with the secretariat, hopefully within the next few months, to decide on issues to be studied and discussed, level of participation, duration and modalities for hosting the forum.
- 43. The meeting suggested the following issues as possible theme topics for the forum:
 - a. Inventory and analysis of energy modelling
 - Temporary energy shortages/scarcity in relation to critical choices of allocation
 - c. Process of energy policy formulation for decision
 - d. Refinery policies

- 44. The meeting also suggested that the studies ought to be structured around models available in the regional countries. Some developing countries in the region were known to be developing models for energy planning purposes.
- 45. It also suggested that participants to the forum be of a top technical or professional level i.e. advisers to the governments on energy planning matters and those connected with national energy modelling. The forum itself would be of a short duration, possibly 3 to 4 days.

Agenda item 6 - General discussions

- 46. The meeting considered the proposals and recommendations detailed above, and endorsed them unanimously.
- 47. The meeting felt that the approach adopted now towards the formulation of the co-operative partnership framework and action programme for the second cycle of REDP was a very innovative and purposeful one. It would provide for wide ranging consultations with the national government agencies, donor agencies, United Nations agencies and other relevant technical assistance agencies in arriving at an agreed programme and detailing the modalities of its implementation. The meeting therefore strongly called on funding agencies, the co-operating donor countries and Asian member countries in the ESCAP region to extend full support to the proposed activity and provide the various resources required. The meeting also noted the interest in this activity shown by UNDP, the Governments of France, and the Federal Republic of Germany, and urged that the commitment for funds for this activity may be obtained in a timely manner.
- 48. Dr. Munasinghe expressed the appreciation of the participants to the UNDP and the Government of France for the financial support given for convening the meeting and the secretariat for the initiative and its organization. The Senior Co-ordinator of REDP thanked all the experts and representatives for their presence.

Agenda item 7 - Adoption of conclusions and recommendations

49. The above report was adopted in the evening session of the meeting on 28 December 1984.

Annex I

LIST OF PARTICIPANTS

Member Country Experts

Mr. Mohan Munasinghe, Senior Energy Adviser to the President of Sri Lanka, Ministry of Power and Energy, Colombo, Sri Lanka

Mr. R.K. Pachauri, Director, TATA Energy Research Institute, New Delhi, India

Mr. Prathes Sutabutr, Deputy Secretary-General, National Energy Administration, Government of Thailand, Bangkok, Thailand

Mr. T.L. Sankar, Secretary to the Government of Andhra Pradesh and Director, Institute of Public Enterprise, Hyderabad, India

Mr. M. Malherbe, General Manager, TRANSENERG, Paris, France

Mr. Dang Van Giap, French Embassy, Bangkok, Thailand

Agency/Institution Experts

Mr. K.V. Ramani, Expert, Energy Programme, Asian and the Pacific Development Centre (APDC), Kuala Lumpur

Mr. V.V. Desai, Senior Energy Specialist, Asian Development Bank (ADB), Manila

Mr. Romir Chatterjee, President, International Development and Energy Associates (IDEA), Inc., Washington, D.C.

Mr. Vinod Mubayi, Expert, IDEA Inc., Washington, D.C.

Mr. Eddy Lee, Chief Technical Adviser, Asian Regional Team for Employment Promotion (ARTEP), International Labour Organisation (ILO), Bangkok

United Nations Development Programme (UNDP)

Mr. David Thorup, Deputy Regional Representative, UNDP, Bangkok

ESCAP Secretariat

Mr. L.N. Fan Chief, Natural Resources Division

Mr. G. Uswatte-Aratchi Chief, Development Planning Division

Mr. J. Jasiewicz Regional Adviser on Energy, Natural

Resources Division

Mr. S. Martosudirjo Chief, Energy Resources Section, Natural

Resources Division

Mr. S.J. Torok Economic Affairs Officer, Natural

Resources Division

Mr. T.S. Chung Economic Affairs Officer, Natural

Resources Division

Mr. A.J. Flatt Economic Affairs Officer, Statistics

Division

Mr. J.E.C. Martin Industrial Co-operation Adviser, ESCAP/

UNIDO Division of Industry, Human

Settlements and Technology

Ms. G.G. Koehler Associate Economic Affairs Officer,

Natural Resources Division

Mr. Filino Harahap Senior Co-ordinator, Office of the

Executive Secretary/Regional Energy

Development Programme

REGIONAL ENERGY DEVELOPMENT PROGRAMME (RAS/80/001 - RAS/84/001)

The Regional Energy Development Programme (REDP) was evolved in response to the call made by the Asian countries of the ESCAP region for promoting greater co-operation among them in the planning and management of the energy sector with special emphasis on augmenting rural energy supplies through available sources of energy, including new and renewable sources. In 1981 the programme was cast into a regional project funded by the United Nations Development Programme (UNDP) implemented by the Economic and Social Commission for Asia and the Pacific (ESCAP) in association with seven other agencies, namely, the United Nations Department of Technical Co-operation for Development (DTCD), the United Nations Industrial Development Organization (UNIDO), the Food and Agriculture Organization of the United Nations (FAO), the International Labour Organisation (ILO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Asian Development Bank (ADB) and the World Bank.

Phase I of REDP (RAS/80/001) was implemented during 1982-1983 with the active participation of 207 officials and/or experts from 19 Asian member and associate member governments in 19 activities. Phase II of REDP (RAS/84/001) will be implemented during 1984-1986. Following is its profile:

SUB-PROGRAMME	A:	ENERGY PLANNING,	POLICY	ANALYSIS	AND
		MANAGEMENT			

A-3.4

	MANAGEMENT
A-1	IMPLEMENTATION OF ENERGY PRICING STRATEGY
A-2	CONSERVATION IN SMALL/MEDIUM SCALE INDUSTRIES
A-3	ENERGY PLANNING, POLICY ANALYSIS, ASSESSMENT AND MODELLING
A-3.1	- Assistance to Two LDC's in Strengthening Overall Energy Planning and Policy Analysis Capability and Master Plan
A-3.2 A-3.2(a)	 Consultancies in Training in Energy Planning Effects of price and non-price policies on demand management
A-3.2(b)	= Energy demand forecasting and supply-demand integration
A-3.2(c)	= Manpower assessment and identification of training needs
A-3.3	- Establishment of a Forum to Examine the Regional/ Sub-regional Energy Economy Patterns
	Jacob Taccollis

- Assistance in Establishing a Common Framework for

Energy Data Collection and Compilation

SUB-PROGRAMME B: LARGE SCALE ENERGY SYSTEMS

B-1	NATURAL GAS/LPG UTILIZATION AND TRANSPORT
B-1.1	- Comparative Evaluation of Natural Gas Production,
× ,	Use and Future Targets in Gas Producing and Importing Countries of Asia
B-1.1(a)	= Techno-economic study of natural gas production and use in nine gas producing countries
B-1.1(b)	= LPG/CNG/methanol/hydrogen/LNG tradeoffs study
B-1.2	- Use of Natural Gas as a Substitute for Petroleum in Transportation Vehicles
B-1.3	- Workshop on Activity B-1
B-2	COAL UTILIZATION AND DEVELOPMENT
B-2.1	- Potential for Coal and Peat Use in Small Scale Industries and Rural Households in Countries with Dispersed Coal Deposits
B-2.2	- Training in Coal Utilization in Industries
B-3	TRANS-COUNTRY POWER EXCHANGE AND DEVELOPMENT
SUB-PROGRA	MME C: RURAL ENERGY SYSTEMS AND NEW AND RENEWABLES
C-1	RURAL ENERGY PLANNING STUDIES
C-2	SUPPORT FOR REGIONAL NETWORK FOR SMALL HYDROPOWER (RN-SHP)

C-3 UTILIZATION OF SURPLUS AGRICULTURAL RESIDUES AS ENERGY SOURCE FOR PRODUCTIVE ACTIVITIES

The REDP has an energy agency as the government executing agency at each country level, for implementation arrangements regarding each activity listed above.

Governments review progress of implementation of the REDP annually through a nine-member Steering Committee of senior officials, which is comprised of 2 members from energy exporting countries, 5 members from energy importing low income countries, 1 member from energy importing lower middle income countries and 1 member from energy importing middle and high income countries. Membership will rotate, so that all countries will eventually serve on the Committee. The Committee also advises the REDP on policy matters.

Proper co-ordination of REDP with other agencies and institutions in respect of energy activities is ensured through the Regional Inter-Agency and Inter-Institutional Working Group Meeting, which is convened by ESCAP immediately after the meeting of the Steering Committee each year.

The national focal points, as listed on the inside of the front cover play an important role in the effective and efficient implementation of REDP activities in respective countries by coordinating and managing incoming and outgoing communications on REDP.

THE WORLD BANK/INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

DATE: January 3, 1985

TO: Mr. Jean-Loup Dherse, Vice President, EISVP

FROM: Masood Ahmed, EGYEA

Olmed.

SUBJECT: Response to Mr. Gibson's Proposal

- 1. I have now spoken to Mr. John Mimm, a section head in Phillips Petroleum's Research and Development Branch, who coordinated Mr. Gibson's presentation to that company. According to Mr. Mimm, Mr. Gibson's project involves the growing of castor oil beans on an immense scale and converting the oil from these beans into a substitute for crude oil via a glycerine refining process. In his view, the proposal was technically feasible, albeit with a few hitches, but its main drawbacks were:
 - (i) the enormous scale required to make it commercial -Mr. Gibson proposes to reclaim millions of acres of West African desert and employ millions of agricultural workers to grow and harvest the beans;
 - (ii) the project was unlikely to be commercially viable and its economics were also suspect, although Mr. Mimm could not give me an estimated production cost for the crude oil substitute that would be produced; and
 - (iii) the scale of the project would require collaborative action by more than one country.
- 2. At the same time Mr. Mimm indicated that Mr. Gibson was not "fanatically committed" to this project and was an engineer of longstanding and some respect in the industry. Also, his presentation was interesting and had stimulated considerable discussion amongst his more technical colleagues. Thus his view was that while this project wasn't likely to fly in the near future, it may be worthwhile for our technical staff to hear out Mr. Gibson.
- 3. Based on my conversation, I propose that we ask Mr. Gibson to meet with Dan Fallen-Bailey who is a highly experienced energy resources specialist in the Department and who would then determine whether a formal presentation to a group of staff would be worthwhile. I have drafted a reply from Mr. Stern along these lines which is attached for your approval.

Attachment

cc: Messrs. Dan Fallen-Bailey (EGYEC) Zia Kalim (EGYDR)

MAhmed:aaf

DRAFT

January 3, 1985

Mr. Harry T. Gibson Administrator W. W. Konam Company P. O. Box 1312 Frederick, Maryland 21701

Dear Mr. Gibson,

Thank you for your letter of September 26, a copy of which we have now received and reviewed. As an international development assistance agency, the World Bank is interested in any technically and economically viable project which would both add to the world's supply of liquid hydrocarbons and improve the material wellbeing of developing countries. Consequently, we would like to find out more about your proposal and its applicability to the developing countries. In the first instance, I suggest that you meet with Mr. Dan Fallen-Bailey, an energy resource specialist in the Bank's Energy Department. Following your meeting we will be able to determine whether the proposal would be of interest to a wide enough audience in the Bank to justify a more formal presentation by you and your colleagues. Please call Mr. Fallen-Bailey at your convenience to set a time for your meeting. His telephone number is (202) 477-2253.

I look forward to hearing from my staff of the outcome of your discussions and I thank you for your interest in the World Bank and its objectives.

Sincerely,

Ernest Stern Senior Vice President Operations

THE WORLD BANK

DATE ROUTING SLIP Dec 18, 1984 OFFICE OF THE SENIOR VICE PRESIDENT, OPERATIONS NAME ROOM NO. Mr. Dherse 2) The mison hand In flow would like you to make To Handle Note and File Appropriate Disposition Note and Return Approval Prepare Reply Comment Per Our Conversation Full Report

Recommendation

Signature

Send On

REMARKS

Information

Initial

(E -80)

Please prepare a draft-reply by January 3, 1985.

FROM

Ernest Stern 4

W. W. KONAM CO.

A Non-profit Organization engaged in energy research and development.

P.O. Box 1312 - Frederick, Maryland 21701

26 September, 1984

(this is a copy of the original which we did not receive)

this wy 12/15/84

Mr. Ernest Stern, Vice President The World Bank 1818 H St. NW Washington, D.C. 20433

Dear Sir:

Apropos of Mr. Rowen's article in the Washington Post, I would appreciate the opportunity to present to you a means of making at least four of the West African nations prosperous. This is a twenty year old project that we only recently completed. The prime purpose of this project is to provide the World with an inexhaustable supply of non-polluting liquid hydrocarbons. It would seem reasonable to expect that in the course of achieving the stated purpose of the enterprise no one would have over riding objections if one side effect was to improve the lot of the nations directly involved. Other contiguous nations will benefit indirectly as a result of a necessary adjunct to the subject enterprise.

I recently made this presentation to the heads of the Research and Development section of the Phillips Petroleum Company because the successful operation of this project depends upon the participation by an entity with Phillips' philosophy and capabilities. The presentation was made recently enough so that I suspect that its evaluation is not yet prepared. Anyhow, I expect that you would prefer to render your evaluation first. However, if you are interested in it, a call to Mr. William C. Douce, Chairman, at 918 661 6600, under whose aegis this presentation was made, would, I am sure, expedite their evaluation for you.

This presentation requires about forty five minutes without questions and answers. It deals with solutions to technical, social, and economic problems involved in an enterprise designed to deliver from the subject area a peak production of 75×10^6 bbl of liquid hydrocarbons per day.

Looking forward to hearing from you in the near future and thanking you for your time and attention, I am,

11. Charles (Ook 18 04)

Sincerely Yours,

Harry 7. Gibson
Administrator

HTG/at

This is certified to be a true copy

World Bank Plan Seeks to Reduce Misery in Africa

By Hobart Rowen

A World Bank proposal to halt and, if possible, reverse the spread of misery in sub-Saharan Africa was endorsed by the United States and other nations yesterday at a meeting sponsored by the bank and the International Monetary Fund.

The bank's long-awaited report on the deepening crisis in these poor African countries calls for a minimum of about \$2 billion in annual bilateral and multilateral disbursements in addition to existing commitments of about \$9 billion.

"Africa has faced declining per capita income for the past 20 years," senior bank Vice President Ernest Stern said in releasing the report. "Today, the average African is worse off than he was in 1970—and there's every risk that 10 years from now, the average African will be worse off than at the time of independence."

The report also proposes giving highest priority to Africa in allocating aid through the International Development Association, through which the bank provides interest-free loans, with a small service charge, to the world's poorest countries.

In essence, the report proposes that all future aid for Africa be designed to help poor nations address their major problems: population growth, development of human

See AFRICA, A6, Col. 1

OFFICE MEMORANDUM

DATE: December 28, 1984

TO: Julian Bharier, Chief, EGYEA

FROM: Masood Ahmed, Deputy Chief, EGYEA

SUBJECT: Meeting with Jay Pelosky

- 1. At Franco Batzella's request I met yesterday afternoon with Mr. Pelosky who is a New York-based freelance journalist currently writing an article on the World Bank Energy Program in Africa for the Economist Intelligence Unit. The article is expected to be published in EIU's Quarterly Energy Report of Spring 1985.
- 2. Mr. Pelosky had already met with Franco and his colleagues and wanted some additional information on the objectives, scope, etc., of the Assessments and ESMAP. I gave him a brief overview of the program and particularly of their extensive focus on Africa.
- 3. I also gave him copies of:
 - (i) December 01 Quarterly Info Brief
 - (ii) Niger Blue Cover Assessments Ethiopia - Blue Cover Assessments Botswana - Blue Cover Assessments
 - he already had copies of all other blue cover assessments in Africa and Franco had already told me that we were supplying him with considerable material for the article, and
 - (iii) the following ESMAP Blue Cover Reports:
 - Malawi Tobacco Curing
 - Kenya Power Efficiency
 - Burundi Petroleum Supply Management
 - Uganda EASR
- 4. Mr. Pelosky appeared quite satisfied with the information/documents he had received. He promised to send me a copy of his article when it was published.

cc: Messrs. Batzella (EGYD2); Kalim (EGYDR)

MAhmed:tla

THE WORLD BANK/INTERNATIONAL FINANCE CORPORATION

DFFICE MEMORANDUM

TO: Distribution

DATE: December 21, 1984

FROM: Masood Ahmed, Deputy Chief, EGYEA

SUBJECT:

WHY STUDIES SUCCEED: Lessons from Effective Preinvestment Work

This is an interesting paper. Any views? Should we ask Engelman (who is a retired staff member from LAC Transport Division) to help in:

- designing a specific ESMAP activity
- carrying it out
- reviewing and commenting on one or more of our activities
- something else?

Attachment.

Distribution:

Messrs. Alahdad, Floor, Gulstone, Sherbiny, Ferroukhi, Weimper, Mitchell, Armar, Richter, Broadfield, King, Salvador, Frueh, Akanda, Bachrach, Gaskin, Mian (ESMAP Staff)

Mesdames: Shanberge, Sharkey (ESMAP Staff)

MAhmed:jcl

WHY STUDIES SUCCEED:

1/

Lessons from Effective Preinvestment Work

by Peter Engelmann & Kenneth A. Bohr PREINVEST, Inc. 8200 Fenway Road Bethesda, MD 20817

Good project design and execution require good preparation. The steps to successful preinvestment work are perhaps obvious, but neither simple nor easy.

Things can go wrong with preinvestment work. Even with the best intentions and generous resources, it is difficult to prepare well for investments which introduce major change at some point in the future. But a catalogue of hazards awaiting those who prepare capital projects would not be useful and might, in fact, discourage both studies and investments. On the other hand, there are lessons to be learned from good work that has been done in preparing projects.

This article identifies features that have been found common to preinvestment work which has been executed expeditiously and led to sound decisions. It reflects experience of its authors during service on the staff of the World Bank, covering a wide range of conditions in different countries. The observations come from direct involvement in project work on transportation and urban development and from a retrospective view of experience in other fields; they probably apply to most capital works requiring preinvestment studies of similar complexity.

What we have learned from successful experience is, in general, not at all complex. It is possible, therefore, that some of the points made below will strike readers as simple, even simplistic. But it is perhaps just this "common-sense" nature of effective preinvestment work which can create the impression that the process is automatic and that its execution may be taken for granted. Precisely the opposite can be demonstrated: in preinvestment work, which often examines change in areas that are critically sensitive and requires collaboration among agencies and persons not accustomed to collaborate, nothing can be taken for granted.

Our discussion of effective preinvestment work is organized under the following six headings:

- (1) institutional potency
- (2) spadework

^{1/} Article published October 31, 1984, by the United Nations "Development Business," Issue 161 (with different title and subheadings).

- (3) concept definition
- (4) study design effort
- (5) starting dynamics and
- (6) follow-through.

Institutional Potency

"Institutional potency," as used in this article, refers to both power and competence within the agencies concerned with preinvestment work. It is helpful if sponsoring institutions have skills to participate effectively in the preparation process. Other key considerations are:

- power of the agency having principal interest in the study and the project (it is desirable that executing power and interest coincide in the same agency);
 - awareness by the principal agency of its dependence on other agencies and the need for adaptation to weaknesses in some of those agencies, which may affect the speed of study implementation;
 - attention to the relative authority levels among agencies their financial resources, attitudes and "stopping power";
- the feasibility of assigning lead responsibility for overall control (preferably to the one agency/person most interested, competent and efficient) and of designating clearly the connection points to other agencies; and
- access to financial resources for all phases, with clear understandings on responsibility for moving funds from source to users and establishment of expeditious disbursement procedures.

Successful studies are almost always associated with a stable institutional environment and each of the above considerations is relevant not only at the outset of the exercise, but throughout the study process. For good results in preinvestment work, it pays to avoid periods of major organizational change or of key staff changes in responsible agencies.

Spadework

The term "spadework" covers a variety of steps which are required to provide a basis for defining study concepts. In preinvestment work for complex projects, the objectives of spadework are to:

- identify the sectors affecting the proposed project in a national economic setting and identify main trends and development prospects which could affect the study subject;
- define clearly the setting of the proposed project within its sector(s) and region;

- assess completed and on-going studies on the subject and in the project's regional and sectoral setting;
- identify portions of previous studies that can be used (to avoid duplication) and define how such material should be updated for the proposed study (A critical point here is the assignment of responsibility for results, if different sources of inputs are used); and
- extract lessons from previous studies and projects, covering the history of both failures and successes, and attempt to diagnose causes indicating what should be avoided/repeated/strengthened in the proposed study.

Ideally, spadework for major preinvestment work is a collaborative effort among agencies concerned with the proposed project, using a small team of professional staff who will be associated with concept definition and subsequent stages of project preparation, through the execution of studies.

Concept Definition

Critical for successful study design, but frequently ignored as a separate and distinct step, is the definition of basic concepts around which a proposed preinvestment study (or group of studies) should be formulated. A conceptual framework is necessary as a basis for study design to ensure clear focus on key issues, efficiency, and ultimate usefulness of preinvestment work.

Concept definition for major studies requires a period of undivided attention by senior professionals familiar with the "spadework," who will:

- define key issues that could affect the proposed project and should be resolved by the study. This may involve some diversity of views and the team should reach agreement on a ranking of issues, before the study has started (understanding that other issues may be uncovered during study process); on this basis, the team should define key decision areas for the project and the agencies that should participate in the decision process for each;
- search for ideas within agencies concerned and among informed outsiders. Even lower level professionals should be allowed to take part in informal "brain-storming" sessions and should be encouraged to express their views on key issues, the validity of past studies, possible new study procedures, etc.;
- define key outputs of the proposed study (or group of studies),
 leading to identification of alternative study approaches;
- outline alternative study configuration (e.g., should there be a quick first-phase with a review before the rest of a study proceeds in depth? Are there key demand factors which should be assessed before physical solutions are explored? How and to what depth are key issues identified earlier to be addressed?). This should result

in one preferred configuration for the study which should be outlined in more detail; and

 draft a statement of objectives for the proposed study, estimate its approximate timing and overall budget, and obtain agreement among key agencies on these points.

Study Design Effort

Agreement on the basic study concepts then leads to detailed study design, which should be undertaken by professionals with experience in undertaking/directing/evaluating preinvestment work.

Examples of past study definitions are often not very helpful, since each project situation is different. The main effort at this stage should be to define a study that is suited specifically to the project at hand, its national, sectoral and regional setting, the institutions involved and the historical background. Study areas should be defined in detail, and the output should be:

- scope definitions in form suitable for (a) review and approval by the agencies concerned, (b) invitation of proposals from consultants (if needed), and (c) contract(s) with selected firm(s) or work assignments for participating agencies;
- "control points" at which study results should be submitted for interim review. Such reviews could be the occasion for formal coordination among participants and decisions on next steps in the study. The timing of control points will determine the phasing of study components;
- assignment of key study tasks to agencies' staff and/or consultants, with clear definition of responsibilities of each;
- a reasonable but lean budget, based on "nominal" staffing schedules for the work, estimated man-months for main categories of effort, other cost components (travel, materials, equipment, computer time, etc.), and suitable provision for contingencies; and
- a time-phased program for implementation, with realistic periods for all actions required by the agencies in the initiation of preinvestment work with their own staff or their consultants.

These outputs of the study design effort, if well prepared, will provide the basic documentation for all preinvestment activities and a solid foundation for the study process.

Starting Dynamics

Both timing and professional judgment are important for the successful initiation of preinvestment work. When studies require services of consulting firms, their invitations, evaluations of proposals, and negotiation of a contract should follow a strict time schedule. The dynamics of this process

are such that the lead agency must assign a team of selected professionals (ideally the same persons who participated in the spadework and study design) to work fulltime on study initiation work, to the virtual exclusion of other assignments.

Clear definition of consultants selection criteria should precede the invitation of proposals. Good team spirit among the professionals who evaluate proposals is helpful, and high professional standards should be maintained both in the evaluation process and during contract negotiations with the selected consultants. For the agency engaging the consultants, experience in the business side of consultancy practices and in negotiating procedures are key factors for arriving at a satisfactory contract.

Once contracts are signed, the focus shifts to initiation of the work. It is difficult to overstress the importance of starting on the right foot, with adequate briefings of agency staff at the various levels involved and with support efforts that ensure the consultants' effectiveness on arrival.

Follow-Through

Once underway, important factors in execution are to:

- create and sustain a collaborative spirit among participants, maintaining morale and momentum;
- respond to interim findings and periodically review the progress and quality of the work, with participation by senior officials of both agencies and consultants;
- effectively control the process in terms of costs, disbursements, and timing; and
- evaluate final study results when produced and encourage a dialogue on findings and recommendations.

For effective utilization of preinvestment work upon completion, it has been useful to make review of final reports the occasion for (a) giving appropriate credit and recognition to all participating agencies, their consultants and internal staff, (b) reaching formal agreement on the next steps for project implementation and (c) assigning responsibilities for all required follow-up action.

While preinvestment work cannot guarantee that a project will be implemented and operated successfully, chances for success are certainly increased if the project is well thought out with participation of those responsible for eventual implementation and operation. The preparation process is itself good training for the rigors of project implementation and operation that follow. Thus, good preparation work is an investment in project success.

OFFICE MEMORANDUM

DATE November 5, 1984

10 All EGY Higher Level Staff

FROM Philippe Bourcier, Assistant Director, EGY

manager, moderant birector, Ed

EXTENSION 72431

SUBJECT Presentation on "Procurement in Cofinancing"

1. Further to my memorandum on this subject dated October 25, 1984, the presentation by Messrs. Tambe (VPCOF), Strombom (PPD), Walser (LEG) and Ludvik (EISVP) will take place on the morning of November 7 at 10:00 a.m. in Conference Room D556. The brief presentation will be followed by a question and answer period and discussion.

france my

Washington, D.C. 20433 U.S.A.

Cable Address INTBAHAD
Cable Address INDEVAS

October 29, 1984

H. Gutsche
SFE
Friedrichstrasse 3B
D-6000 Frankfurt an Main 1
Federal Republic of Germany

Dear Mr. Gutsche:

Thank you for your inquiry concerning the Eindhoven Kerosene Stove Report, which was referred to us by the Bank's European office.

The report has recently been edited and final corrections are now being made. No decision has been made on when and in what manner the report will be published.

However, when it is available, we will send you a copy. If you do not hear from us in two months, please get in touch. Thank you for your interest.

Singerely,

Je Peitmann for Willem Floor

Energy Assessments Division

Energy Department

cc: Liliana Ponchon (Documentation, European Office, World Bank)

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4	ROOM TM-401, NEW YORK, NEW YORK.		
5	SEPTEMBER &, INVITING MR. WILLEM		STONANTINE MINERAL
6	INTERNATIONAL MEETING ON DISSEMI	NATION STRATEGIES FOR	IMPROVED
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Peter King and Associates Chon

12 Corrie Gardens, Virginia Water, Surrey, GU25 4JH, United Kingdom. Telephone: Wentworth (09904) 3797 International calls: -449904 3797

MARKETING and MANAGEMENT CONSULTANTS ENERGY MANAGEMENT CONSULTANTS

PETER W. KING Senior Partner Mathew Mitchel, Energy Division, The World Bank, 1818H Street N.W. Washington D.C. 20433, U.S.A.

September 1984.

Dear Mathew,

I am writing to let you know that on the 31st July 1984 I resigned my position as Business Development Director of the White Young Group and have returned to my former consultancy practise as its Senior Partner.

The changes referred to will not cause any conflict of interest in that the White Young Group have retained me as a Consultant which will mean that I shall still be working with my former colleagues as and when my, or my partners, particular skills are required.

It is hoped that we in this practise will be able to work with your organisation whenever our specialised skills are needed as your help and co-operation in the past has always been appreciated.

I hope that we shall have an opportunity of working together again in the future.

The family send their best wisles.

nd see us some

Kindest regards

1818 H Street, N.W. Washington, D.C. 20433 (202) 477-1234 Cable Address: INTBAFRAD Cable Address: INDEVAS

June 6, 1984

Mr. C. E. Acker
The President
Pan American World Airways
Panam Building
200 Park Avenue
New York, N.Y. 10166

Dear Mr. Acker:

I am writing to express my dissatisfaction and anger at the way in which I was treated by your staff on a recent trip. The facts of the situation are as follows.

While in Hong Kong, I made a confirmed reservation on May 17 to fly on Pan Am flight 6 from Hong Kong to New York on May 18. reservation was in first class and I was holding a full fare first class ticket. On the morning of May 18, I called Pan Am Reservations at 9:00 to reconfirm my intention to take this flight and asked them whether they could allocate a specific seat number for me. I was informed that the seats would be allocated at the airport and that the latest check in time for the flight was 12:15 p.m. To be safe, I arrived at the airport at 11:30 a.m. and checked in at 11:40 a.m. The check in desk told me that the computer was malfunctioning so he would give me my boarding card at 12:10. However he confirmed that I had a seat in first class and tagged I waited there till 12:15. In the interim various people checked in and were issued boarding cards for first class. At 12:15 I was told by the check-in clerk that first class was overbooked and I would have to fly clipper. I asked to see the supervisor because I found this unacceptable. The Supervisor, a Mr. Chan, turned out to be a thoroughly rude, unpleasant and unreasonable person. First of all, he told me that I couldn't complain because I was checking in too late. When I told him I had checked in at 11:40 he accused me of lying until the check-in clerk had to verify that I had indeed checked in well in advance. Thereupon he told me that he could do nothing about the situation as the computer had preallocated seats to the people who had checked in after me and they therefore got priority.

When I told him that this was not an acceptable explanation, he started shouting and ranting and told me that I could either fly on clipper or get off the plane. I said to him that as I had arrived well in advance with a confirmed reservation, which I had reconfirmed earlier that day, I did not find these alternatives adequate. I asked him whether Pan Am would put me up in a hotel for a day and get me a seat on the following day's flight. He refused and said that I would only be entitled to a HK\$1000 compensation. I said that I would take that and pay my own expenses. He then changed his mind and said that I was not entitled to any compensation as I was only being downgraded not offloaded. I then asked him whether he could help me find a first class

seat on another airline. His response was that all airlines were sold out and in any case he didn't have the time to help or to continue the conversation. At this point he walked off.

I then decided that I was not going to fly Pan Am. Consequently, I retrieved my baggage and went to the enquiries desk where I was told that a United Airlines flight to Seattle was leaving at 1:30. The United Airlines counter was most helpful in getting me on the flight even though by then it was 12:40. When I got on the plane I was amazed to note that there were 12 empty seats in first class. So much for Mr. Chan's assertion that all flights to the US were sold out.

Now, as a World Bank official I fly a lot (having done more than 70,000 miles in the last year of which about half has been on Pan Am whose Frequent Traveler Program I also belong to). I appreciate that flights can be sometimes overbooked and passengers with confirmed reservations may not get on the flight. However, I have never come across the combination of rudeness and incompetence that was displayed by your Mr. Chan. Instead of acknowledging that this was a mistake and trying to help me find a suitable alternative, he went out of his way to be aggressive, discourteous and singularly unhelpful. As a result, I experienced considerable stress and really cannot see why I should go on flying your airline.

However, I am writing this letter because I believe that this is probably an isolated incident. I would like to be convinced that this is indeed the case and, that you are taking steps to ensure that this remains the case.

I would be interested in your response.

Yours sincerely,

Masood Ahmed

Deputy Division Chief

Energy Assessments Division

Energy Department

November 4, 1983

Mr. Daniel W. Goren, Director World Bank Unit AMerican Express Company Washington, D.C.

Re: Hotel Accommodation in Ottawa

Dear Mr. Goren:

During my last mission to Ottawa (November 1-3), I stayed at the Holiday Inn on Dalhousie Street, which appears on the list of Bank recommended hotels. This hotel is not suitable for Bank staff use. Apart from the generally decrepit nature of the facilities and furnishings, the hotel is unclean (bedspread and towels were dirty) and there was not hot water on one of the two days. Moreover, we were also advised by CIDA staff that the hotel is not entirely safe. Finally at C\$63 per night, it is not cheap either.

Given this experience (which was shared by Messrs. Deraet and Thiam) I would recommend that this hotel be taken off the Bank list and that Bank staff travelling to Ottawa should be advised accordingly.

Sincerely yours,

Masood Ahmed Senior Economist Energy Assessments Division Energy Department

cc: Mrs. Owen (EGYEA)

MAhmed:ks

MOTOR COLUMBUS

CONSULTING ENGINEERS INC. BADEN/SWITZERLAND

Dr. D. Edelman



Dr. Matthew Mitchell Energy Department The World Bank 1818 H St., N.W.

Washington, D.C. 20433

U.S.A.

Baden, July 4, 1984

Dear Dr. Mitchell:

I just wanted to write a note to thank you for your time in Washington. It was once again a pleasure to talk to you, and I appreciate you volunteering to pass my literature on to David Hughart. If there is ever any way I can be of assistance, please do write or call. Thanks once again.

Sincerely,

David J. Edelman PhD

Senior Energy Economist

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