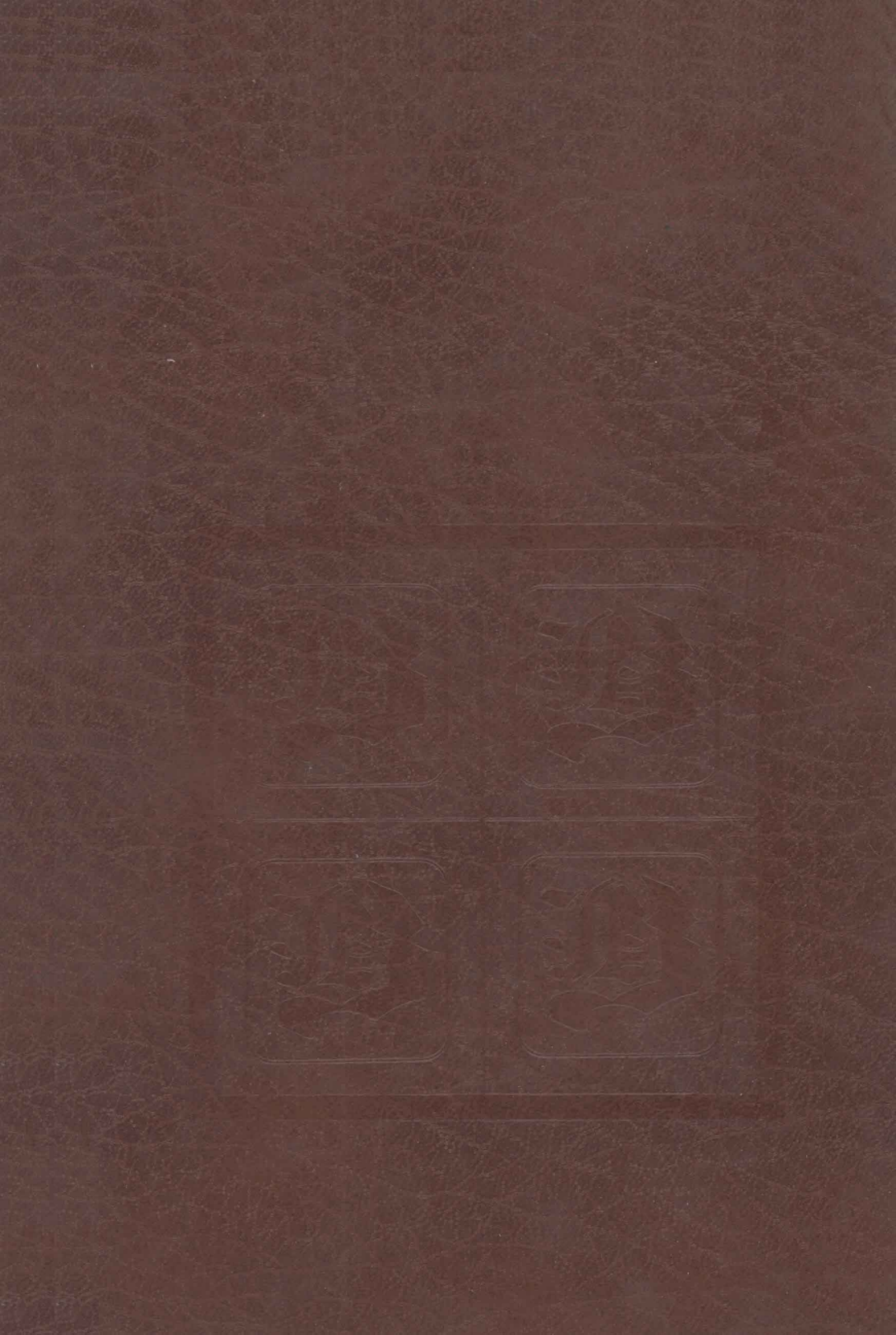

The World Energy Triangle

A Strategy for Cooperation

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Foreword

It is becoming widely believed that the world energy crisis could be the progenitor of a new era of economic opportunity. This book offers support to that belief. It comes at a time when the dialogue between Northern "haves" and Southern "have nots" (particularly those who have no oil) has been frozen by fear and suspicion. At such a time, the only hope is to focus on potential areas of common interest and practical cooperation. My colleagues argue in this book that the best opportunity for bold initiatives in the international community, from which everyone could profit, is the development of new sources of energy supply, particularly in the oil-poor countries of the South. These sources should be able to use these countries' natural advantages—above all direct energy from the sun—in ways that will help to solve their central problem of rural poverty.

What gives this theme its particular interest is the growing recognition in the industrial North that by early in the next century their own economic destiny will hang increasingly on success in adapting renewable energy sources. This applies equally to the present oil exporters of OPEC, whose interest in examining and investing in the great energy transition is documented here.

This volume serves the important purpose of documenting the progress—and the suspicions, misunderstandings, and institutional bottlenecks—that have shaped cooperation and conflict over energy between the West, the oil-rich states, and the poor, oil-importing developing countries. The authors see these three groups locked in a

triangle of suspicion that could, however, become a triangle of cooperation to everyone's advantage.

In addressing themselves to "A Strategy for Cooperation," the authors discuss not only the politics in energy cooperation and the characteristics of energy sources in relation to the objectives that they are supposed to meet, but also present and prospective policies for energy production. They concentrate particularly on solar energy—discussing the prospects for mutually profitable transactions between suppliers and recipients and the mediating role the governments can and should play in this rapidly growing market.

A feature of this volume that I believe gives it particular relevance and importance is the authors' insistence on seeing energy production, and the economic and social development it is supposed to secure, in the total context of the physical environment. To the technologically minded, discussions of the importance of fuelwood programs to soil conservation and climate may seem remote from the price of a kilowatt hour of hydro-electricity, or of a joule of energy caught from a methane digester. But Hoffmann and Johnson illustrate why they are intimately connected, and why it is vital that we bridge these conceptual divides and see energy production and use "in the round" as an inseparable part of the task of managing and conserving the environment.

Both for its conceptual breadth and its practical suggestions for modest, realistic steps toward negotiated programs for energy cooperation, this book should provide a "lamp unto the weary feet" of the whole development community—whether to the official, academic, or business concerns at each corner of the "suspicious triangle." I commend it to them all.

William Clark
President
International Institute for
Environment and Development

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This book was made possible by a supporting grant to the International Institute for Environment and Development from the ARCO Foundation, and our thanks are due to them for their generous help.

We would also like to thank the more than one hundred officials of aid agencies, government ministries, and international organizations whose policies and programs were the target of our research. They were generous in the time they gave to discuss the issues presented here.

As authors it has been our aim to avoid the inherent and unnoticed Western bias of most writers on oil and energy issues. Inevitably, however, while we have sought detachment, we cannot claim an Olympian view. We are aware, for example, that an author from an OPEC country with a similar commitment to balance would have written a quite different book.

We owe a great debt of gratitude to IIED staff who contributed a large amount of background research and assistance: Christine Glenday, who particularly contributed to Chapter 3; Ariane van Buren, who researched French policy and programs; Mike Whiteman, Joe Chapel, and Edda Post, who compiled the statistical tables. Our particular gratitude goes to Todd Bartlem who not only researched Chapter 4 but also solved every problem, large and small, that reached his desk. We wish also to thank Shelley Dobyns, Virpi

Kairinen, Catherine Nesbet, and Nancy Shepherd for their cheerful energy in preparing successive drafts of the manuscript.

More than thirty individuals read an early draft. We appreciate the comments and advice of them all, but wish particularly to thank Barbara Ward Jackson and Abdlatif Y. Al-Hamad, as well as Robert Blake, Gillian Brown, Erik Eckholm, Efrain Friedmann, William Knowland, David Runnalls, David Satterthwaite, and Gregory Thomas. However, the judgments made and any errors of fact or interpretation are of course the responsibility of the authors alone.

Finally, energy politics and finance are, at the time of publication, so volatile, that we have avoided discussion of the twists and turns of immediate issues. We cannot help recalling H.L. Mencken's telegram to the *Baltimore Sun* during the 1924 Democratic Convention. During this, the longest Convention in American political history, Mencken telegraphed, as a lead to Baltimore, "Only one thing is certain after the 101st ballot of this Convention. John W. Davies will never be nominated". Following Davies' nomination on the 103rd ballot, Mencken cabled "I hope some idiot will have the sense to remove the negative." We will not be in a position to send such a message to our longsuffering publishers.

Thomas Hoffmann
Brian Johnson

September 1980

List of Acronyms

ACP	Atlantic, Caribbean, Pacific states (parties to the Lomé Convention, with the members of the European Economic Community)
ADB	Asian Development Bank
AID	Agency for International Development (United States)
BMZ	Bundesministerium für Wirtschaftliche Zusammenarbeit (Federal Republic of Germany)
CEA	Commissariat à l'Énergie Atomique (French Atomic Energy Commission)
CIEC	Conference on International Economic Cooperation
COMES	Commissariat à l'Énergie Solaire (France)
DAC	Development Assistance Committee (of the OECD)
DOE	Department of Energy (United States)
EDF	European Development Fund
EEC	European Economic Community (Common Market)
FAC	Fonds d'Assistance et de Coordination (France)
IAEA	International Atomic Energy Agency
IBRD	International Bank for Reconstruction and Development (World Bank)
IDB	Inter-American Development Bank
IEA	International Energy Agency
LDC	Less Developed Country
NIEO	New International Economic Order
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development

OIDC	Oil Importing Developing Countries
OLADE	Latin American Regional Energy Organization
OPEC	Organization of Petroleum Exporting Countries
U.K.ODA	Overseas Development Administration (United Kingdom)
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
VIF	Venezuelan Investment Fund

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Introduction

War may be man's oldest pastime, but energy is his newest obsession. Worldwide public attention has fixed on energy probably more than on any other peacetime issue in recent memory. The contortions of nations and international institutions to meet the challenge of OPEC have dominated cabinets, Great Power summits, the North-South dialogue, and deliberations of the United Nations. Scarcely a day passes without some new variation on the political threats to energy supply or the announcement of an exciting alternative energy prospect. Recent political and military events, moreover, have deepened concern that the stakes in the contest for oil and its influence have become so high that regional, and perhaps world, peace will be threatened in the 1980s.

With Western lifestyles facing severe modification, and with Middle Eastern stability apparently threatened by the clash between modernization and fundamentalism, it is hardly surprising that the continuously worsening energy plight of the poor countries of the Third World and the implications of their predicament for the rest of the international community have received little attention in North America and Europe. But this inattention seems extraordinary when one considers the relation between a variety of Third World energy possibilities and the issues of foreign policy, development strategy, and finance with which they are entangled. These relationships are not limited in their importance to those who feel sympathy for the Third World's energy predicament. They are germane—in this book we argue they are essential—to efforts in the 1980s to shape new energy strategies in both Western and developing countries.

The Western industrial countries can help develop new energy sources in the Third World and in so doing, stabilize their own economic systems. The OPEC states can stabilize their political alliances and diversify their investments. It is both ironic and troubling that governments have failed to act decisively upon the threat to their own well-being that is carried forward by the deepening energy crisis of the world's poor countries. To try to explain this failure in full would require another book, covering a much wider range of relations between states. However, at least one contributing factor is the widespread ignorance and misunderstanding of the potential benefits of energy cooperation with the Third World.

This book evaluates the international problems and the potentialities for stimulating new energy initiatives for the benefit of developing countries of the Third World.[a] Energy and poverty are both politically charged subjects. Combined, they offer a formidably explosive potential. So it is as well that we clarify at the outset the political perceptions on which our analysis is based.

Energy issues generate intensely nationalistic concern. This is true among the countries of the Organization for Economic Cooperation and Development (OECD), where no issue has been more divisive than European irritation at America's inability to slow down significantly the rate at which it imports and consumes oil. It is equally true among the "Group of 77," the loose political affiliation of Third World countries, including the Organization of Petroleum Exporting Countries (OPEC), that now numbers 129 states which are held together by large geopolitical issues such as a new economic order for the Third World or the Palestine question, the "Group of 77"'s unity has on more than one occasion been strained almost to the breaking point by the fact that the poorest countries have been hurt most by OPEC price increases.[b] Indeed, the determination of bargaining groups among states (particularly the "North" and "South") to maintain solidarity often obscures the great pressures felt within these groups to break ranks in response to more immediate self-interest. The wealthier developing countries have by now achieved

[a]Detailed discussion of present institutional arrangements, which have changed little in recent years, are available elsewhere, as are extensive, if inconclusive, evaluations of technological alternatives to which institutions and governments might now turn. (See Bibliography, p. 197).

[b]The Organization for Economic Cooperation and Development (OECD) is a loose affiliation of twenty-four Western industrialized countries and Japan, headquartered in Paris, that provides a forum for concerted planning and—occasionally—action by its members. The "Group of 77" as such has no formal organization.

a large measure of self-reliance and bargaining power; the poorest have almost none whatever with which to influence the outside world, and in particular the type of concessional help available to them. But the attempt of the vulnerable, oil-poor Third World to mitigate their evident weakness behind a guise of Third World energy solidarity is becoming damaging to their own interests.

This situation parallels another political development of the 1970s, the increasing strain not only among but also *within* so many of the less developed countries (LDCs). The official aid strategy of Western donors and lenders has increasingly focused upon the needs of the poorest people in the poorest countries—the estimated 800 million whose existence is permanently at risk because their fundamental or "basic" human needs remain unmet. To reach these people, donors of aid must work within national economic systems. But these systems often show scant signs of bridging the social chasm between their own rich and poor, and equally little concern with doing so. This is often especially true in the smaller, poorer countries of the Third World—precisely the ones that must inevitably rely most on outside help in planning and delivering sources of energy to the poorest strata of their societies.

Finally attempts to tackle such issues through world conferences and global institutions, simply has the effect of institutionalizing conflicts. In the case of energy, national interests are so compelling that easing international antagonism requires much more than institutionalized responses. It demands a general change in assumptions and expectations.

In the end, of course, options for energy aid to the Third World must be measured within the limits of political reality and available energy resources. We therefore have tried to evaluate present efforts and future prospects for energy investment in developing countries, and its relationship to aid, from several perspectives:

1. What is really at stake for the North, for OPEC, and for the developing countries?
2. What energy alternatives are available for investment now, and what are the outstanding potentials and disadvantages of each?
3. What types of programs are being promoted and funded by aid institutions and government agencies, and how effective are they?
4. In light of the active interest taken by a growing Northern solar energy industry in developing country markets, what is its potential contribution to energy cooperation, and what are the limitations of its involvement?