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I. INTRODUCTION

A. USAID TECHNICAL LEADERSHIP TRAINING PROGRAM

1. Background

USAID energy programs assist developing countries in establishing the policy frameworks and institutional capacity necessary for the operation of financially viable, competitive energy markets that will mitigate the environmental impact of energy use while increasing access to energy services, and promoting economic growth. The heart of USAID's strategy is the reform of legislative and regulatory policies and institutions to allow private sector participation in energy and electric power development and to open markets for renewable energy, energy efficiency, and clean-energy technologies. USAID assistance has been crucial in more than 24 countries in the reform of the electric sector, improvements in energy efficiency and availability, stimulated investments in renewable energy projects, and improved economic performance in the power sector.

Free Market: A market in which there is an absence of intervention by government and where the forces of supply and demand are allowed to operate freely.

David W. Pearce, Ed., "The MIT Dictionary of Modern Economics, © 1992 Aberdeen Economic Consultants, (Cambridge, Mass.: The MIT Press) p. 163.

Economic Liberalism: The doctrine, which advocates the greatest possible use of markets and the forces of competition to coordinate economic activity. It allows to the state only those activities which the market cannot perform – e.g. the provision of public goods – or those which are necessary to establish the framework within which the private enterprise economy and markets can operate efficiently, e.g. by establishment of the legal framework on property and contract and the adoption of such policies as anti-monopoly legislation.

Ibid., p. 120.

Rapid transformations in the energy sector worldwide have changed the emphasis and focus of energy training needs, as well as the way USAID conducts training. Training needs have shifted over time from hardware & technology, to technology/project management and policy, and now to development and implementation of marketplaces and transactions for environmentally sound energy. Likewise, the Agency's shift in emphasis and operations has forced a change in modes of delivering training, moving away from a fixed curriculum of workshops, and toward having a ready capability on hand to provide custom training to meet Strategic Objective goals.

The developing world and the development field are awash with consultants able to custom design technology, policy, and financing solutions, virtually at a moment's notice, and with complete turnkey services. But can our in-country partners, the recipients of this assistance, manage and operate the technology, policy, and financing on their own after the installation process is complete?

Increased understanding, knowledge and skill of host country partners of the importance and benefits of liberalized markets to their local situations, as well as the political, legal, economic, and social infrastructure requirements for sustainable market liberalization is a requirement to achieve environmental, economic, and social sustainability in the energy sector. Thus, access to the right technology, policy, or financing is much less an issue today than is the ability of individuals in stakeholder institutions to develop and operate legal, regulatory, and market frameworks for implementation of technology, policy, and financing for environmentally sound energy.

Nothing starts (or stops) unless people take action. Lack of a sufficient knowledge and/or skill base among our partners is frequently a greater barrier to the implementation of environmentally sound technology, policy, and financing than in getting the specific interventions themselves "right." Human capacity is the awareness, knowledge, and abilities that allow individuals and institutions to cause positive changes in their circumstances. Capacity building is required when the barriers to success are human (i.e., when the technology, policy, and financing solutions alone do not seem to be working).

Ideally, solutions will depend on an analysis of specific problems. The analysis is now focused on the human dimension, and can be summed up in the following questions: "Who among our partners needs to know (or be skilled in) what in order to achieve what goals, and how and where do those people learn best?"

2. Training Within USAID – Technical Leadership Training

Within USAID, the way the Agency conducts business is forcing a change in how Energy and Environment Training Program (EETP) can conduct training. The traditional fixed curriculum of training that EETP has offered in the past is increasingly less viable as a centrally run program in today's USAID. Funding and staffing for capacity building has shifted away from building core competencies in staff and corporate capability in institutions in general, and toward increasing skills and knowledge in people closely correlated with technical assistance activities.

The Technical Leadership Training is designed and delivered under EETP, a program within the Global Bureau at USAID in Washington, D.C. The Global Bureau manages this program in partnership with the various USAID Bureaus and Missions, host country partners, and a number of cooperators and contractors.

The "Workshop on Enhancing Energy Sector Policy and Reform Process in Zambia" is being provided under a Task Order – Private Sector participation in Clean Energy Development, Management & Operations – awarded by USAID to CORE International, Inc.

B. CORE INTERNATIONAL, INC. – CORPORATE BACKGROUND

CORE International, Inc. is a small minority owned and operated international management consulting firm with expertise in the energy and environmental sectors. The firm was founded in 1984 by its current President and since that time the firm has managed and/or participated in over 300 energy and environmental assignments in over 72 countries worldwide. One of the special areas of expertise of the firm is in developing and delivering tailor-made training programs, workshops, seminars, and conferences. CORE has designed and delivered training programs to developing country public and private sector officials in a number of areas including energy planning, energy pricing, economic and financial analysis of energy and environmental projects, financial evaluation of energy enterprises, environmental management, industrial cogeneration, DSM, IRP, ESCO development, project financing, and bid preparation and procurement. CORE's clients include a number of bilateral agencies, the World Bank, Asian Development Bank, European Bank for Reconstruction and Development, and the governments of over 40 countries.

CORE's experience in energy and environmental training includes the design and delivery of training to developing country public and private sector officials in a number of countries. Specific examples include (i) training in energy planning and tariff development to Ministry of Energy officials in Jamaica, (ii) training to over 60 energy conservation engineers, planners, and economists in Thailand, (iii) training to 30 staff members of the Korea Management Corporation in the environmental advantages and economic efficiency of gas-fired cogeneration systems, (iv) over a dozed short training sessions on the utilization of bagasse as a source of clean power in Guyana, India, the Philippines, Uganda, Kenya, Rwanda, Ghana, Zimbabwe, and Thailand, (v) training on technology choice, product specification, procurement and tendering for clean energy projects.

In the electricity sector, CORE has worked in over 60 countries worldwide in assessing the institutional and regulatory aspects of power sector management and the relationship between electricity prices, regulation, and markets. CORE has also developed strategies for consumer acceptance of tariff and regulatory changes and analyzed different models for market development with respect to the relationship between Gencos and Discos. Another area of CORE's expertise includes the development of customer relationship management (CRM) in a changing market environment that many developing countries are increasingly facing as part of the power sector reform.

Some examples of CORE's recent work in the area of energy sector capacity building and training are provided below:

Brazil: Institutional Capacity Building and Consumer Acceptance Approaches for New Electricity Regulations and the Sector Restructuring

Under a $2.2 million project for USAID, Mr. Shrivastava developed a detailed strategy for the implementation of a 1% utility fund, allocated by law within the

newly restructured electricity sector, for investments in utility and non-utility energy efficiency programs. The work involved the identification of barriers to new investment, barriers relative to the organizational relationships of the Ministry, the ESCO industry, energy consumer groups, and ANEEL, the regulator, and defining changes needed within ELETROBRAS, the national utility, to give the consumer a greater voice in electricity investment planning and tariff setting. In another assignment for USAID, Mr. Shrivastava organized a national solid waste management program involving 12 landfill sites in 11 major cities throughout Brazil. He developed the organizational structure for the cooperative association of the municipalities and city governments and structured the institutional process to affect change in the prevailing practice of solid waste management in Brazil. The process was agreed to by all the governments and the first methane-based power project was initiated.

Malaysia: Institutional Capacity Building in the Electricity Sector in Malaysia

In Malaysia he participated in the development of a change strategy resulting in the corporatization of the Tenaga Nacional Berhad (TNB), the national utility, which also included the break-up of TNB into different independent operating entities in order to serve the energy market and the consumer more efficiently.

Indonesia: Technical Assistance to USAID Jakarta for Institutional Strengthening of NGOs in the Energy Sector and the Development of the USAID Energy Sector Assistance Strategy

Mr. Shrivastava led a TAG Mission to Indonesia to develop a detailed paper in support of the USAID Mission Strategy for Energy Sector Assistance in Indonesia. In addition, he managed the efforts of CORE International that included an evaluation of numerous local NGO's involved in the energy sector in Indonesia. Due to (i) recent energy price increases and (ii) coupled with the country's economic downturn resulting from the country's fiscal crisis, energy conservation and energy efficiency issues are rising to new levels. All energy sector end users in the country (households, industrial, government, etc.) are looking seriously at options for decreasing their energy usage and costs. The CORE mission was to evaluate the current institutional capabilities of local NGOs in the energy efficiency and conservation field and to make specific recommendations for institutional strengthening and capacity building for identified NGOs.

One of the most complex institutional capacity building and change management project's led by CORE International, Inc. was the institutional and economic reconstruction in Bosnia and Herzegovina (BiH) under the leadership of the White House and Ambassador Robert Gelbard, the then Chief Envoy for Bosnia Implementation and Dayton Peace Accord Implementation. Mr. Shrivastava supported the Administration's objective to introduce significant institutional restructuring and changes throughout the three presidencies in BiH. His responsibilities included residency in BiH and the development of change management plans and government and utility restructuring throughout Bosnia in

all sectors of the economy. He supported the work of the Office of the High Representative and coordinated all donor investments including participating in the donor meetings in Paris and reporting regularly to Ambassador Gelbard at the State Department.

Zambia: Power Sector Regulatory Restructuring and Reform and Institutional Development of ERB, ZPA, and ZESCO, the National Utility Company

CORE International is prime contractor for a major power sector restructuring and capacity building project in Zambia. Under this projected funded by USAID under the Energy training IQC, CORE plans to design and deliver a number of training courses. The first course is designed is to provide ERB and ZPA with the ability to analyze the financial and economic consequences of introducing different levels of market competition into the existing Zambia generation subsector. Such analysis will allow estimation of market determined wholesale electricity prices for specific electricity demand levels and predication of the financial performance of specific private sector owned generating companies. It will also allow determination of any capture of economic rent by private sector generating station owners. The course will also review international experience with design, implementing, and operating and regulating wholesale electricity markets. It will identify the main issues related to implementing wholesale competition in Zambia. These include the following.

SADC Countries: Power Sector Restructuring Institutional Development in Southern Africa Development Community (SADC) Countries

CORE International is a prime contractor for an ongoing institutional development project in SADC countries. As the first exercise under this project CORE organized and conducted a workshop. The Southern Africa Electricity Regulation Workshop consisted of over 75 attendees from the Southern African Development Community (SADC) countries plus invited officials from Kenya and Uganda. In addition, eleven international consultants and the USAID Regional Mission (Gaborone) were in attendance. Most attendees at the Workshop were from the countries power sector regulatory entities. Senior managers of the Southern Africa Power Pool (SAPP) also participated in the workshop.

The workshop was divided into two parts: (i) a series of presentations by international consultants on power sector regulatory and reform and restructuring topics, and (ii) the enactment of a plan for the eventual regulation of SAPP. The workshop continued the consideration of topics that had been discussed at a similar workshop held approximately two years previously. Most of the presentations by international consultants dealt with conditions and/or regulations in developed countries or regions possessing sophisticated wholesale or wholesale and retail electricity markets. CORE's presentation focused on the following topics:

- the role of Independent System Operators

- transmission tariffs principles
- regional wholesale electricity market regulation in the Nordic region
- optional approaches to electricity regulation
- the role of NARUC in supporting U.S. utilities regulators

The second part of the Workshop demonstrated the resolve of the existing Southern Africa regulators, particularly the regulators for South Africa and Zambia, to regulate the emerging SAPP wholesale market. SAPP announced at the Workshop that they planned to initiate a spot power contract on May 1, 2000. The Workshop resulted in the following actions for furthering the establishment of a regional regulator:

1. Establishment of a Technical Working Group consisting of Kenya, Malawi, Namibia, South Africa, Zambia, and Zimbabwe, chaired by Namibia. The Technical Working Group will develop an action plan which will (i) better define the objectives of regional regulation for Southern Africa, (ii) prioritize the regional regulatory focus areas, (iii) determine the legal status of a regional regulatory entity, (iv) develop criteria for the selection of regulators, (v) define the regulatory governance roles, (vi) identify regulator funding, and (vii) present a schedule for implementation of a regional regulatory body.

2. Establishment of a Plenary Committee to direct the Technical Working Group and coordinate with SADC members.

3. Reporting on the progress made by the Technical Working Group and the Plenary Committee at the April SADC Electricity Sub-Committee meeting.

4. Reporting on the progress made in the establishment of a regional regulator at the April SAPP Executive Committee meeting.

5. Submittal of the Technical Working Group action plan report to the Plenary Committee in May 2000.

6. Development of an Information Memorandum to be submitted to SADC Energy Ministers Meeting in May/June.

Southeastern Europe: Design of Institutional Development Requirements for South Eastern European Countries for Power Sector Cross Border Trading and Sectoral Reform for the Development of Regional Programs and Strategies

This on-going project is being funded by the U.S. Trade and Development Agency. CORE International is collaborating with all key donors (particularly the World Bank and the EBRD), and the Office of the Special Coordinator for South Eastern Europe Stability Pact in Brussels, Belgium to develop institutional restructuring requirements for electric utilities in 5 Stability Pact countries

(Albania, Macedonia, Bulgaria, Croatia, and Serbia). CORE International is the prime contractor for this on-going assignment and is closely working with the Energy Division in the ENI Bureau on their on-going electricity sector restructuring projects in Albania and Croatia. Specifically, CORE International is participating in the regular workshops with KESH (the Albanian Electric Utility) and HEP (the Croatian Electric Utility).

SARI: South Asia Regional Initiative/Energy Program – Design and Implementation of Rural Electric Services Reform in the South Asia Region as Part of the USAID South Asia Regional Initiative – Energy (SARI/E)

CORE International is a key partner under a $25 million USAID-funded SARI/E Program that focuses on power sector institution building and capacity enhancement in the South Asian countries (Bangladesh, Nepal, India, Bhutan, Maldives, Sri Lanka). Along with a team of USAID contractors and cooperators, CORE International is taking the lead in the rural energy sector. As a prime contractor for this activity, CORE International is managing the design and delivery of 15 workshops and courses throughout the South Asia region. These workshops and courses involve senior power sector officials from each of the countries and are aimed at identifying and developing new approaches for sector reform and institutional development in order to enhance efficient development and supply of electricity throughout the region.

Thailand: Review of the Institutional Development and Capacity Building Requirements for the Electricity Generating Authority of Thailand (EGAT)

As a prime contractor and through a series of assignments over the period 1986-1992, CORE International closely worked with EGAT, the Asian Development Bank, and the U.S. Trade and Development Agency to develop an overall strategy for the reform of the power sector in the country and for the transformation of EGAT into a more open utility. Specifically, the strategy included the splitting of EGAT into one GENCO and several competing DISCOS. Through the introduction of competition in the electricity sector, CORE was able to convince EGAT to make extensive reforms including the establishment of an independent regulatory agency and a fair and acceptable electricity pricing system. Towards the later part of the assignment, CORE International participated in a management and oversight team that provided direct institution building advice to the top management of EGAT and the Office of the Prime Minister.

Thailand: Development of an Institutional Restructuring Plan for 12 Thai Municipalities towards a Common Strategy for Rural Electricity Supply and Municipal Waste Management

Under a contract with the U.S. Trade and Development Agency and the U.S. Air & Waste Management Association, CORE International, as a prime contractor, managed a 16-month assignment involving 12 Thai municipalities. The objective

of this assignment was to develop an institutional framework to facilitate dialogue between municipal entities and EGAT whereby reliable electricity could be provided to the rural sector at an affordable price. During the performance of this work, CORE International also engaged several Thai consultants and sub contractors. A second component of this project focused on the development of an institutional framework whereby the 12 municipalities could agree on a common strategy for the management of municipal waste in their respective areas in coordination with the overall policies of the Bangkok Metropolitan Administration (BMA).

C. CORE INTERNATIONAL'S RECENT WORK IN THE SADC REGION

Under the Task Order "Private Sector participation in Clean Energy Development, Management & Operations", awarded by USAID to CORE International, Inc. in 2000, CORE International Inc. has been working extensively in the Southern African Development Community region primarily in the areas of expanding the regional electricity trade through the development of the Southern African Power Pool (SAPP), and in the area of rural electrification.

The following Exhibits 1 provides a summary of CORE's major scheduled and planned activities to be completed by end of May 2004, while Exhibit 2 summarizes all major CORE's activities completed in the SADC region.

Exhibit 1: Summary of Scheduled and Planned Activities in the SADC

No.	Dates	Activity Description	Location
1	March 22-23, 2004	A two-day Workshop on "Issues and Options for Power Sector Reform and Restructuring" in Zambia	Lusaka, Zambia
2	March 24, 2004	A one-day Planning Workshop for the GVEP in Zambia"	Lusaka, Zambia
3	April 13-14, 2004	A two-day Workshop on Enhancing the Environment for IPPs in the Reforming Namibia Power Sector	Namibia
4	April 15-16, 2004	A two-day Regional Conference on Enabling Environment for Private Participation in Rural Energy Service Delivery in the SADC Countries	Namibia
5	November 2003 – June 2004	Global Village Energy Partnership (GVEP) Support In Brazil, Mexico, Sri Lanka, and Zambia	Zambia (Brazil, Mexico, Sri Lanka also)

Exhibit 2: Summary of Completed Activities in the SADC Countries

Location	Activity	Schedule	Scope
Lesotho	1. SADC-wide Desk Study on Issues & Options for Rural Electrification in SAPP Member Countries and Rural Electrification Planning in Lesotho	March 30, 2003	Described approaches to Rural Electrification development through private sector led participation and the involvement of the broader stakeholder community. Focused on best practices for, and lessons learned from Rural Electrification programs and projects worldwide from the development point of view. Described the challenges and approaches to various critical issues related to the planning process of Rural Electrification.
	2. SADC-wide Workshop on Issues & Options for Rural Electrification in SAPP Member Countries and Rural Electrification Planning in Lesotho	April 7 - 12, 2003	Identified the different stages of rural electrification and the importance of containing the appropriate institutional arrangements of SAPP member countries and provided analysis of Lesotho's progress in the rural electrification process.
	3. Support on the Preparation of Detailed Rural Electrification Action Plan for the Government of Lesotho	May - June 2003	Developed a detailed action plan for rural electrification (RE) and an outline for Lesotho's rural electrification policy. The focus was to prepare an agenda for the RE stakeholders in order to implement the World Bank LURP project RE's component.
Mozambique	1. Seminar On The Treatment of Ancillary Services Southern Africa Power Pool	February 20, 2003	The focus of this one day seminar was to consider further system-wide transactional transparency and efficiency improvements to make better use of SAPP members' electricity system resources.
	2. Training Needs Assessment for Mozambique's Power Sector institutions	June - August 2003	Identification of short- and mid-term needs for capacity building through training course and workshops for the Mozambique's power sector institutions.
Namibia	Participation in NARUC's "Southern African Energy Regulators and Other Stakeholders Forum", jointly sponsored by Nexant, AED, and CORE.	June 18 - 19, 2003	Dr. Don Hertzmark provided a presentation entitled "Development of a Regional Electricity Market - Southern Africa Development Community". The focus was on issues and options for SADC countries to advance the development of the SAPP electricity market.

Location	Activity	Schedule	Scope
South Africa	SADC-wide Course On Advanced Electricity Markets South African Power Pool	November 4 - 8, 2002	This course demonstrated gains and benefits of electricity trading for national electricity power systems, and the potential costs and pitfalls. Prepared and conducted exercises on electricity trading.
Zambia	1. Course on Issues in Realizing Wholesale Electric Power Competition through Private Sector Ownership "Energy and Environmental Training"	July 15 - 20, 2001	Training course focused on the approaches to developing a viable competitive electricity market in a restructured environment, to increase efficiency and availability of clean energy to consumers.
	2. Workshop and Roundtable on Issues and Options for Rural Electrification	May 6 - 10, 2002	Geared towards Zambian officials engaged in planning and decision making for increasing access of clean and affordable electricity to rural population. Roundtable for senior political leaders focused on enhancing acceptance of creative ways for RE planning and consumer participation and acceptance.
	3. Follow-up Assistance in Rural Electrification Planning to the Government of the Republic of Zambia	May - July, 2003	Development of a detailed rural electrification action plan for rural electrification (RE), an outline for Zambia's rural electrification policy, and a concept paper on the establishment of a Rural Electrification Authority in Zambia. The objective was to prepare an agenda with milestones for the Zambian RE stakeholders in order to prepare for the launching of the World Bank, $120 million, IAES Projects by mid 2005.
	4. Facilitation of Discussions on the GVEP Program in Zambia	May 20 - 21, 2003	Facilitation of in-country consultations on the Global Village Energy Partnership (GVEP) program through (i) discussion with Zambian officials, and (ii) conducting a workshop with all major rural electrification (RE) stakeholders during 20 – 21 May 2003.
	5. Two-Day SADC-wide Workshop on Developing SAPP Through Advanced Electricity Trading.	July 24 - 25, 2003	This workshop was for SAPP member executives and regulators. It covered various policy, regulatory, and institutional capacity requirements for implementing a successful electricity-trading program.
	6. Four-Day SADC-wide Course on Advanced Power Trading.	July 28 - 31, 2003	This four-day course was for SAPP electricity traders. The course focused on demonstrating the potential gains and benefits of moving beyond short-term electricity trading in SAPP. The course included numerous hands-on exercises.

D. WORKSHOP INSTRUCTORS

The following experts will provide the workshop facilitation:

1. Vinod K. Shrivastava, President and Senior Energy Policy Expert, CORE International, Inc.

2. Dr. Vaso Leno, Senior Energy & Training Expert, CORE International, Inc.

VINOD K. SHRIVASTAVA
President and Senior Energy Policy Expert, CORE International, Inc., and COP – SARI/Energy

Key Qualifications

Mr. Vinod K. Shrivastava is a senior energy project development, financing and investment expert. During his career, he has developed over 250 infrastructure projects in 72 countries worldwide for a variety of donors and project sponsors including multilateral financial institutions (World Bank, European Bank for Reconstruction and Development, Asian Development Bank, and Inter-American Development Bank), bilateral agencies (U.S. Trade and Development Agency, U.S. Agency for International Development, etc.), the governments and state enterprises in over 40 countries, and major private corporations and project developers. His energy project development and market experience includes projects ranging from $10 million to $1.5 billion in investments in the power sector, petroleum sector, gas pipeline infrastructure, telecommunications sector, roads, railroads, airports, ports, waste treatment plants, mining sector, and minerals sector. He has also advised many foreign governments and parastatal agencies in the development of privatization and capitalization strategies.

In the electricity sector, he has worked in over 60 countries worldwide in assessing the institutional and regulatory aspects of power sector management and the relationship between electricity prices, regulation, and markets. He has also developed strategies for consumer acceptance of tariff and regulatory changes and analyzed different models for market development with respect to the relationship between Gencos and Discos. Another area of his expertise includes the development of customer relationship management (CRM) in a changing market environment that many developing countries are increasingly facing as part of the power sector reform.

Education

B.S., Physics and Engineering, St. Aloysius College, Jabalpur, India, 1962
M.S., Applied Technology, University of Jabalpur, India, 1964
Ph.D. (ABD), Physics, American University, Washington, D.C., 1974
Graduate Studies in Development Planning and Economics and Finance, American University, Washington, D.C., 1975

Awards and Honors

UNESCO Fellow - 1966
Fulbright Scholar to the U.S. - 1967
Invited Expert Testimony - U.S. House Committee on Science and Technology
"Testimony on Technical and Economic Barriers to Cogeneration in the U.S." – a pre-PURPA Congressional Hearing

Moderator for Energy issues at the Woodrow Wilson Center for International Scholars
Various Awards

- Government of Jordan for Investment Strategy (1995)
- Minister of Economic Cooperation and Trade for Stability Pact Advisory Services to the Government of Albania (2000)
- Office of the High Representative, Bosnia and Herzegovina for Outstanding Services for Bosnia Economic Reconstruction
- Recognition from the Leaders of Albania, Bulgaria, and Macedonia for South Balkan Development Initiative
- Several Citations and Medals from EGAT in Thailand, KEPCO in Korea, REB in Bangladesh, and Others

Years of Experience
Management - 24
Relevant Work - 26
Developing Countries - 17

Regions of International Experience

Africa Region
Abu Dhabi, Angola, Botswana, Cote d'Ivoire, Egypt, Gabon, Ghana, Jordan, Kenya, Kwa Zulu Natal, Malawi, Mauritius, Mozambique, Namibia, Nigeria, the Palestinian Authority, Rwanda, Saudi Arabia, South Africa, Togo, Uganda, Yemen, and Zimbabwe.

Asia Region
Bangladesh, Bhutan, China, Hong Kong, India, Indonesia, Korea, Laos, Macau, Malaysia, Maldives, Nepal, Pakistan, the Philippines, Singapore, Sri Lanka, and Thailand.

European Region
Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Czech Republic, Hungary, Lithuania, Macedonia, Poland, Romania, Slovakia, Slovenia, and Turkey.

Latin America and the Caribbean Region
Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Guyana, Jamaica, Mexico, Peru, Trinidad and Tobago, and Venezuela.

New Independent States
Armenia, Kazakhstan, and Russia

Professional History

1983 to Present, CORE International, Inc., President and Chief Executive Officer

1974 to 1983, Energy and Industry, Energy Resources Company, Inc., Cambridge, Massachusetts, Vice President and Group Manager

Energy and Infrastructure, Resource Planning Associates, Inc., Cambridge, Massachusetts, Senior Associate

Energy and Environment and Corporate Planning, Science Applications International, Inc. (SAIC), McLean, Virginia, Director

Energy, Industry, and Environment, Jack Faucett Associates, Chevy Chase, MD, Project Director

Energy and Environment, Hittman Corporation, Columbia, Maryland, Program Manager

1964 to 1973, Lectured at Indian Institute of Technology, Kharagpur, India; University of Maryland; American University. Fulbright Scholar at Indiana University

SELECTED PROJECTS IN THE POWER SECTOR

ASEAN Region: Review and evaluation of several power interconnection projects and assessment of power markets in the ASEAN member countries and the development of a bilateral technical assistance package to the ASEAN, for the U.S. Trade and Development Agency, (1992).

Albania: Principal advisor and team leader of the Task Order -- USAID Support for Commercialization, Training, and Utility Advisor for Albania.

Bulgaria: Development of a major project for upgrading and rehabilitation of Bulgaria's coal-fired power plants to serve a growing market, including an assessment of the coal mining sector and preparation of a technical assistance and investment program, for the U.S. Trade and Development Agency (1991).

Chad: Preparation of an Energy Sector Review report including the main issues such as energy production, demand, pricing and institutional sector issues and the development of a sector investment program as part of the Bank's operational strategy for the World Bank (1993).

Chile: Preparation of three coal mine/power plant projects at Carampangue, Lota, and Isla Riesco coal mines and a private power project as part of the power sector investment strategy in Chile, for the U.S. Trade and Development Agency (1992).

Czech Republic: Development of a major project for upgrading and modernization of Czechoslovakia's coal-fired power plants and the evaluation the

Czech power market. This included the reviews of specific proposals by Westinghouse for the Czech Republic and by the Southern Electric Company for the Slovak Republic. The mission also included discussions on other energy sector technical assistance needed by the Czech government, for the U.S. Trade and Development Agency (1991).

Dominican Republic: Preparation of relevant material for a private power project in the Dominican Republic, including power market and environmental issues, electricity pricing and project economics, and regulatory policy and institutional issues for USAID under the Energy Technology Innovation Project (ETIP) managed by Bechtel Corporation (1993).

Egypt: A comprehensive analysis of the country's power sector and the role of the dominant Egyptian Electricity authority. Assessment of delinking of the generation system from the transmission and distribution system, for an 18-month study for the U.S. Agency for International Development (1995-97).

Indonesia: Technical and economic assessment of the Java-Sumatera Power Interconnection Project for BPPT and PLN and the development of a technical assistance grant to the Government of Indonesia to evaluate new power markets and cross border opportunities, for the U.S. Trade and Development Agency (1992).

Jamaica: Management Review of USAID/GOJ Energy Sector Assistance Program and the Development of a Strategy for AID Assistance in the Energy Sector in Jamaica, for USAID Mission in Jamaica (1984).

Latvia: Assessment of the power sector and the development of a generation/distribution strategy to meet the regional market in the Baltics for LATPOWER under a contract with the U.S. Trade and Development Agency (1992).

Lithuania: Preparation of a project for the rehabilitation and modernization of the Elektrenai Power Complex (6X300 MW oil-fired) as part of a regional market strategy in the Baltics Region and an assessment of the institutional aspects of the Lithuania Power Works under contract with the U.S. Trade and Development Agency (1992).

Assistance to the Lithuanian Power Association and the Ministry of Energy in developing the process for shortlisting and tender evaluation and selection for a $275,000 U.S. Trade and Development Agency-funded study for upgrading and rehabilitating the Elektrenai Power station.

Madagascar: Review of the institutional arrangement in the energy sector, energy policies, and investment program and the development of an energy sector reform and investment strategy as part of a joint USAID-World Bank energy assessment, for the World Bank (1984).

Malaysia: Development of a Demand-side Management Demonstration Program and a review of the capacity expansion plan and financial performance of the national utility -- the Tenaga Nasional Berhad, for the U.S. Trade and Development Agency (1992).

Development of over 30 projects in IPP power generation, transmission and distribution, industrial cogeneration, and energy efficiency in commercial and industrial facilities and presentation of a workshop to California firms interesting in the Malaysian energy market, for the California Energy Commission (1996).

Poland: Review of a proposal for upgrading and modernization of seven large (42 percent of the total power sector) power stations and development of the strategy for the rehabilitation of the entire power sector and a framework document for discussions with the World Bank for a major power sector loan, for the U.S. Trade and Development Agency (1990).

Review of a private proposal prepared by Bechtel Corporation and Westinghouse Corporation for the rehabilitation and modernization of the Kozienice Power Plant (2 X 500 MW) in Poland and the development of a power marketing strategy under contract with the U.S. Trade and Development Agency (1994).

Detailed review of a private power development proposal at the Belchatow Power station in Poland. The project was proposed by the Community Energy Alternatives (CEA), an IPP, and the review was funded by the U.S. Trade and Development Agency (1996).

Sri Lanka: Development of Energy Sector Investment Strategy and a Power Capacity Expansion Plan for the Asian Development Bank (1983).

Preparation of a technical assistance paper to provide assistance to the Government of Sri Lanka in energy planning, for the Asian Development Bank (1983).

Technical assistance to the Bureau of Infrastructure Development, Government of Sri Lanka for the modernization and expansion of the Colombo Port, the development of IPP power projects, development of a barge-mounted IPP power project, privatization of the Colombo Port including assistance in bid negotiation with private developers, for Bechtel Corporation under contract with the U.S. Agency for International Development (1996).

Thailand: Review and analysis of industrial energy conservation policies and opportunities for the Energy Assessment Program of the World Bank under the joint UNDP/World Bank sponsorship, Economic and Financial Analysis of Energy Conservation Opportunities, Policy Development and Institutional Analysis, for the National Energy Administration, Thailand under the Technical Assistance Financed by the Asian Development Bank; Organization and the preparation of

three background papers on coal mining and power sector investments, preparation of an industrial cogeneration demonstration project; Development of a technical assistance grant to carry out a feasibility study of an I-Shaped Interconnection Project planned by the Provincial Electricity of Thailand; Preparation of a technical assistance grants program for feasibility studies of (i) the Saba Yoi Coal Deposit development and (ii) the development of the Mae Moh and Ngao Lignite Deposits and (iii) an EGAT mine and power sector training visit to the U.S.; Review of a private 50 MW power cogeneration project being promoted by the Ban-Pu Coal Company for the Asian Development Bank, the World Bank, USAID and TDA; Assessment of the potential of district heating (DH) and cogeneration investments including review of market size and type, policy and institutional issues, investor perceptions and attitude, and coordination and preparation of the final report and policy recommendations. (1984- 1993).

Turkey: Review of the Turkish energy sector and preparation of several projects and technical assistance grants for power plant rehabilitation, SCADA systems, BOT and clean coal technologies projects; preparation of a technical assistance project for the privatization/ capitalization of the Turkish Electricity Authority (TEK) in collaboration with the World bank's power sector lending in Turkey; Performance of a study to review and evaluate a proposal for a 330 MW lignite-fired private power plant in Turkey to be built and financed by a consortium headed by Community Energy Alternatives (CEA), for the U.S. Trade and Development Agency (1994).

SELECTED PROJECTS IN RURAL ENERGY AND ELECTRIFICATION

Bangladesh: Development of a Rural Electrification Plan by assisted the PCI team in the socioeconomic analysis of potential decentralized rural power projects. He also analyzed the costs associated with power generation and distribution and the geographical distribution of costs.

Lesotho: Technical assistance on the development of a rural electrification policy and action plan for the government of Lesotho.

South Asia: Under South Asia Regional Initiative/Energy (SARI/Energy) Program, has led teams in designing and delivery of about 15 training events in the forms of courses, workshops, and roundtables focusing on issues and options of providing sustainable and reliable rural energy services.

Southern African Development Community (SADC): Desk study, followed by a region-wide course and a workshop, on Issues and Options on Rural Electrification (RE) in SADC Region and RE Planning in Lesotho.

Zambia: Issues and Option for Rural Electrification and Action Plan for the Government of the Republic of Zambia.

SELECTED PROJECTS IN THE PETROLEUM SECTOR

Armenia: Performance of a definitional mission to prepare an oil and gas exploration project in Armenia in collaboration with the California Energy Commission and California Lands Commission and several major and independent oil companies. The engagement also included the preparation of an investment strategy for foreign direct investment and potential equity by the Ministry of Energy in Armenia (1993).

Cote d'Ivoire: Preparation of the Terms of Reference for the FOXTROT natural gas field development project and development of a bilateral technical assistance grant package (1992).

Ecuador: Development of the financial aspects, and joint preparation of the final report, for a definitional mission for the development of heavy oil reserves and refinery upgrading project in Ecuador (1989).

Hungary: Preparation of a gas pipeline project to transport gas across the Hungarian/Austrian sector as well as a connection with Czechoslovakia, for the Hungarian Oil and Gas Trust (OKGT) (1991).

India: Assisted in the preparation of a definitional mission report for an oil exploration project in the Bombay High region in India, for the U.S. Trade and Development Agency (1988).

Venezuela: Development of three projects proposed by MARAVEN, S.A. including (i) an 8 MBCD lubricant base oil manufacturing facility, (ii) a 110 MBCD new refinery to process heavy crude, and (iii) a 60 MBCD new industrial complex to process heavy crude through gasification units and use syn-gas to produce petrochemicals. Also performed a desk study review to evaluate a joint venture heavy crude project proposed by MARAVEN, for the U.S. Trade and Development Agency (1992).

VASO LENO
Senior Energy and Training Expert
CORE International, Inc.

SUMMARY OF EXPERIENCE

Dr. Vasillaq Leno is a Senior Energy Specialist at CORE International, Inc. and is an integral member in most of CORE's ongoing projects. A list of his most recent work includes the following:

Albania: Restructuring, Unbundling, and Privatization Assessment for the Albanian Electric Company, KESH and the preparation and delivery of training programs in energy planning and strategy development, energy sector management, commercial methods for utility operation and management and private participation in energy sector development, for the U. S. Agency for International Development. Specific activities include the following:

- Course on Power Sector Reform in Albania for senior managers from the Ministry of Industry and Energy, Electricity Regulatory Entity (ERE), and KESH, the national utility. September – October, 2002
- Roundtable on National Energy Policy Implementation Resource Requirements for Ministry of Industry and Energy and KESH, the national utility in Albania. September 2002
- Roundtable on National Energy Strategy and the Role of KESH for senior energy officials. August 2002
- Workshop on IPP Issues and Contracting Requirements for senior management from the Ministry, KESH, and ERE of Albania. November 2002
- Roundtable on Fundamentals of Human Resource Management. March 2003
- Course on Human Resource Management – Impact of Power Sector Reform in Power Utility Downsizing. June – July, 2003
- Development of training needs assessment for the Albanian power sector institutions. June – September 2002
- Designing of a monitoring system for Power Sector Policy Statement implementation in Albania. October 2002 – March 2003
- Development of a proposal for the restructuring of the General Directorate of Electroenergy at Ministry of Industry and Energy in Albania. June – October 2002.

Bangladesh: Power Sector Reform Initiatives in Bangladesh and the Role of Asian Development Bank, a concept paper being developed by CORE International, Inc. Year 2002.

Guam: Financial and Fiscal Management of the Government and Strategies for Private Sector Led Economic Development in Guam, for the U.S. Department of the Interior. Year 2002.

India: Senior Energy Specialist for the development of a report on "India Electricity Distribution Reform Review and Assessment for USAID Mission, India. Year 2002.

Kosovo: Participation in a Multi-Sector Project Identification Mission to Kosovo for the U.S. Trade and Development Agency. May – June 2003

Lesotho: Participation in number of tasks under the USAID Private Sector Participation in Clean Energy Project. Specific activities include the following:

- Development of materials and delivery of a Course on Rural Electrification Planning in Lesotho. January – April, 2003
- Working sessions with the Government appointed Rural Electrification Working Group (REWG) to assist the REWG in the development of an Action Plan for rural electrification with a specific focus on desirable institutional and financial models for the implementation of pilot projects under the World Bank LURP Loan. May 2003
- Development of an Overall Action Plan for Rural Electrification in Lesotho -- Phase I: Preparation and Implementation of RE Pilot Projects. June – July 2003

Mozambique: Participation in the preparation of training needs assessment report for the Mozambican power sector stakeholders, July 2003

South Africa: Development of materials for a course on "Advanced Electricity Markets and Trading under the SAPP Model" for senior representatives from the Southern Africa Power Pool, for USAID, EGAT Bureau. June – July, 2003

Southern Africa: Development of materials for a workshop on "Developing SAPP through Advanced Electricity Trading" for regulators and senior energy policymakers from the Southern Africa Power Pool member countries, for USAID, EGAT Bureau. June – July, 2003

Southern Africa: Development of materials for a course on "SAPP Advanced Power Trading" for power traders/members from the Southern Africa Power Pool, for USAID, EGAT Bureau. October - November 2002

Southern Africa: Development of a Desk Study on Issues and Options for Rural Electrification in SAPP Member Countries. Development and delivery of a Course on Issues and Options for Rural Electrification in SAPP Member Countries. January – April 2003

Southern Africa: Participation in the preparation of a report named 'Seminar on the Treatment of Ancillary Services for Southern Africa Power Pool'. January – February, 2003

South Asia Region: Analysis of Lessons Learned in Rural Electrification and the potential for the Adaptation of Best Practices within the South Asia Region under the USAID South Asia Regional Initiative for Energy (SARI/Energy) Program, for U.S. Agency for International Development. Specific activities include the following:

- Development of course materials for a course on "Private Participation, Financing and Procurement Approaches for Rural Electrification in the Maldives" for USAID, Mission, India. Year 2002
- Development of course materials for a course on "Policies and Regulations for Rural Energy Access and Integration with Other Rural Development Programs in Nepal" for USAID, Mission, India. Year 2002
- Development of course materials for a course on "The Process of Decision Making for Rural Energy Programs in Sri Lanka" for USAID, Mission, India. Year 2002
- Development of course materials and delivery of a course on "Financing Rural Energy Projects in the South Asia Region". The course conducted in India for USAID, Mission, India. October – November 2002

U.S. Virgin Islands: Financial and Fiscal Management of the Government and Strategies for Private Sector Led Economic Development in the U.S. Virgin Islands, for the U.S. Department of the Interior. Year 2002

Zambia: Participation in number of tasks under the USAID Private Sector Participation in Clean Energy Project. Specific activities include the following:

- Rural Electrification Issues and Options Assessment in Zambia and the Preparation of Training Materials. Year 2002
- Participation in the preparation of a Desk Study and conducting a one-week workshop on institutional and financial models for rural electrification in a power sector reforming environment and a follow up stakeholder roundtable and a working group work session to assist the stakeholders in the development of a blue print for a rural electrification plan. Year 2002
- Follow up mission for the development of a complete report focusing on (i) the development of the outline of the Rural Electrification Policy document for the Government of the Republic of Zambia, (ii) an action plan for the implementation of Rural Electrification Program, and (iii) initiation of in-country consultations on the Global Village Energy Partnership (GVEP) Program. May – July 2003

Zimbabwe and South Africa: Development of Parameters for a Modeling Exercise for Energy Trading and the Manual for Training for Members of the Southern Africa Power Pool (SAPP), for the U.S. Agency for International Development. Year 2002

Dr. Leno has over 16 years of professional experience in a number of area including energy and environment planning and training; private sector financing; sector reform; banking and finance; project appraisal, financing, and development; economic development and trade policy development; development program coordination at the national level; bilateral and multilateral donor leveraging; energy and environmental sector policy formulation; and government strategy development. Dr. Leno has extensively worked with a large number of Bilateral and multilateral donors including the World Bank, European Bank for Reconstruction and Development (EBRD), European Investment Bank, (EIB), and the European Union (EU), Italian Cooperation, USAID, USTDA, CIDA, and others.

Dr. Leno's international experience includes energy policy, planning, and training activities in Europe (Italy, Greece, Germany, Belgium, Luxembourg, Great Briton, Spain, Austria, Hungary, Turkey, and Macedonia, Poland, Bulgaria, Rumania, Ukraine, and Denmark), North America (USA and Canada), Latin America (Brazil and Colombia), Middle East and Arab Countries (Lebanon, Israel, Saudi Arabia, and Kuwait), Asia (Bangladesh, China, Hong Kong, India, Nepal, Sri Lanka, and South Korea), and Africa (Egypt, Lesotho, Mozambique, South Africa, Tunisia, Zambia, and Zimbabwe).

PROFESSIONAL EXPERIENCE

August 1 2002 - Present
Senior Energy Expert, CORE International, Inc., Washington, D.C., U.S.A.

June 2001 - July 2002
Senior Consultant, CORE International, Inc.

As a Senior Associate at CORE international, Inc., Dr. Leno participated in many of CORE's technical assistance and training projects in the energy sectors. He was the lead analyst on CORE's USAID project for developing strategies for the restructuring and privatization of the Albanian national utility. He was also assisting in the design of course materials and research for CORE's SARI/Energy Project for USAID. In addition, he was assisting the project team for CORE's Private Sector Participation Task Order with USAID.

July 1997 - May 2001
Senior Advisor to the Minister, Ministry for Economic Cooperation and Trade, Tirana, Albania

Responsible for advising the Minister on all donor coordination and infrastructure financing issues. Specific activities included managing and providing coordination for infrastructure project identification, development, and financing, by working with the line ministries -- Ministry of Industry and Energy, Ministry of Transportation, and the Ministry of Public Works. In addition, Dr. Leno closely worked with other ministries in articulating the process for the development of the national economic policy. Other responsibilities of Dr. Leno included the following:

- Supervision of two departments in charge with monitoring and evaluation, and programming and coordination of all development aid for Albania.
- Coordination of the development foreign aid assistance and participation in negotiations with IFIs and bilateral donors concerning the development finance assistance for Albania.
- Training and capacity building.

September 1994 - July 1997
Manager, Department of Economic Development and Foreign Aid Coordination, Government of Albania, Council of Ministers, Tirana, Albania

Specific responsibilities in this position included the following:

- Task Manager for World Bank (IDA), German Cooperation, and EC projects in Albania
- Involved in project preparation and appraisal of priority economic development project throughout Albania in all productive sectors of the economy
- EC-Project management Unit, Director - involved in Public Administration project implementation.

March 1991 - March 1994
Senior Banking and Investment Officer
National Commercial Bank of Albania, Tirana, Albania

Specific responsibilities included all commercial banking function such as the following:

- Analysis and appraisal of project proposals and long-term loans applications.
- Project risk assessment and customer/borrower financial review
- Credit worthiness assessment of potential borrowers
- Market assessment and customer profiling
- Financial management and portfolio supervision
- Finance and accounts report analysis.

September 1987 - March 1991
Lecturer, in Thermotechnics disciplines -- such as Heating, Air Conditioning, Cooling, Ventilation, Thermodynamics, Thermotechnic Industrial Machines, Thermal Generation, Tirana University, School of Engineering, Tirana, Albania

January 1985 - September 1987
Air Conditioning and Ventilation Design Engineer, Textile Mill, Project Designing Department, Tirana, Albania

EDUCATION

Ph.D.	Energy Resources and Renewable Energy Tirana University, School of Engineering, Tirana, Albania (1991)
B.S.	Mechanical Engineering Tirana University, School of Engineering, Tirana, Albania (1985)

OTHER RELEVANT PROFESSIONAL EXPERIENCE

1991	Two weeks course on energy project identification, preparation and appraisal through PROPSPIN and COMFAR 2.1, in UNIDO Office, Milan, Italy
1993	Two weeks course on project preparation and risk evaluation, Vienna, Austria
1995	Six months internship on Banking, California, U.S.A**.**
1996	A two weeks training course on project identification, preparation, financing and evaluation, Milan, Italy
1996	Three weeks training UNIDO course on project preparation, appraisal, evaluation and COMFAR III Expert Software, Albania
1996	Two weeks training course on Public Investment Programming and Aid Coordination, Bradford, UK
1997	Two week study tour in Latin America to get experience on UNDP's project development and financing approach, Brazil and Colombia
1997	Two weeks training course of Bradford University (England) on organizational behavior, team working, Ohrid, Macedonia
1997	A two weeks training course on Economic Development Policies organized by the Korea International Cooperation Agency, Seoul, Korea
2000	One month course on small and medium enterprise (SME) Banking, California, U.S.A.

LANGUAGES
Fluent in English, Italian, Albanian. Some Spanish and German too.

E. WORKSHOP DESCRIPTION

Two Day Workshop on "Enhancing Energy Sector Policy and Reform Process" in Zambia

Sponsored by the U.S. Agency for International Development
Energy and Environment Training Program (EETP)
Global Bureau

1. Background

In 1994, the Government of the Republic of Zambia (GRZ) formulated the National Energy Policy (NEP). Its main objective is "to promote optimum supply and utilization of energy, especially indigenous forms, to facilitate the socio-economic development of the country, and to maintain a safe and healthy environment". In the NEP, the policies in energy sub-sectors are defined as follows:

Electricity: The overall policy objective is to increase accessibility to electricity as well as develop the most cost effective sites for the domestic and export markets.

Petroleum: Since petroleum is wholly imported, the policy is to supply and utilize it in the most efficient and cost effective manner.

Coal: Being an indigenous energy source, the policy is to promote its use with due regard to environmental protection.

Wood fuel: Constitutes the largest single source of energy mainly by the household sector. The policy is to achieve a sustainable supply of wood as a source of energy.

New & Renewable Sources of Energy (NRSE): As there is currently limited use of NRSE, the policy is to promote wider application of NRSE technologies particularly for remote and rural population.

In order to ensure that the developments in the energy sector are closely linked to the Government's goal of poverty alleviation[1], the GRZ has planned to enhance the policy, planning, and reform process of the energy sector. In this context, the energy sector will aim to:

- Increase electricity access rate from the current 20 percent to 50 percent by the year 2010. In rural and urban areas, this will translate to access rates of 15 percent and 70 percent respectively.

[1] Poverty Reduction Strategy Paper, 2002

- Reduce dependence on wood fuel from the current 72 percent to 45 percent by 2010.

- Increase exports of electricity to neighboring countries by 300 percent from the current levels by 2010.

Since the NEP was adopted in 1994, many changes have taken place and substantial results have been achieved in the areas of energy sector policy development and reform. Since 1994 the structure of energy sub-sectors, including the power sector, has changed substantially. Throughout the past ten years, various policy and reform issues that need careful consideration have been identified. As noted in the recommendations of the Rural Electrification Working Group (REWG) for the GRZ, the NEP has not been reviewed since 1994, which is far too long for any policy to remain effective. For example, NEP does not draw direct and sufficient attention to rural electrification, but only expresses general aspiration to increase access to electricity to the rural population. There is a need for a comprehensive review of the NEP, as well as for the development of an updated national energy policy, including appropriate implementation of institutional arrangements.

Furthermore, the Government of the Republic of Zambia (GRZ) and the World Bank have recently reached an agreement to commercialize ZESCO, the Zambian national utility, and further develop the national power market and regional power exchange in the context of the Southern African Power Pool (SAPP). This will result in increasing power exports, while increasing efficiency in the sector.

To this end, CORE International, in close consultation with USAID, is proposing a two-day workshop on enhancing energy sector policy and reform process in Zambia. Energy sector policy and reform design, development, and implementation issues and options are anticipated to be the focus of this workshop for energy policy makers and planners, utility managers, regulatory experts, and various other Zambian energy sector stakeholder institutions, including media and civil society representatives. This workshop is intended to focus on the identification of major issues and options related to the existing policy and reform programs for the energy sector.

CORE's facilitators will work with Zambian officials, primarily from the Department of Energy (DOE), with the objective of creating an internal process in Zambia that would aim to advance and enhance energy sector policies and reforms at a suitable pace under Zambian conditions.

An important part of this process is to create an institutional momentum within the energy sector stakeholders that would serve as a bridge between high level politicians and policy makers, and the broader stakeholder community, including consumer groups, to gradually enhance the process of policy and reform development. Provision of best practices within the region and around the world

is expected to help in this process. Therefore, during this workshop, experiences and lessons learned in other countries will be presented in support of the need for reform and the benefits that can be derived by all parties involved in the reform process. CORE's facilitators will aim at building initial consensus on the approach that Zambia might take on enhancing energy sector policy and reform development process through:

1. Capacity building on major issues related to the development of comprehensive energy sector policies and reform process through extensive interaction during the workshop; as well as developing a process for the policy drafters and analysts to regularly enter into dialogue with both high level politicians and policy makers on one hand, and the civil society on the other. This may also include the development of an initial slate of follow-up actions most critical to energy sector policy and reform development.

2. Initiating a discussion on the possibility of establishing an energy sector policy and reform task force (or a similar advocacy group) with membership from the government, utilities, regulators, consumer groups, and civil society representatives. The objective of this group would be to further the dialogue on energy sector policy development/update and reform advancement. Precedence of this type of facilitation by CORE already exists, whereby the Government of Zambia established the Rural Electrification Working Group in early 2003. CORE will build on this prior experience in supporting the design of a model institutional framework for addressing the above-mentioned issues in Zambia.

2. Workshop Objectives

The primary objectives of the workshop are as follows:

1. Provide comprehensive knowledge on energy sector policy development and reform design and implementation by capacity building on dealing with various issues and respective options for solutions, based on best experiences from other similar developing countries.

2. Facilitate the development of a process and a results-oriented approach to enhancing energy sector policy and reform, primarily in power sector by (i) advocating the formation of Energy Sector Policy development and Reform Implementation Task Force and (ii) developing an initial draft agenda for the Task Force including a slate of initial actions.

3. Workshop Dates

March 22-23, 2004

4. Workshop Venue

Hotel “Safari Lodge”, Lusaka, Zambia

5. Workshop Planning and Delivery Personnel

To best design, develop, and deliver the workshop, CORE has formed the following team of experts:

Mr. Vinod Shrivastava, Senior Energy Policy and Training Expert
Dr. Vaso Leno, Senior Energy Expert
Ms. Marika Robertson, Project Analyst
Mr. Dinesh Wahi, Logistics

6. Description of Activities

The following activities are proposed for the facilitation of the workshop:

(i) Comprehensive presentation of the major issues of design and review of energy sector policies and reforms, in sequential modules

(ii) Discussion of the main issues related to energy sector policy, planning, and reform development, with special focus on power sector reform. Pros and cons of the reform will be brought to the participants’ attention

(iii) Discussion of the creation and composition of an all-inclusive stakeholder Task Force under the leadership of the MEWD with the objective of enhancing Zambia's energy sector policy and power sector reform agenda

(iv) Development of a draft agenda, including major steps and milestones, for reviewing the energy sector policy and enhancing power sector reform

As discussed with DOE officials, workshop presentations on selected issues will be made by local stakeholders. This will allow the local stakeholders to share their views and approaches on how Zambia may proceed. As a result, the participants will have the opportunity to play an active role not only during the workshop, but also in subsequent activities involving reform.

7. Workshop Modules

The workshop activities will cover the following topics organized in a logical sequence of modules:

Module I: Energy Policy and Planning Process in Zambia

- Existing policies and planning procedures
- Energy sector reforms undertaken
- Identified issues that make the policy review necessary
- New dimensions for enhancing energy sector policy

Module II: Power Sector Reform – Issues and Options

- Status of power sector reform in Zambia
- Policy issues and options
- Commercialization as part of restructuring process towards a competitive wholesale power market
- Lessons from other countries, conclusions & policy implications

Module III: Enhancing Energy Sector Governance

- Models of sector governance
- Legal and regulatory issues – Transparency and Stability Issues
- Issues on improving energy sector governance
- Widening public participation in energy sector governance
- Implication of enhanced sector governance on attraction of private investors

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

- New approach to enhancing policy and reform development process
- Enhancing policy and reform development agenda
- Potential institutional arrangements for policy and reform development
- Need for donor and private sector participation in this process

8. Workshop Participants

The workshop is intended for up to 20-25 Zambian policy and planning experts, energy sector regulators, utility managers, consumer groups, the private sector, media, universities, and other key stakeholders groups that have a clear stake in the energy sector policy development and reform process.

II. WORKSHOP SCHEDULE

REPUBLIC OF ZAMBIA
Ministry of Energy and Water Development

WORKSHOP ON ENHANCING ENERGY SECTOR POLICY AND REFORM PROCESS IN ZAMBIA

Sponsored by
The Office of Energy and Information Technology
Bureau of Economic Growth, Agriculture and Trade
U.S. Agency for International Development
Washington, D.C. 20523

Facilitated by
CORE International, Inc.
Washington, D.C. 20016

Protea Lodge, Chisamba
March 22-23, 2004

Monday, March 22, 2004

8:30 a.m. – 9:00 a.m.

Opening Remarks
Ms. Helen Gunther
Acting Mission Director
USAID Mission, Lusaka, Zambia

Keynote Address
H.E. Mr. George W. Mpombo, Minister
Ministry of Energy and Water Development, Zambia

Workshop Address
H.E. Mr. Martin Brennan, Ambassador
American Embassy, Lusaka, Zambia

Welcoming Remarks
Dr. Davida Wood
Program Analyst
USAID/EGAT Bureau, Energy Team

9:00 a.m. – 9:30 a.m.	**Introduction of Workshop Participants** **Workshop Introduction** **Mr. Vinod Shrivastava, President** **Senior Energy Policy Expert** **CORE International, Inc.**
9:30 a.m. – 10:00 a.m.	**Government Roadmap for Energy Policy Review** **Presenter: Mr. Oscar Kalumiana, Assistant Director** **Department of Energy, Zambia**
10:0 a.m. – 10:45 a.m.	**Module I: Energy Policy and Planning Process in Zambia** • Existing policies and planning procedures • Energy sector reforms undertaken • Identified issues that make the policy review necessary • New dimensions for enhancing energy sector policy
10:45 a.m. – 11:00 a.m.	**Coffee/Tea Break**
11:00 a.m. – 12:30 p.m.	**Module I: Energy Policy and Planning Process in Zambia (continued)**
12:30 p.m. – 2:00 p.m.	**Lunch Break**
2:00 p.m. – 2:45 p.m.	**Progress and Challenges of Power Sector Reforms in Zambia** **Presenter: Mr. S. H. Hibajene, Executive Director, ERB Zambia**
2:45 p.m. – 3:30 p.m.	**Module II: Power Sector Reform – Issues and Options** • Status of power sector reform in Zambia • Policy issues and options • Commercialization as part of restructuring process towards a competitive wholesale power market • Lessons from other countries, conclusions & policy implications
3:30 p.m. – 3:45 p.m.	**Coffee/Tea Break**
3:45 p.m. – 4:45 p.m.	**Module II: Power Sector Reform – Issues and Options (continued)**

4:45 p.m. – 5:00 p.m.	**Energy Institutions and Sector Governance in Zambia** **Presenter: Professor J. Mwenechanya, Chairman, ERB**
5:30 p.m. – 6:00 p.m.	**Review of the First Day** **Review of the Next Day Workshop Program**

Tuesday, March 23, 2004

8:30 a.m. – 10:00 a.m. **Module III: Enhancing Energy Sector Governance**

- Models of sector governance
- Legal and regulatory issues – Transparency and Stability Issues
- Issues on improving energy sector governance
- Widening public participation in energy sector governance
- Implication of enhanced sector governance on attraction of private investors

10:00 a.m. – 10:30 a.m. **Enhancing Energy Policy and Reform Development Process in Zambia**
Presenter: Professor Francis Yamba, Center for Energy, Environment & Engineering

10:30 a.m. – 10:45 a.m. **Coffee/Tea Break**

10:45 a.m. – 12:30 p.m. **Module IV: Enhancing Energy Policy and Reform Process – Policy Agenda and Potential Institutional Arrangements**

- New approach to enhancing policy and reform development process
- Enhancing policy and reform development agenda
- Potential institutional arrangements for policy and reform development
- Need for donor and private sector participation in this process

12:30 p.m. – 1:30 p.m. **Lunch**

1:30 p.m. – 3:00 p.m. **Open Discussions and Workshop Summary**

3:00 p.m. – 3:15 p.m. **Coffee/Tea Break**

3:15 p.m. – 3:45 p.m.	**Conclusions and Distribution of Certificates**
4:00 p.m.	**Departure of Participants**

III. WORKSHOP MATERIALS

Workshop on "Enhancing Energy Sector Policy and Reform Process" in Zambia

USAID Support Under The Energy and Environment Training Program (EETP)

Two Day Workshop Designed and Facilitated By CORE International, Inc., Washington, D.C.

Lusaka, Zambia

March 22-23, 2004

Workshop on "Enhancing Energy Sector Policy and Reform Process" in Zambia

Workshop Modules

Module I: Energy Policy and Planning Process in Zambia

Module II: Power Sector Reform – Issues and Options

Module III: Enhancing Energy Sector Governance

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

Workshop on "Enhancing Energy Sector Policy and Reform Process" in Zambia

Contents of Module I: Energy Policy and Planning Process in Zambia

I Existing Policies and Planning Procedures

II Energy Sector Reforms Undertaken by GRZ

III Issues Requiring Policy Review

IV New Dimensions for Enhancing Energy Sector Policy

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Module I: Energy Policy and Planning Process in Zambia

Country Specifics

- Population - approximately 11 million
- Area - 740 thousand sq. kilometers
- Major components of the economy - agriculture and mining
- Country considered highly indebted - $2.5 billion
- Country has embarked on substantial market economy reforms

Module I: Energy Policy and Planning Process in Zambia

I Existing Policies and Planning Procedures – *Policy Framework*

- Ministry of Energy and Water Development (MEWD) is the lead entity charged with energy policy and reform development
- Furthermore, the government (GRZ) relies on the MEWD to execute its core responsibilities of policy and strategy development principally for the petroleum sector, and for monitoring the implementation of such policies and strategies through autonomous energy utilities, agencies, and organizations

Module I: Energy Policy and Planning Process in Zambia

I Existing Policies and Planning Procedures – *Policy Framework*

- National Energy Policy (1994), and Electricity Act (1995) have the following common goal ***"to promote optimum supply and utilization of energy, especially indigenous forms, to facilitate the socio-economic development of the country and maintenance of a safe and healthy environment"***

Module I: Energy Policy and Planning Process in Zambia

I Existing Policies and Planning Procedures – *National Energy Policy Objectives*

- Increase access to ***electricity*** as well as develop the most cost-effective generation sites for domestic and export markets
- Increase efficiency of utilization of imported ***petroleum***
- Promote use of ***coal*** by utilizing clean energy technologies
- Improve production and utilization of fuel ***wood***
- Promote wider application of ***renewable technologies*** in meeting the energy needs particularly in remote areas

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Module I: Energy Policy and Planning Process in Zambia

I Existing Policies and Planning Procedures – *National Energy Sector Strategy*

- GRZ's strategy for the energy sector has given priority to:
  - ✓ Streamlining of institutional responsibilities for energy policy
  - ✓ Restructuring and commercializing the operations of the main energy sector parastatals
  - ✓ Reforming energy pricing policies
  - ✓ Rehabilitating existing energy facilities and infrastructure
  - ✓ Improving arrangements for petroleum imports in order to minimize expenditure of scarce foreign exchange resources

Module I: Energy Policy and Planning Process in Zambia

II Energy Sector Reforms Undertaken by GRZ

- Notable progress in bringing energy pricing policies in line with overall macroeconomic adjustments
- Rationalization of allocating available resources in the public expenditure program to achieve cost-effective rehabilitation of the existing energy infrastructure
- New energy legislation opened up the sector to increased private sector participation and protection of the consumer through the Electricity Act, Petroleum Act, and Energy Regulation Act

Module I: Energy Policy and Planning Process in Zambia

II Energy Sector Reforms Undertaken – *cont'd*

- A Framework and Package of Incentives for private sector participation in hydropower generation and transmission development is in place, and an office for promoting private power investment has been set up in the Ministry of Energy and Water Development
- Downstream oil sector is liberalized but prices remain high due to land transportation cost of imports
- Coal sector is restructured, but production has been downsized substantially over the last decade
- Power sector is undergoing a commercialization process, and IPPs are allowed to both generate and export electricity, wheeling through the national grid

Module I: Energy Policy and Planning Process in Zambia

III Issues Requiring Policy Review – *General Policy Issues*

- Development of an energy database that supports systematic planning (e.g. forecasting) and development of energy resources of the country
- Energy resource survey and assessment
- Technology assessment to select appropriate technologies
- Management of coal, power, and petroleum sectors
- Energy conservation to improve efficiency

Module I: Energy Policy and Planning Process in Zambia

III Issues Requiring Policy Review – *General Policy Issues – cont'd*

- Environmental consideration and assessments
- Pricing policy geared towards cost recovery
- Investment policy
- Area-based energy planning to ensure coordination among various programs for sustainable provision of energy products/services to end users
- Private sector power generation policy, including solicitation of proposals, fiscal incentives, and tariff for bulk purchase of power at bus bar

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Module I: Energy Policy and Planning Process in Zambia

III Issues Requiring Policy Review – *Other issues*

- Ensuring balanced and sustainable development of energy resources in different zones of the country and balanced development of different sub-sectors of the energy sector (need for systematic surveys, exploration, and exploitation)
- Introducing business friendly policies and practices for increased private sector participation
- Enhancing efficient management and operation of energy sector institutions

Module I: Energy Policy and Planning Process in Zambia

III Issues Requiring Policy Review – *Other Issues* - *cont'd*

- Enhancing the provision of modern rural energy services
- Enhancing the rationalization of energy prices
- Enhancing the rationalization of energy use
- Enhancing human resource capacity for efficient management of the energy sector
- Ensuring sustainable and integrated development and expansion of energy products/services for supporting poverty alleviation and economic and social development

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Module I: Energy Policy and Planning Process in Zambia

IV New Dimensions for Enhancing Energy Sector Policy – *Continuous Decision-Making Process*

- Policy formulation is to be perceived as a **continuous process for synchronized decision-making** at three levels, by institutions and individuals. The three levels are:

  1. Macro level, to ensure that energy sector meets the energy demand of all end use sectors/groups in a sustainable manner
  2. Sector level (energy sector), to ensure balanced development of different sub-sectors (e.g. coal, oil, power, etc)

Module I: Energy Policy and Planning Process in Zambia

IV New Dimensions for Enhancing Energy Sector Policy – *Continuous Decision-Making Process*

- Policy formulation is to be perceived as a **continuous process for synchronized decision-making** at three levels, by institutions and individuals. The third level is:

  3. Sub-sector level (utility), to ensure balanced development of different programs under a particular sub-sector, e.g., in the power sub-sector, it is necessary to consider chronological development of generation, transmission, and distribution systems

Module I: Energy Policy and Planning Process in Zambia

IV New Dimensions for Enhancing Energy Sector Policy – *Integrated Energy Planning (IEP) as a Tool for Sustainable Development*

- Key characteristics of the IEP include:
  - ✓ Consideration of a wide variety of demand and supply options
  - ✓ Consideration of the environmental and other social costs of providing energy services
  - ✓ Analysis of the uncertainties associated with different external factors and resource options
  - ✓ Public participation in development of the resource plan

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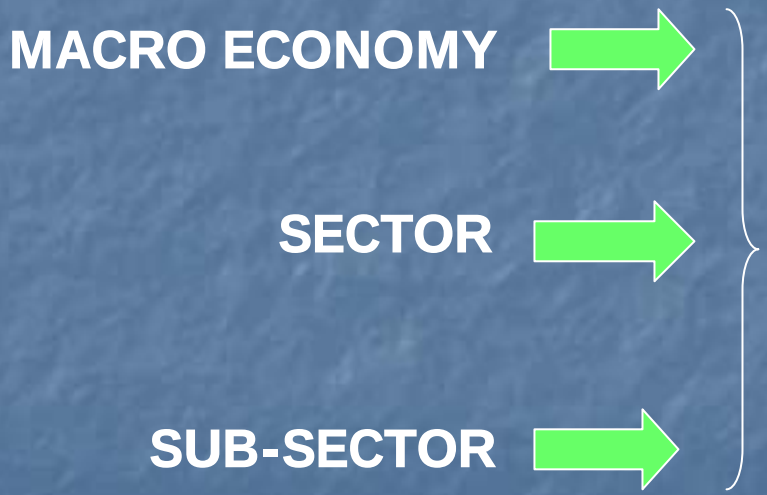
Module I: Energy Policy and Planning Process in Zambia

IV New Dimensions for Enhancing Energy Sector Policy – *Integrated Energy Planning (IEP) as a Tool for Sustainable Development* – *cont'd*

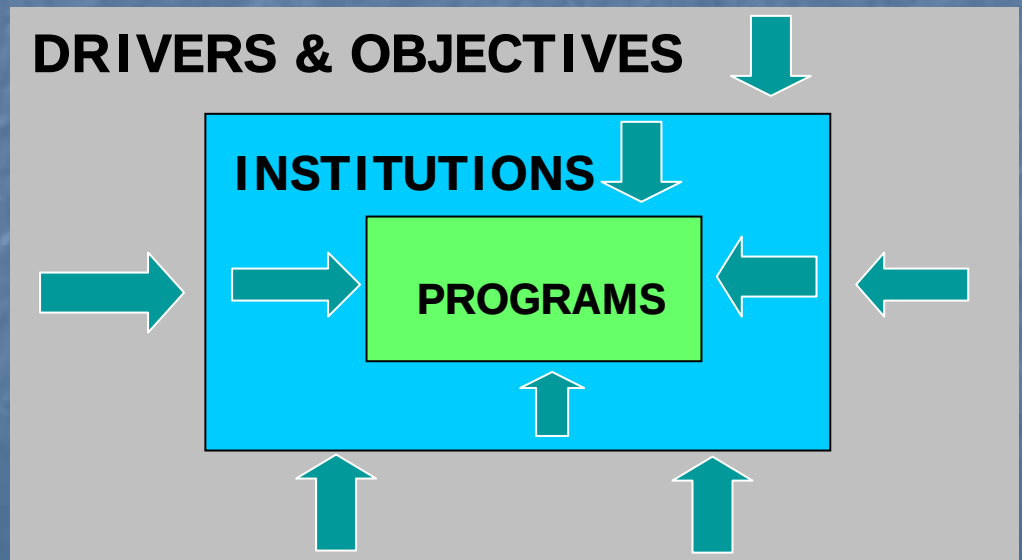
Relationship in the Integrated Planning Process



Module I: Energy Policy and Planning Process in Zambia

IV New Dimensions for Enhancing Energy Sector Policy – *Integrated Energy Planning (IEP) as a Tool for Sustainable Development* – *cont'd*

- Model: Drivers/Objectives – Institutions – Energy Programs



Module I: Energy Policy and Planning Process in Zambia

IV New Dimensions for Enhancing Energy Sector Policy – *Integrated Energy Planning (IEP) as a Tool for Sustainable Development* – *cont'd*

- Drivers: poverty, environment, and equity
- Objectives: energy security, reliability, price affordability, and access
- Institutions: development plans, energy policy and regulatory frameworks, and energy legislation
- Energy Programs: projects in various energy sub-sectors

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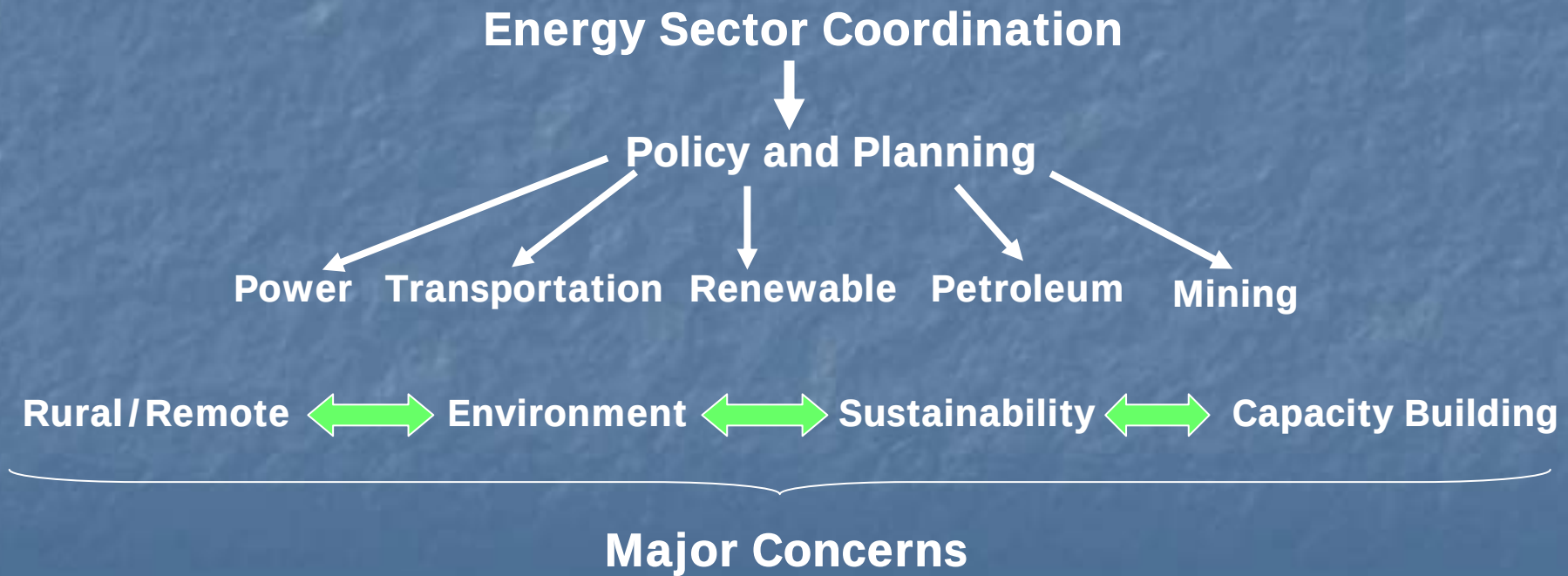
Module I: Energy Policy and Planning Process in Zambia

IV New Dimensions for Enhancing Energy Sector Policy – *Integrated Energy Planning (IEP) as a Tool for Sustainable Development* – *cont'd*



Module I: Energy Policy and Planning Process in Zambia

IV New Dimensions for Enhancing Energy Sector Policy – *Integrated Energy Planning (IEP) as a Tool for Sustainable Development* – *cont'd*

- IEP provides:
  - ✓ Better decision-making process
  - ✓ Political commitment
  - ✓ Involvement of all stakeholders
  - ✓ Sustainable energy sector
- Constraints
  - ✓ Lack of institutional capacity
  - ✓ Government commitment
  - ✓ Lack of resources (human and financial)
  - ✓ Lack of staff

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Module I: Energy Policy and Planning Process in Zambia

IV New Dimensions for Enhancing Energy Sector Policy – *Balancing Interests*

Balancing Conflicting & Competing Stakeholder Interests – ***Difficult Job for the Regulators***

- Customers vs. Investors *(Higher returns vs. lower rates)*
- Within customers: Domestic vs. Business vs. Agricultural *(cross subsidization issue)*
- Within investors: Fixed Income vs. Equity holders *(the "moral hazard" concern and bond risk containment)*
- Price vs. Service Quality *(optimal mix between quality and price)*
- Supply vs. Demand Side Management *(find optimal mix)*
- Labor vs. Management *(minimal regulatory involvement advised, both parties to strike their deal)*

Module I: Energy Policy and Planning Process in Zambia

IV New Dimensions for Enhancing Energy Sector Policy – *Decentralization*

- Integration of national energy policy with provincial and local government energy planning and service delivery. Options include:
  - ✓ Assign energy planning functions to provincial governments
  - ✓ Establish provincial energy planning committees
  - ✓ Expand the energy advisory capacity in MEWD provincial offices

Module I: Energy Policy and Planning Process in Zambia

IV New Dimensions for Enhancing Energy Sector Policy – *Local Participation*

- Local participation in energy needs identification, planning and implementation. Options include:
  - ✓ Strengthen district and local government's ability to address energy issues
  - ✓ Establish local energy action committees with adequate women participation
  - ✓ Encourage involvement of local entrepreneurs and organizations in energy service delivery

Module I: Energy Policy and Planning Process in Zambia

Thank You!

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Workshop on "Enhancing Energy Sector Policy and Reform Process" in Zambia

Workshop Modules

Module I: Energy Policy and Planning Process in Zambia

Module II: Power Sector Reform – Issues and Options

Module III: Enhancing Energy Sector Governance

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

Workshop on "Enhancing Energy Sector Policy and Reform Process" in Zambia

Contents of Module II: Power Sector Reform – Issues and Options

I Status of Power Sector Reform in Zambia

II Policy Issues and Options

III Commercialization as Part of the Restructuring Process towards a Competitive Wholesale Power Market

IV Lessons from Other Countries, Conclusions & Policy Implications

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Module II: Power Sector Reform – Issues and Options

I. Status of Power Sector Reform in Zambia

- Hydropower resource potential estimated at 6,000 MW; Total installed capacity – 1,715.5 MW, representing 92% of installed capacity and accounting for 99% of electricity production
- Vertically integrated and state owned power system
- Two power plants account for 93% of total hydro-generation
- Virtually all generation is on the ZESCO network
- 68% of the electricity is used by the mining industry, only 19% of the electricity used by households
- Export of hydroelectricity balances import of oil

Module II: Power Sector Reform – Issues and Options

I. Status of Power Sector Reform in Zambia – cont'd

- Electricity tariffs are still low and not able to cover electricity delivery costs
- Revenues received by ZESCO are not sufficient to (i) fully maintain the network infrastructure, and (ii) extend the grid to new areas
- Technical losses exceed 15%, and non-technical losses are estimated to be as high as 18-20%
- Non-mining electricity demand continues to grow
- Household demand for electricity doubled during the past decade

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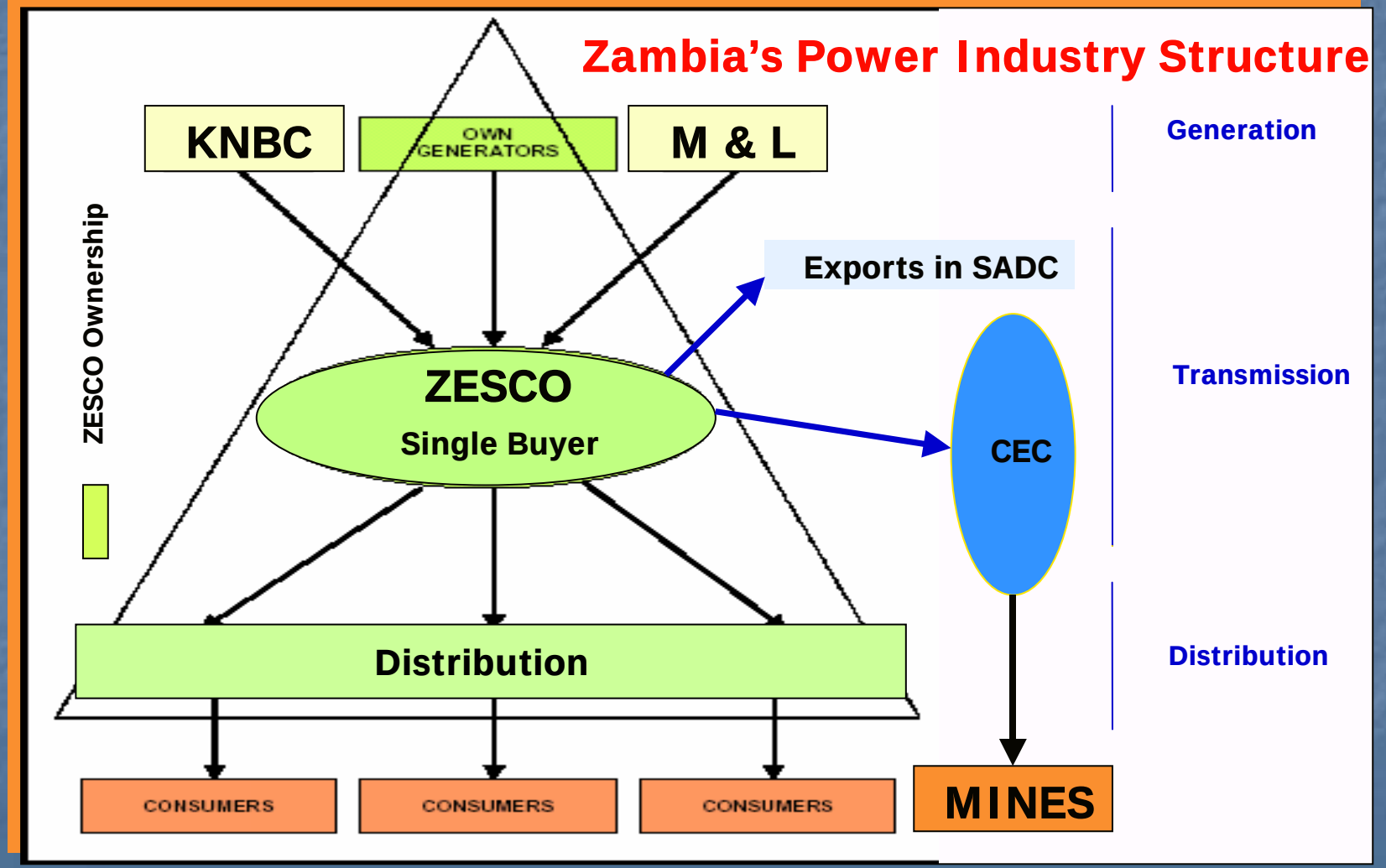
Module II: Power Sector Reform – Issues and Options



Module II: Power Sector Reform – Issues and Options

TRADITIONAL UTILITY

INTERCONNECTION AND INITIAL TRADE

INTERNATIONAL GRID MULTILATERAL TRADE

LOOSE POWERPOOL

TIGHT POWERPOOL

INTERPOOL TRADE

National Scenario

Single Market Scenario

Gov't-owned Vertically Integrated Monopolies

Unbundling of generation, transmission & distribution functions

Commercialization or privatization of some components

Limited Competition

Full Competition

Expected Mid-Term Picture for Zambia

Synchronization of neighboring systems

Bilateral trade with limited commitments

Bulk Power Purchase Agreements

Reserve sharing wheeling by third parties

IPP generation and sale to host utility (single buyer)

Competition between suppliers

Utility control with power pool support

IPP generation and direct bulk change

Large users allowed to choose suppliers

Pool-wide least cost system planning

Supply competition even at the small customer level

Supply/ demand distance limited only by economics

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Module II: Power Sector Reform – Issues and Options

I. Status of Power Sector Reform in Zambia – *Overall Goals of Power Sector Reform*

- Enhance sector efficiency and introduce innovation
- Improve service quality
- Reduce political interference; reduce financial burden to the Government budget, thereby facilitating the reallocation of Government resources to other social services sectors
- Put sector on a commercial basis and commercialize risks
- Enhance ability to attract private capital
- Conform to international pressure for liberalization

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Module II: Power Sector Reform – Issues and Options

I. Status of Power Sector Reform in Zambia – *Restructuring Efforts*

- Zambia's power sector reform policy provides for:
  - (i) restructuring
  - (ii) unbundling
  - (iii) commercialization
  - (iv) private sector participation
  - (v) wholesale market competition

Since 1998, IPPs are allowed to both generate and export electricity, wheeling through the national grid

Module II: Power Sector Reform – Issues and Options

I. Status of Power Sector Reform in Zambia – *Progress of Power Sector Reform*

Power sector reform in Zambia is taking place as part of an overall reform and privatization program undertaken by the GRZ. Major achievements are:

(i) Privatization of the copper industry

(ii) Privatization of many state-owned industries

(iii) Establishment of several entities to manage PSP – ZPA, OPPPI, ERB, and ZCC

Module II: Power Sector Reform – Issues and Options

I. Status of Power Sector Reform in Zambia – *Progress of Power Sector Reform* (cont'd)

- Separation of Kariba North from ZESCO - first Step of ZESCO Restructuring
- Establishment of the Copper Belt Energy Corporation (CEC) as a Separate Entity
- Establishment of the Energy Regulatory Board (ERB)
- Continued process of ZESCO commercialization (as agreed recently with the World Bank)

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *To Be Acknowledged*

- Power Sector Reform is perhaps the most debated issue in any country
- Global experience has lead to the evolution of ***two broad approaches*** to power sector reforms
  1. ***'Bottom-up'*** recommended by International Energy Initiative (IEI) – involves primarily corporatization, increased efficiency and loss reduction measures, while establishing regulatory institutions
  2. ***'Top-down'*** recommended by the World Bank – involves initial unbundling and elimination of subsidies

A combination of both of the approaches above may produce better results

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Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Processes Associated with Power Sector Reform*

Restructuring – the process of changing the structure of the electric power industry from one of a guaranteed monopoly over service territories, to one where the competitive elements of the sector are exposed to open competition

Deregulation – the process of relaxing traditional tight control over either state or private monopolies, and opting for more transparent and performance oriented regulations to control both natural monopoly and competitive elements of the sector

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Processes Associated with Power Sector Reform* (cont'd)

Commercialization – the process of attempting to introduce commercial incentives into a state ownership

Corporatization – the process of turning a state trading activity into a State-Owned Enterprise (SOE) forced to operate under common business laws and compete on a level playing field with private firms

Privatization – the selling of government state-owned assets and transfer of ownership to the private sector

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Privatization vs. Restructuring vs. Deregulation*

- ***Privatization*** entails a change from government ownership to private sector ownership; continuation of existing approach to economic regulation
- ***Restructuring*** entails a change in approach to economic regulation, reducing reliance on regulation and increasing reliance on market forces
- Restructuring does not result in the elimination of all regulation

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Restructuring vs. Privatization*

What is Restructuring? The reorganization of a company in order to attain greater efficiency and to adapt to new market environment

General Objective of Restructuring: Ensure reliable service at reasonable prices through less reliance on regulation and more reliance on market forces

Trends in Economic Policy: Restructuring in other industries (gas, railroads, airlines, banking)

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Module II: Power Sector Reform – Issues and Options

Restructuring Goals

- Economic Efficiency
  - Short term (pricing and trade)
  - Long term (investment)
  - Revenue from asset sales
- Technical Efficiency
  - System operation and reliability
- Equity
  - Stranded costs
  - Benefits of competition
- Quality
  - New product development
- Externalities and Public Goods

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Restructuring vs. Privatization* (cont'd)

Methods of Restructuring:

1. Mergers
2. Acquisition
3. Divestitures
4. Liquidation
5. Reorganization – Most relevant in power industry

Restructuring (industrial and organizational changes and their effects in the social and labor spheres) can occur with or without privatization

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Restructuring vs. Privatization* (cont'd)

What is Privatization? It is strictly an economic instrument to improve performance by introducing rivalry and freedom to enter the market

The Objectives of Privatization: tend to advance social welfare objectives through a return of state firms to market discipline away from political interference

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Restructuring vs. Privatization* (cont'd)

Methods of Privatization

1. Sales
    a. Public sales and auctions
    b. Negotiated sales to strategic investors
    c. Management/employee buyouts
2. Management or Lease contracts
3. Mass Privatization
4. Restitution

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Forms of Private Sector Participation*

Privatization Options	Asset ownership	Operations & Maintenance	Capital investment	Commercial risk	Typical duration (years)
Service contract	Public	Shared	Public	Public	1-2
Management contract	Public	Private	Public	Public	3-5
Lease	Public	Private	Public	Shared	8-15
Concession	Public	Private	Private	Private	25-30
Build-operate-transfer (BOT)	Shared	Private	Private	Private	20-30
Divestiture	Private	Private	Private	Private	++

Source: Neil Roger, The World Bank

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Restructuring vs. Privatization Are Two Independent Dimensions of Power Sector Reform*

Privatization relates to changes in management and ownership and can be defined as the instrument for transferring:

1. Responsibility
2. Operations and/or Management
3. Financing
4. Ownership

from the Government to non-government organizations or to private individuals or entities

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Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Restructuring vs. Privatization Are Two Independent Dimensions of Power Sector Reform* (cont'd)

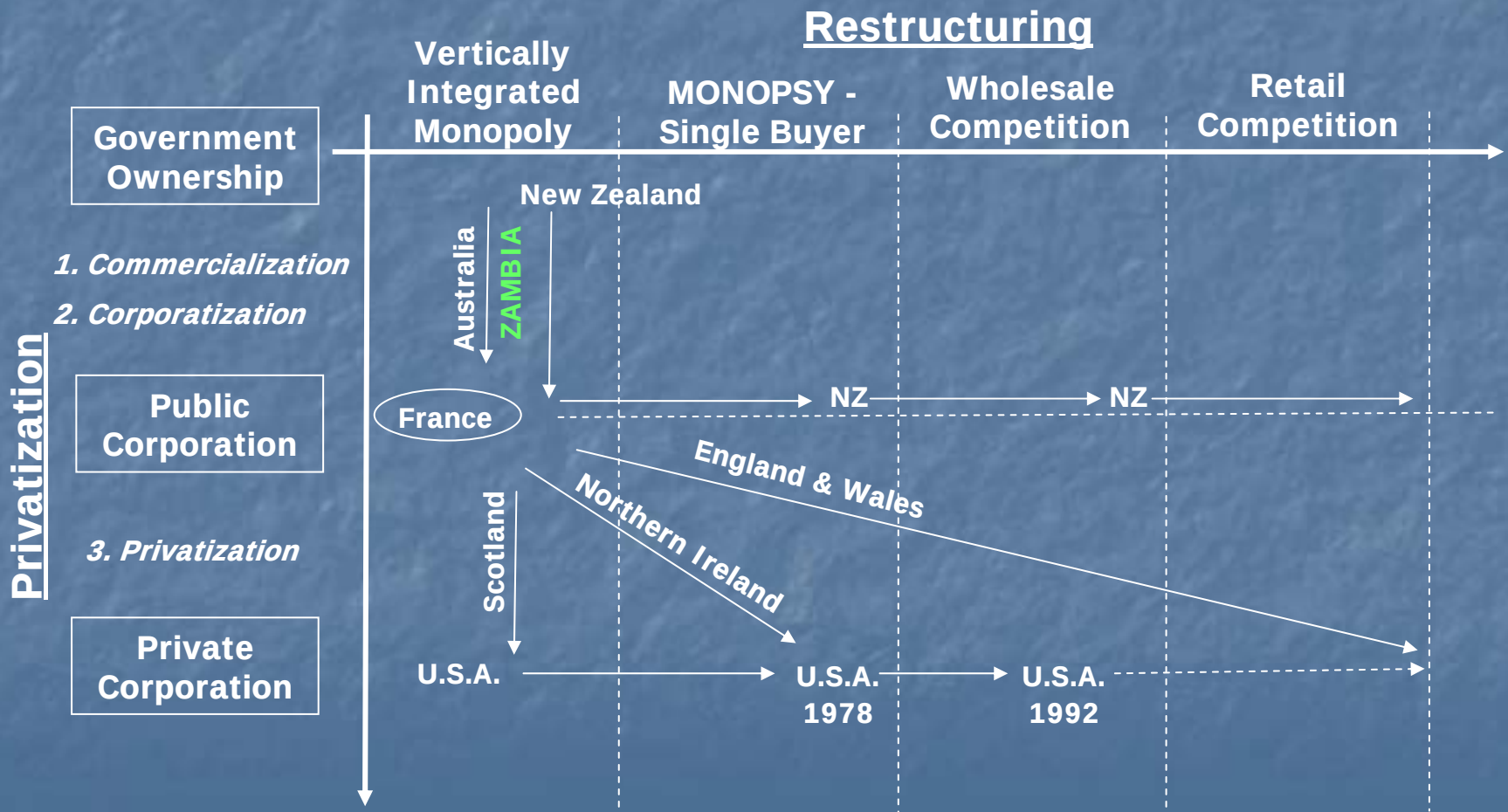
Restructuring relates to changes in industry structure (competition and customer choice) that can be achieved through:

1. Commercialization
2. Corporatization
3. Demonopolization
4. Unbundling

of Government owned utilities

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Restructuring vs. Privatization Matrix*



Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Privatization in Europe*

Ownership of Electricity Industry in the EU, 1997
(M=municipal; P=private; S=State)

Country	Generation	Transmission	Distribution
Austria	S/M	S	M
Belgium	P	P	P/M
Denmark	M	S/M	M/P
Finland	S/P	S/P	M/P
France	S	S	S
Germany	P	P	M
Greece	S	S	S
Ireland	S	S	S
Italy	S	S	S
Netherlands	S	S	M
Norway	S/P	S	M
Portugal	S/P	S	S
Spain	S/P	S	S/P
Sweden	S/P	S	M/P
United Kingdom	P	P	P

Source: "Managing the Privatization and Restructuring of Public Utilities", ILO, Geneva, April 1999

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Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Restructuring and Privatization*

Restructuring:

1. Corporatization
2. Commercialization
3. Demonopolization
4. Unbundling

Restructuring Accompanied with Identified Suitable Privatization Form

Methods of Privatization

- **Transfer of Responsibility**
  - Liberalization and Deregulation of Power Sector
  - Liquidation, Termination or Reduction of Government Production/Provision
  - Transfer to Individuals of Financing Responsibility – Direct User Charge
- **Transfer of Operation and/or Management**
  - Contracting Out
  - Concessions
  - Franchises
- **Transfer of Ownership**
  - Restitution (Reprivatization, Compensation)
  - Auction, Including Share Floating
  - Mass Privatization -- Vouchers
  - Direct Sales to Operators
  - Mgmt./Employee Buy-Outs
  - Transfer to Non-State Non-Profit Coops

Module II: Power Sector Reform – Issues and Options

Privatization in power infrastructure services raises special issues which require specific approaches and techniques. These issues concern such matters as:

- The choice of prior restructuring measures and privatization instruments
- Constitutional and legislative restrictions
- The unbundling of the sector and its sequencing
- The use of yardstick or benchmark competition as a regulatory tool
- Regulatory bodies and their powers
- New technologies
- The emergence of a global industry for electricity services

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *How Legal Framework Supports Restructuring and Privatization*

- Governs the process through utility restructuring and privatization
- Facilitates enforceable contracts
- Facilitates competition on the basis of equality among public and private utilities
- Prevents the transforming of public monopolies into private monopolies
- Allows the market forces for price and quality issues
- Facilitates the development of the private sector, including market entry and finance

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Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Conditions for a Successful Privatization Process*

- Transparency in the privatization process
- Explanation of the benefits of competition, economic efficiency, and foreign investment
- Promotion of popular capitalism without compromising corporate governance
- Securing commitments from new operators to investment for expanding the service delivery
- Adequate compensation for retrenched worker

Module II: Power Sector Reform – Issues and Options

II. Policy Issues and Options – *Conditions for a Successful Privatization Process* (cont'd)

- Training and redeployment services to enable skills development, labor mobility, and job creation through enterprise development
- Protection of consumer against monopoly power, including regulation of tariffs charged by utilities
- Ensuring the potential for implementing public policy goals relating to increased access to affordable and reliable energy, environmental protection, quality of service, and other issues

Module II: Power Sector Reform – Issues and Options

III. Commercialization as Part of Restructuring – *The Four Stages Involved in Power Sector Reform and Restructuring*

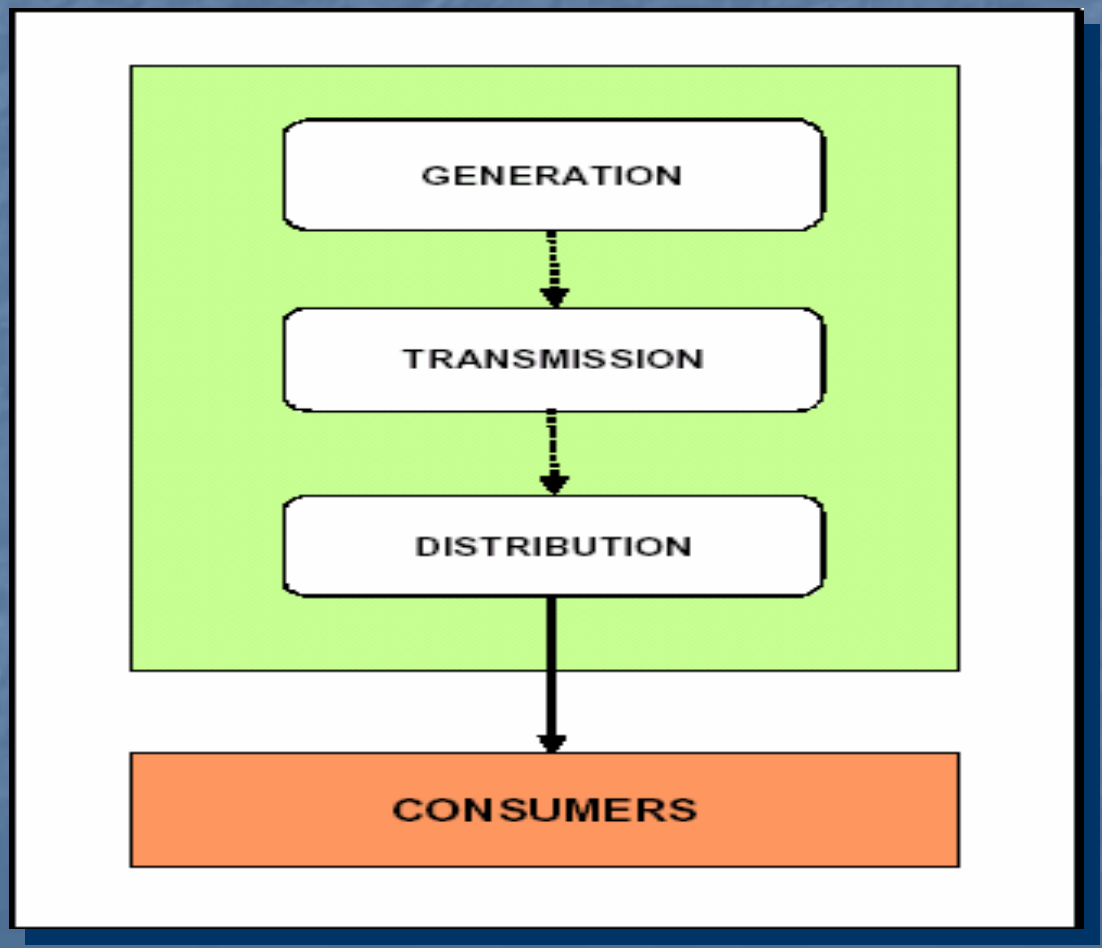
Possible Theoretical Market Models:

- ✓ Vertically Integrated Monopoly
- ✓ Monopsony – Single Buyer
- ✓ Wholesale Competition
- ✓ Full Customer Choice – Retail Competition

These constitute four consecutive steps in the power sector restructuring process

Module II: Power Sector Reform – Issues and Options

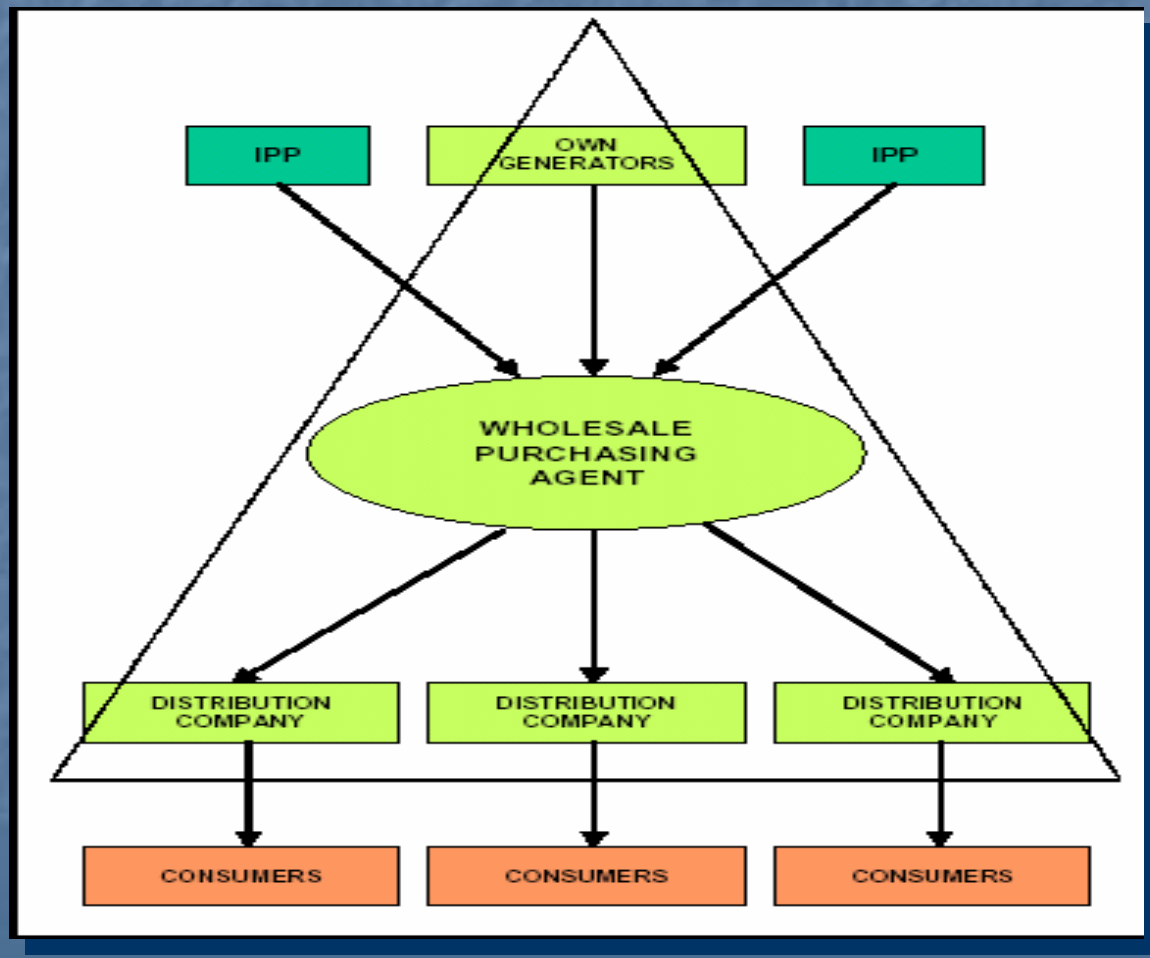
Vertically Integrated Monopoly (VIM)



"ELECTRICITY SECTOR DEREGULATION IN THE APEC REGION", ASIA PACIFIC ENERGY RESEARCH CENTRE, March 2000

Module II: Power Sector Reform – Issues and Options

Monopsy Model (M)



"ELECTRICITY SECTOR DEREGULATION IN THE APEC REGION", ASIA PACIFIC ENERGY RESEARCH CENTRE, March 2000

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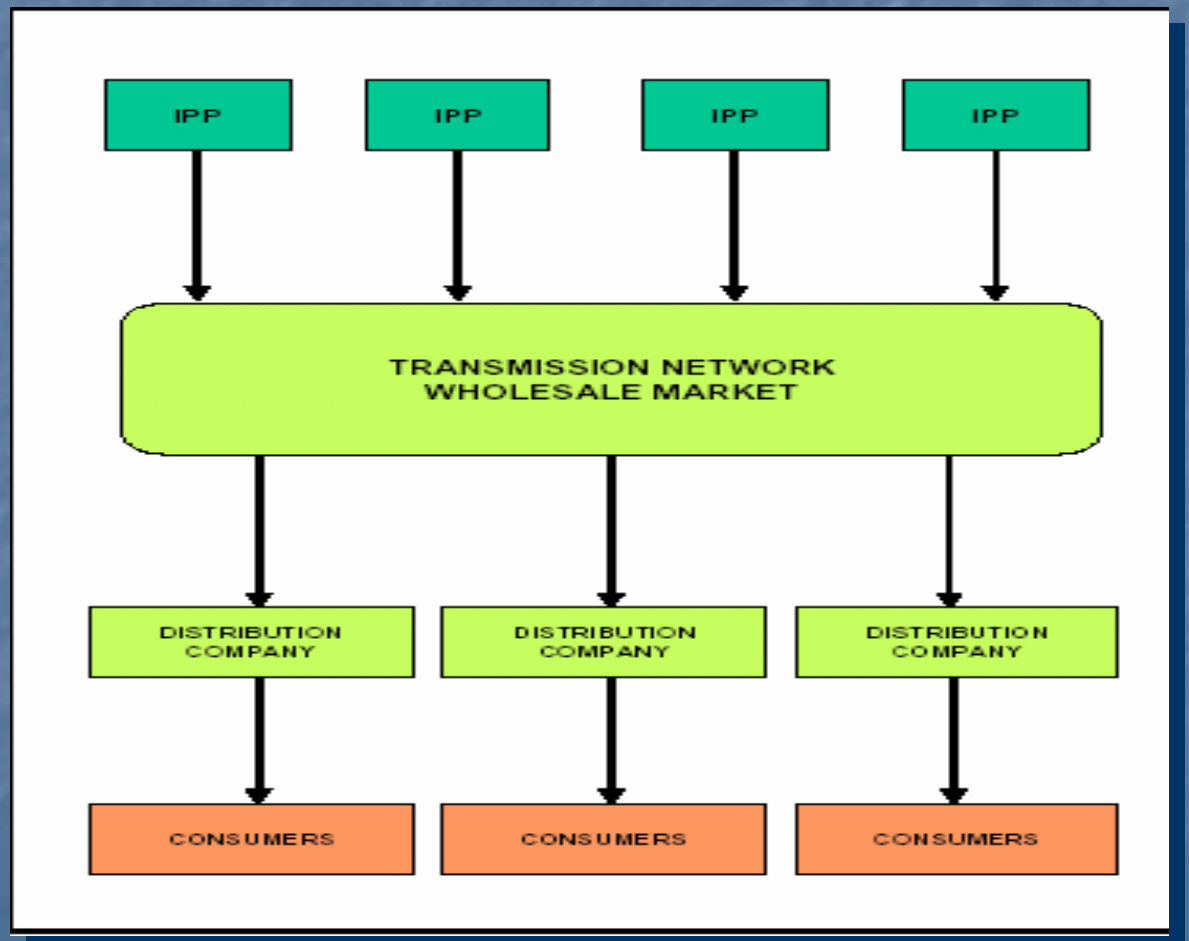
Wholesale Competition (WC)



"ELECTRICITY SECTOR DEREGULATION IN THE APEC REGION", ASIA PACIFIC ENERGY RESEARCH CENTRE, March 2000

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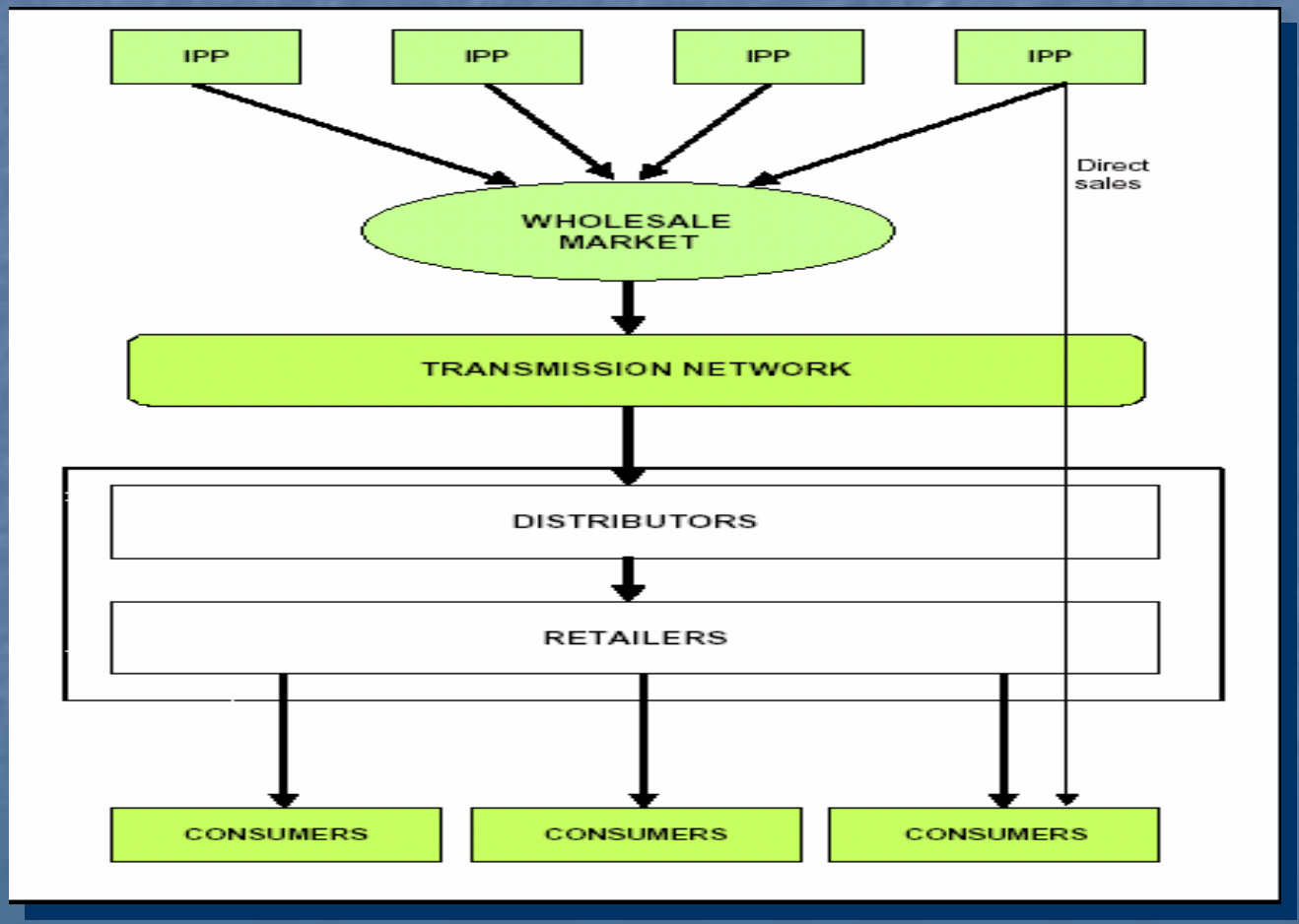
Full Customer Choice (FCC)



"ELECTRICITY SECTOR DEREGULATION IN THE APEC REGION", ASIA PACIFIC ENERGY RESEARCH CENTRE, March 2000

Module II: Power Sector Reform – Issues and Options

Summary of the Characteristics of the Four Theoretical Power Sector Structural Models

Model of Power Sector Structure	VIM Model	M Model	WC Model	FCC Model
Definition	Monopoly At every level	Monopoly With single Buyer	Competition among Power generators Plus choice for consumers	Competition among Power generators Plus choice for consumers
Competition in Generation?	No	Yes	Yes	Yes
Retailer choice?	No	No	Yes	Yes
Customer choice?	No	No	No	Yes

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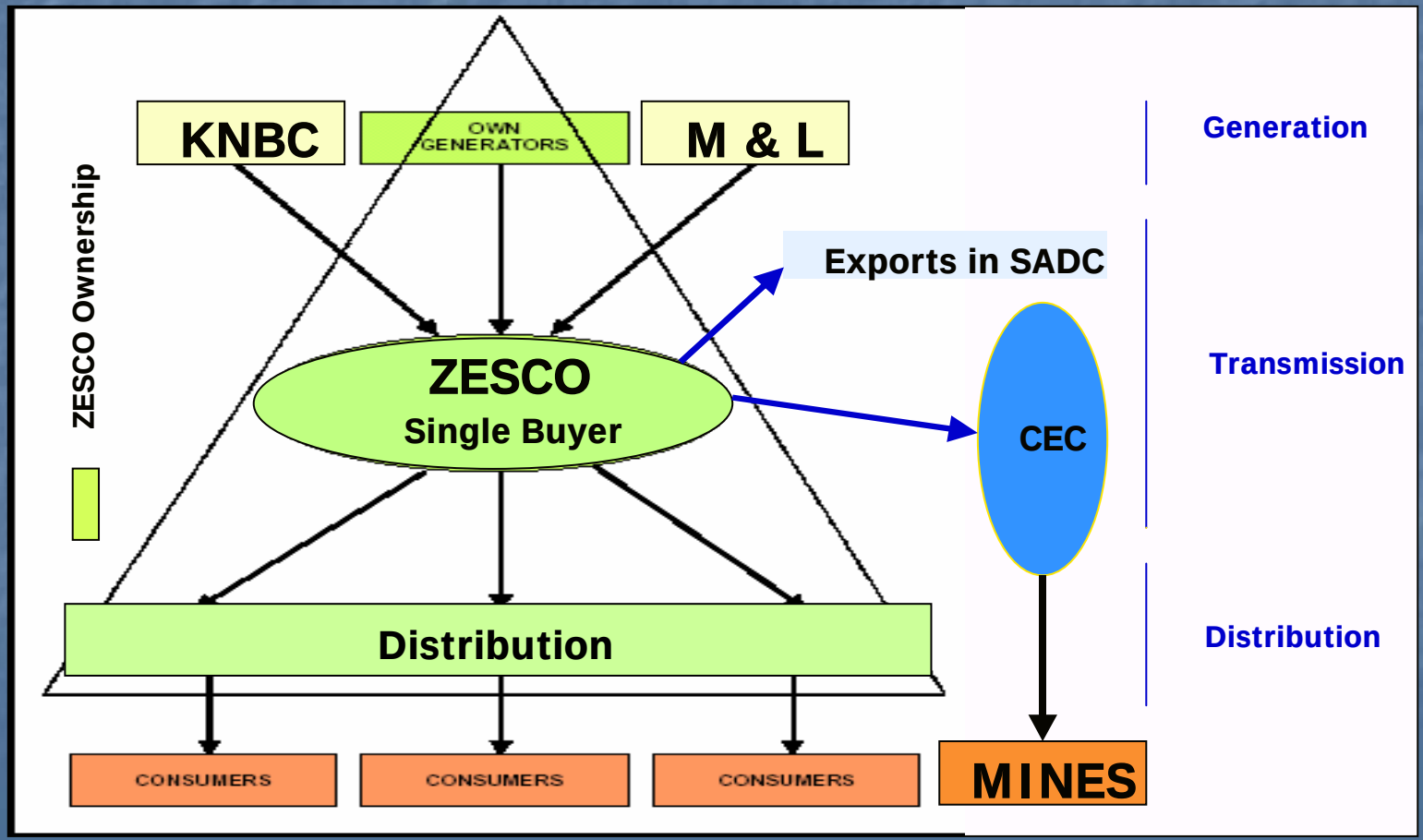
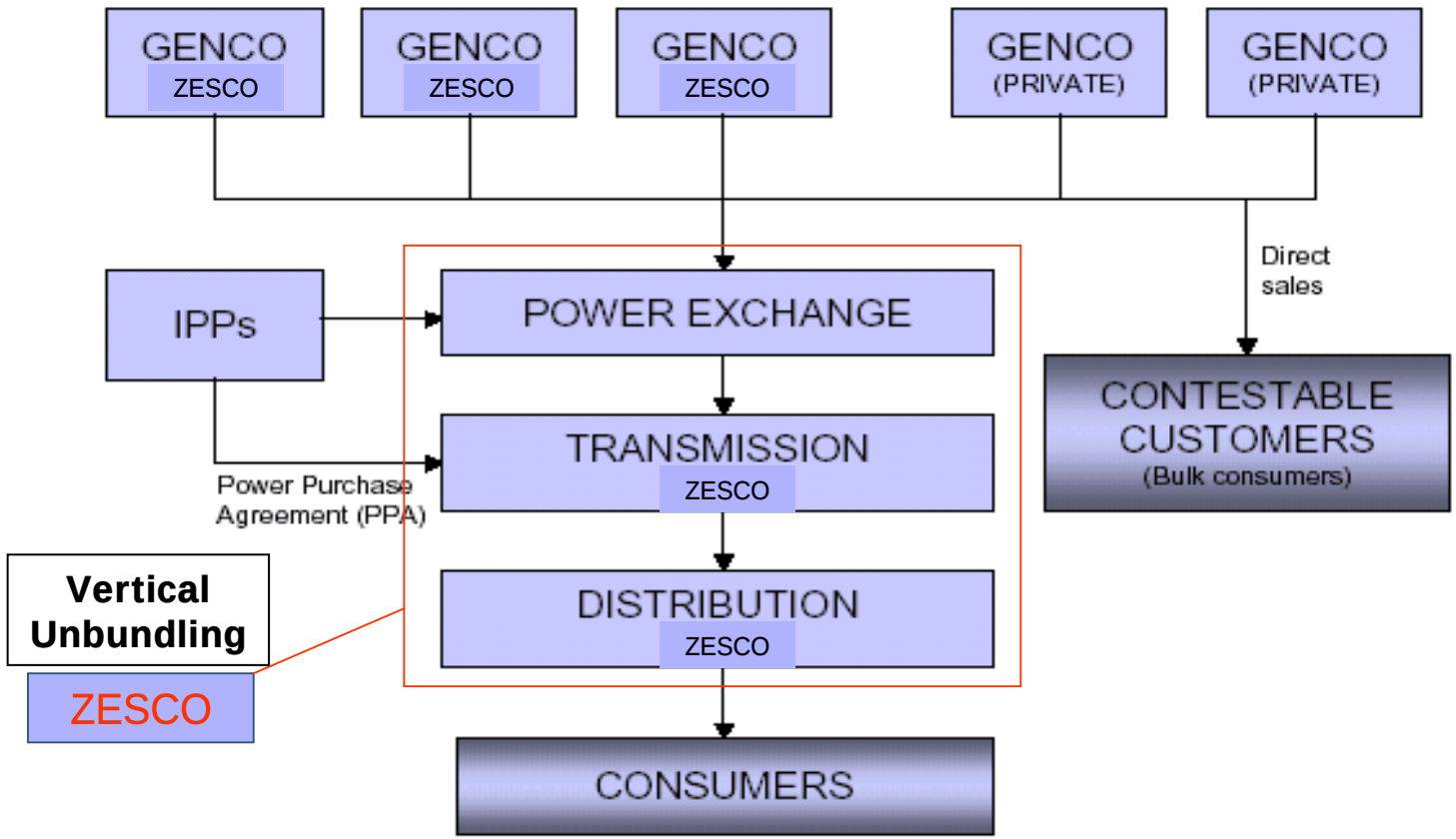
Module II: Power Sector Reform – Issues and Options

Potential Steps for Zambia:
Present Power Industry Structure in Zambia – Monopsy



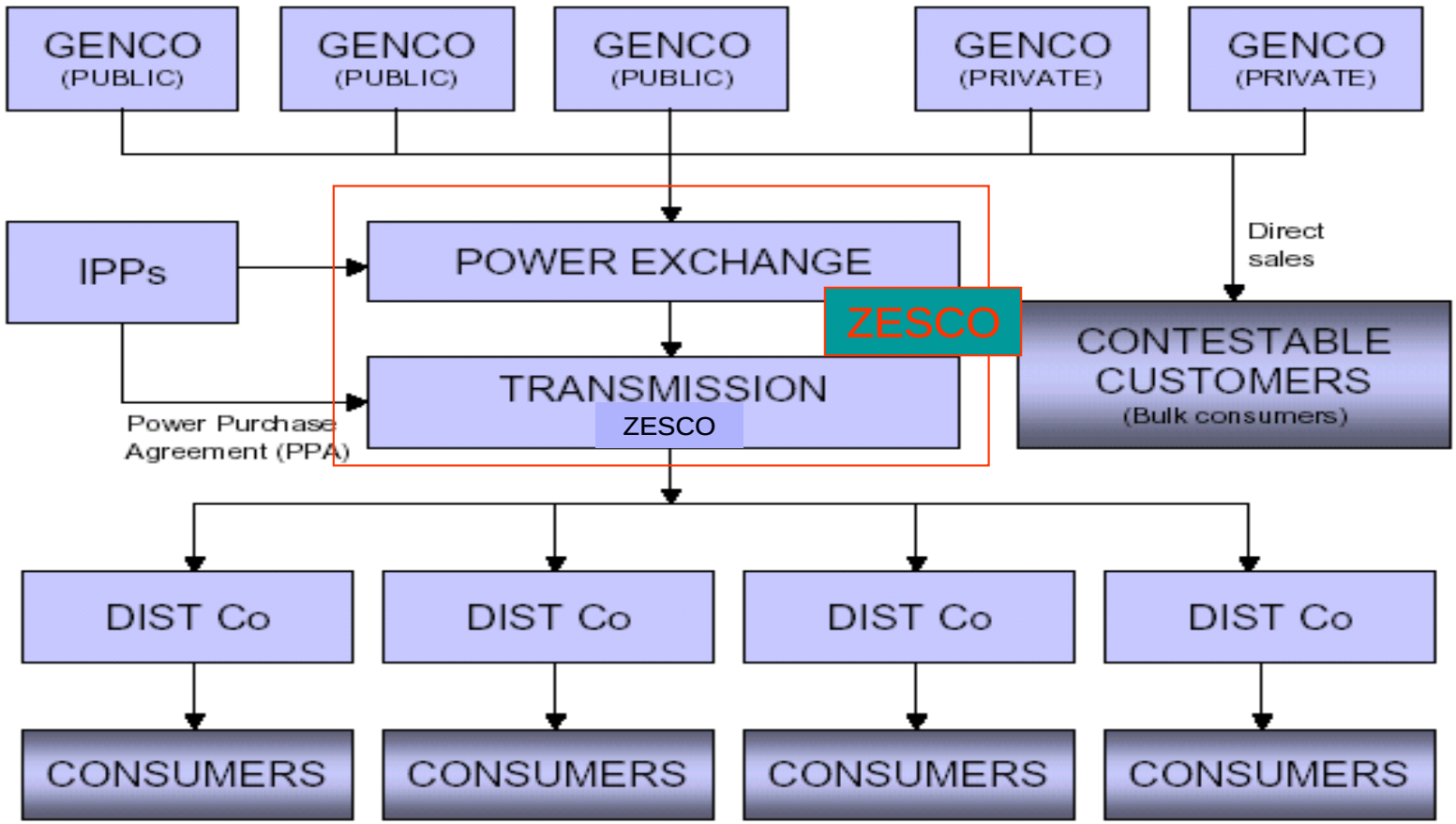
Module II: Power Sector Reform – Issues and Options

Potential Next Step of Restructuring ZESCO



Module II: Power Sector Reform – Issues and Options

Towards Distribution Horizontal Unbundling – Is this an Effective Option?



Module II: Power Sector Reform – Issues and Options

IV. Lessons From Other Countries

Chile: "Economies with small power markets subject to takeover by big trans-national companies after privatization need to carefully craft power sector regulations and enforcement bodies – both specific to the sector as well as of general application to markets – to effectively limit market power, balancing efficiency, investment attractiveness, and consumer protection."

Module II: Power Sector Reform – Issues and Options

IV. Lessons From Other Countries (cont'd)

Malaysia: "In some developing economies, the potential benefits of opening energy markets to full competition must be balanced against competing political, social and economic policy objectives, such as extension of electricity networks to all communities, and maintenance of tariffs at prices poorer consumers can afford."

Module II: Power Sector Reform – Issues and Options

IV. Lessons From Other Countries (cont'd)

New Zealand:

1. Light-handed regulation is possible with the right regulatory framework of incentives and controls (such as information disclosure requirements)
2. The wholesale market does not need to be designed or imposed from above; the industry can be free to implement a market structure most suited to the workings of the electricity sector (with safeguards to ensure fair play)
3. Full privatization of the competitive elements of the sector is not necessary, provided the state-owned corporations operate under the same business laws as private firms, and are independent of political influence

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Module II: Power Sector Reform – Issues and Options

IV. Lessons From Other Countries – *Conclusions And Policy Implications*

- The common expectation is that power sector reform will yield important short and long-term benefits due to enhanced economic efficiency
- Other significant gains are expected, notably further efficiency improvements, the encouragement of greater technological innovation, improvements in service quality and variety, and improved investment decisions
- Economy-wide benefits from improved electricity industry efficiency will also become increasingly evident, as electricity is an input to almost all goods and services

Module II: Power Sector Reform – Issues and Options

IV. Lessons From Other Countries – *Conclusions And Policy Implications* (cont'd)

- For the benefits of competition to be realized relatively quickly, the reform plan must be carefully thought through prior to implementation
- Reform can have significant costs. For example, there may be heavy job losses, and there may be substantial tariff increases for some or all consumers
- The impacts of market liberalization on long-term generating capacity investment is not yet fully clear, given that energy sector liberalization has a relatively short history in the world

Module II: Power Sector Reform – Issues and Options

IV. Lessons From Other Countries – *Sequencing Power Sector Reforms*

1. Legal and regulatory framework
2. Major restructuring
3. Introducing competition to the wholesale
4. The incumbent utility should not sign many long-term power off-take agreements with IPPs
5. The priority for the privatization strategy should be to improve billing and collection performance by privatizing the distribution and supply functions first

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Module II: Power Sector Reform – Issues and Options

IV. Assessing the Reform Progress

- Seven reform steps, ranked by optimal timeframe sequence, are identified by the World Bank:
  1. Launch a sector liberalization program
  2. Enact an electricity law permitting unbundling and divestiture
  3. Establish an independent regulatory authority
  4. Design and approve a new power market structure
  5. Unbundle the power utility
  6. Privatize or close on a concession for some private distribution
  7. Privatize some generation

Module II: Power Sector Reform – Issues and Options

IV. Lessons … Dos and Don'ts for Policy Makers - Example

Speaking of the need to "face reality" of the failure of the regulatory reform and privatization in California, in his State of the State Address, on January 8, 2001, Governor Gray Davis said:

"California's deregulation scheme is a colossal and dangerous failure. It has not lowered consumer prices. And it has not increased supply. In fact, it has resulted in skyrocketing prices, price-gouging and an unreliable supply of electricity. In short, an energy nightmare. ... We have lost control over our own power. We have surrendered the decisions about where electricity is sold – and for how much – to private companies with only one objective: maximizing unheard-of profits."

Module II: Power Sector Reform – Issues and Options

THANK YOU VERY MUCH !

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Workshop on "Enhancing Energy Sector Policy and Reform Process" in Zambia

Workshop Modules

Module I: Energy Policy and Planning Process in Zambia

Module II: Power Sector Reform – Issues and Options

Module III: Enhancing Energy Sector Governance

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

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Contents of Module III: Enhancing Energy Sector Governance

I Models of Sector Governance

II Legal and Regulatory Issues – Transparency and Stability

III Issues on Improving Energy Sector Governance

IV Widening Public Participation in Energy Sector Governance

V Implications of Enhanced Sector Governance on Attracting Private Investors

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Module III: Enhancing Energy Sector Governance

I Models of Sector Governance – *Definition & Key Players*

- ***Definition:*** Energy sector governance is the system of institutions, incentives, and information that – by implementing a set of policy processes and exercising control relationships among various stakeholders and actors – produce sector economic outcomes
- Governance refers to how decisions are made and implemented and who participates in the decision making process

Module III: Enhancing Energy Sector Governance

I Models of Sector Governance – *Definition & Key Players – cont'd*

- Four key issues in designing any system of governance are:
  - ✓ What decisions are made?
  - ✓ Who makes them?
  - ✓ How are decisions enforced?
  - ✓ How are disputes resolved?

Module III: Enhancing Energy Sector Governance

I Models of Sector Governance – *Definition & Key Players – cont'd*

- ***Key players:***
  - ✓ Law makers (Parliament)
  - ✓ Policy makers (e.g. government departments)
  - ✓ Energy enterprises (energy sub-sectors entities and owners, e.g. power utilities)
  - ✓ Various consumer groups (e.g. household, farmers, industry, etc.)
  - ✓ NGOs, labor unions, universities
  - ✓ Regional and international bodies (e.g. SADC, SAPP, WTO, etc.)

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I Models of Sector Governance – *Models*

- The model of energy sector governance depends on:
  - ✓ The policy and role of the Government
  - ✓ Interaction between and among various stakeholders
  - ✓ Stakeholders' interests
  - ✓ Motivations driving stakeholders' actions
  - ✓ The manner in which the sector is regulated

Module III: Enhancing Energy Sector Governance

I Models of Sector Governance – *Models – cont'd*

- Based on these, two basic models may be identified:
  1. Government owns, controls, manages and operates the sector
  2. Government only regulates and monitors the sector through independent regulatory bodies, while open market drives the sector
- A transition process takes place when the policy decision is to move from the first to the second energy sector governance model

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II Legal and Regulatory Issues – Transparency and Stability – *Regulatory Bodies*

- Regulatory bodies combine the three functions of legislation, executive and judiciary and yet are different from each of them
- Establish regulatory independence through legislation. Sanction:
  - ✓ Selection process
  - ✓ Qualification and disqualification criteria
  - ✓ Prescribed tenure
  - ✓ Financial autonomy

Module III: Enhancing Energy Sector Governance

II Legal and Regulatory Issues – Transparency and Stability – *Regulatory Bodies – cont'd*

- The three functions of legislation, executive and judiciary may not have that much universal impact as the regulation
- Regulators have many discretionary powers and, therefore, require additional scrutiny as they:
  - ✓ Combine all the three functions
  - ✓ Are independent
  - ✓ Take decisions that greatly impact policy, the economy and the society at large

Module III: Enhancing Energy Sector Governance

II Legal and Regulatory Issues – Transparency and Stability – *Regulatory Processes*

- Reconciling of independence with accountability towards government, legislature, audit, and appeal and review procedures
- Establishment of transparent decision making process
- Implementation of clarity of regulation
- Ensuring that the personnel in the regulatory bodies have adequate knowledge and skills

Module III: Enhancing Energy Sector Governance

III Issues on Improving Energy Sector Governance

- How to improve the processes of policy formulation and implementation?
- How to improve interaction between the government authorities at central and local levels?
- What should be the role of the Government in owning and/or managing energy industries?
- How to improve energy markets' opening and competitive and efficient functioning?
- How to improve the regulatory processes to prevent potential market failure and address market issues?

Module III: Enhancing Energy Sector Governance

III Issues on Improving Energy Sector Governance – *cont'd*

- Energy sector should support the overall country goal of sustainable development
- In achieving this goal, sector governance must ensure sustainable development of the sector itself by implementing an approach that considers the following three dimensions:
  - ✓ Economic
  - ✓ Social
  - ✓ Environmental

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III Issues on Improving Energy Sector Governance – *Importance of Energy Sector Economic Sustainability in Zambia*

- Energy plays a critical role in every country's economic development *(high impact on GDP)*
- Energy sector is highly capital intensive *(requires large infrastructure investments)*
- Oil imports play an important role in energy balance and balance of payments (BOP)
- Substantial need for increased access to commercial / modern energy services

Module III: Enhancing Energy Sector Governance

III Issues on Improving Energy Sector Governance – *Sector Governance Should Accommodate the Sector Specifics*

- Energy sector and sub-sectors operate under different economic conditions and offer various goods and services with different level of importance to the country and its economy
- Governance approaches should vary accordingly between energy sub-sectors depending on the economic conditions
- Prevailing economic ideology is the decisive factor in any country's style of energy sector governance

Module III: Enhancing Energy Sector Governance

III Issues on Improving Energy Sector Governance

– *Sector Governance Shaped to Accommodate Important Economic Factors in Zambia, such as the:*

- Impact of the energy sector on the economy, including balance of payments, investment, and employment
- High level of economic linkages with other sectors, particularly the mineral and coal sectors
- High level of state involvement in the energy sector through ownership, subsidies, and regulatory controls;
- Sector's strategic importance in terms of electricity exports; and
- Need for power sector structural, ownership, and governance reforms

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III Issues on Improving Energy Sector Governance – *The Social Dimension of Energy Sector Governance*

- Because energy is critical to the social well-being of people, they should become a major actor in the governance of the energy sector
- While the Government must play a primary role in ensuring the achievement of social goals through energy sector governance, there is a clear need to broaden people's participation in order to ensure:
  - ✓ More balanced and appropriate energy policies
  - ✓ Effective and equitable delivery of energy services

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III Issues on Improving Energy Sector Governance – *The Environmental Dimension of Sector Governance*

- Energy sector governance needs to focus on internalization of the environmental externalities in energy prices, which will accommodate environmental concerns and policies. This is expected to:
  - ✓ Decrease the relatively high levels of pollution from households and industries
  - ✓ Increase the opportunities for environmentally friendly technologies and renewable resources
  - ✓ Decrease Zambia's contribution to global warming and related atmospheric effects

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IV Widening Public Participation in Energy Sector Governance

- Public/stakeholder participation in policy and reform design processes ensures their buy-in in the implementation of reform and restructuring processes downstream
- A bottom-up approach ensures overall sustainability of energy sector development and expansion
- Public participation brings all available intellectual capacity into the process
- Public hearings is a proven way of attracting public attention and feedback on any sector issues

Module III: Enhancing Energy Sector Governance

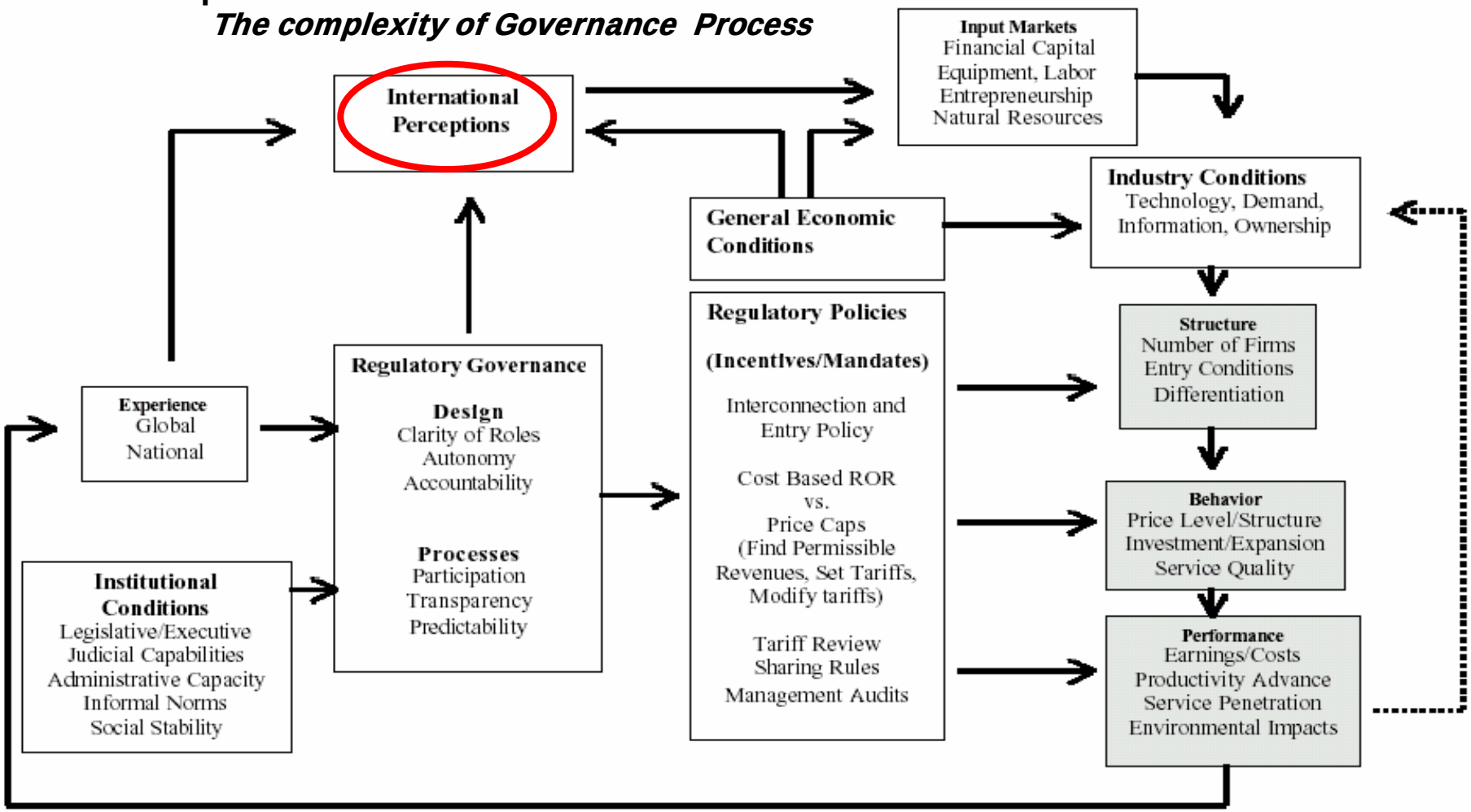
V Implications of Enhanced Sector Governance on Attracting Private Investors

- Increased interest/involvement of local private investors
- Improved perception and increased interest and involvement of foreign private and institutional investors
- Better international rating of the industry that will cause opening of commercial banks with lower interest rates for financing energy sector projects
- Private sector management and operation capacity transferred to the overall sector governance

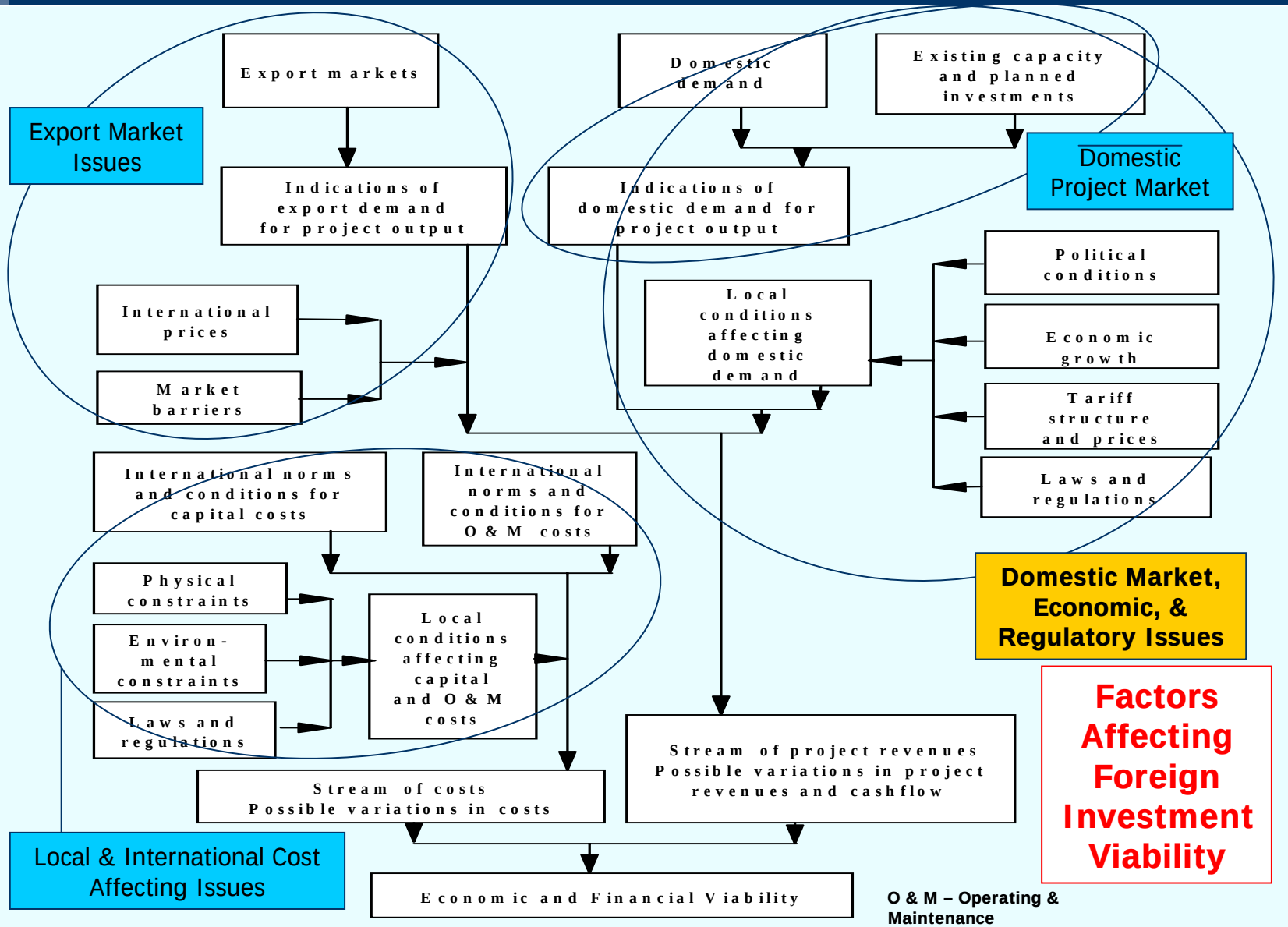
Module III: Enhancing Energy Sector Governance

Figure 1: The Effect of Institutions on Public Policy and Sector Performance

IV.5 Implications of Enhanced Sector Governance on Attraction of Private Investor – *The complexity of Governance Process*



Module III: Enhancing Energy Sector Governance



O & M – Operating & Maintenance

Module III: Enhancing Energy Sector Governance

CONCLUSION

As a conclusion one can say that harmonious institutional relationships, political commitment, and government support are key to enhancing energy sector governance in an open market environment

Workshop on "Enhancing Energy Sector Policy and Reform Process" in Zambia

Workshop Modules

Module I: Energy Policy and Planning Process in Zambia

Module II: Power Sector Reform – Issues and Options

Module III: Enhancing Energy Sector Governance

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

Workshop on "Enhancing Energy Sector Policy and Reform Process" in Zambia

Contents of Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

I New Approach to Enhancing Policy and Reform Development Process

II Enhancing Policy and Reform Development Agenda

III Potential Institutional Arrangements for Policy and Reform Development

IV Need for Donor and Private Sector Participation in This Process

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Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

I New Approach to Enhancing Policy and Reform Development Process

- The process of energy policy formulation is one of the most fundamental issues. The process should be:
  - ✓ Open and transparent
  - ✓ All inclusive – stakeholder participation
  - ✓ Institutionalized and continuous

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

I New Approach to Enhancing Policy and Reform Development Process – *Options*

- Formulate energy policy and reform framework through ministerial initiatives
- Formulate policy and reform framework through the appointment Special Bodies such as a inter-institutional Task Force
- Establish a National Energy Policy Forum with decision-making authority to formulate the new energy policy

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Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

II Enhancing Policy and Reform Development Agenda

- Make the need for a new energy policy a priority action item on the MEWD/GRZ agenda
- Seek consensus on enhancing power sector reform and restructuring
- Institutionalize the process by establishing the appropriate institution for policy development and reform design
- Identify the approach and design a roadmap for enhancing energy sector policy and power sector reform and restructuring

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Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

II Enhancing Policy and Reform Development Agenda – *cont'd*

- Design and develop an action plan for policy development and reform design and implementation with clear objectives, assigned responsibilities, and timelines
- Work with all stakeholders and ensure their buy-in and participation in the process
- Design and conduct a comprehensive public awareness campaign on sector reform costs and benefits

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Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

III Potential Institutional Arrangements for Policy and Reform Development – A MODEL *Energy Sector Policy and Reform Development Task Force (ESPRTF)*

- ***Goal:*** The overall goal of the Task Force would be to enhance, further, and coordinate the work in the area of energy policy development and energy sector reform implementation in Zambia
- ***Reporting:*** The ESPRTF will directly report to the Minister of Energy and Water Development
- ***Timeframe:*** The proposed ESPRTF is expected to operate for a period of of three to five years

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

III Potential Institutional Arrangements for Policy and Reform Development – *Model ESPRTF* - cont'd

- ***Role:*** The role of the ESPRTF is to develop a new energy sector policy and sector reform framework and detailed recommendations for the Zambian Government regarding:
  - the extent and phasing of the reform and restructuring of the energy sector
  - the proposed structure of the competitive electricity market to be established in Zambia
  - the regulatory framework and arrangement required in the process of energy/power sector reform and restructuring

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

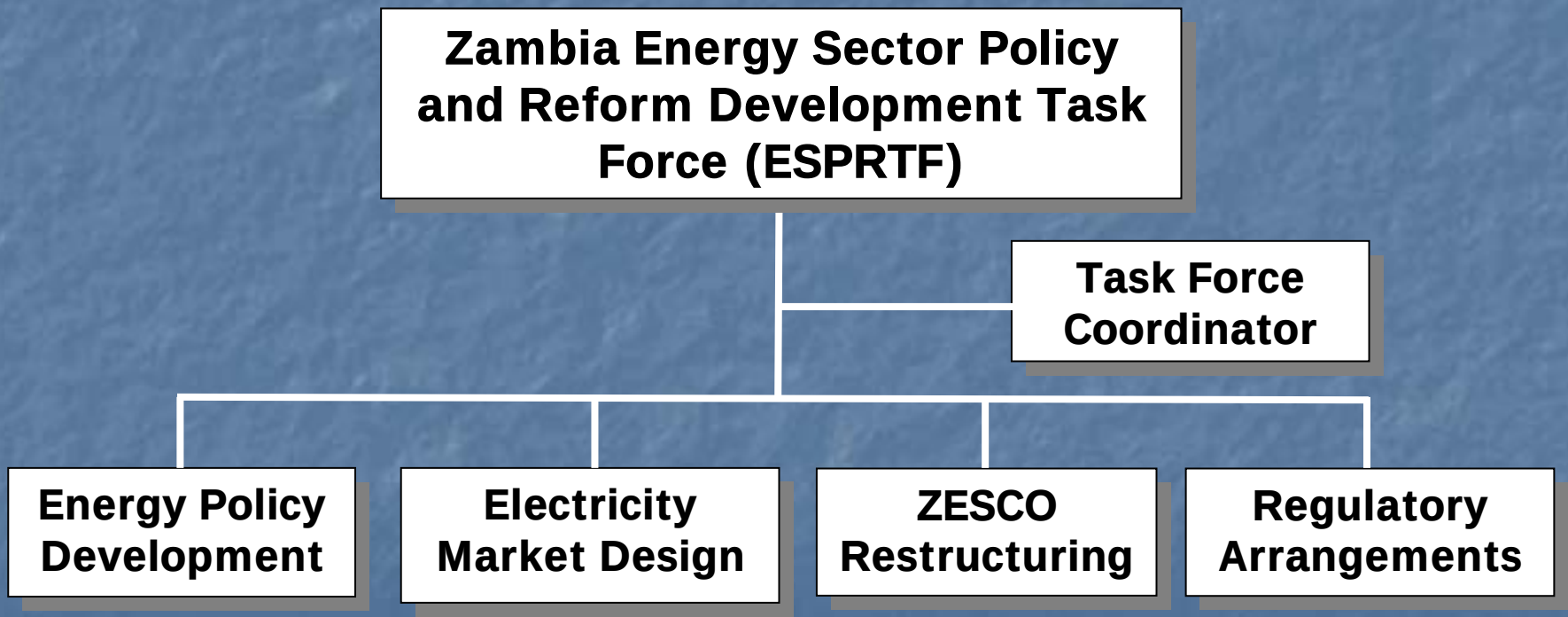
III Potential Institutional Arrangements for Policy and Reform Development – *Model ESPRTF* - cont'd

Key Objectives:

- Design and develop a new energy sector policy
- Propose reform steps that will achieve sustainable energy services by furthering the reform and restructuring of the Zambian power sector
- Study issues and options regarding the design, establishment, and operations of the most suitable competitive power market for Zambia
- Propose a regulatory framework, arrangements, and steps for ensuring smooth power sector reform implementation
- Attempt to reach a reasonable balance between the interests of all major stakeholders

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

III Potential Institutional Arrangements for Policy and Reform Development - *Model ESPRTF Structure*



Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

III Potential Institutional Arrangements for Policy and Reform Development – *ESPRTF Responsibilities*

- Energy policy development
- Electricity market design suitable for Zambia
- ZESCO restructuring and potential disaggregating
- Regulatory arrangements for reform policy implementation
- Assessment of overall economic and social impact – cost and benefits – of the proposed power sector reform and restructuring effort
- Public awareness campaign design

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Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

III Potential Institutional Arrangements for Policy and Reform Development – *MODEL ESPRTF Establishment and Membership*

- The ESPRTF will be established through a decision/decree of the Prime Minister, based on a proposal by the Minister for Energy and Water Development
- A proposed institutional membership of ESPRTF is:

1. Chairperson, PS, MEWD
2. Executive Officer, Coordinator Office
3. Director, Department of Energy
4. PS, Ministry of Finance and Dev.
5. PS, Ministry of Justice
6. Energy Advisor, GRZ President Office
7. Energy Advisor, Prime Minister Office
8. Chairman, REB
9. General Manager, ZESCO
10. KNBC, Private Sector Rep.
11. Coal Mining Company Rep.
12. University of Zambia
13. Consumer Associations Rep.
14. Donor Representatives (*Optional*)

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

III Potential Institutional Arrangements for Policy and Reform Development – *ESPRTF Coordinator Office*

- An ESPRTF Coordinator may be appointed by the MEWD to:
  i. Coordinate the ESPRTF and its working group activities
  ii. Design, develop, and conduct comprehensive public awareness programs
  iii. Liaise with all related major donors and coordinate fundraising activities
  iv. Provide administrative support to the ESPRTF and its working groups

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

III Potential Institutional Arrangements for Policy and Reform Development – *ESPRTF Working Groups*

- Activities
- Issues
- Membership
- Reporting and Procedures
- Timeframe

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

III Potential Institutional Arrangements for Policy and Reform Development – *Proposed Next Steps and Follow-Up Actions*

- Develop an agenda for policy development, including a proposal for institutional arrangements (establishment of a Task Force)
- Design and develop the Terms of Reference for setting up the ESPRTF
- MEWD/ERB to submit a comprehensive proposal for GRZ consideration
- Seek public and donor support for developing the new energy policy and power sector reform and restructuring

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

IV Need for Donor and Private Sector Participation in this Process

- Identify potential donors/IFIs and involve them from the initial steps and through the various stages of policy and reform development
- Ensure private sector (with a direct interest in investing and participating in energy sector development and energy service delivery) involvement in policy development and reform implementation through participatory dialogue
- Seek technical assistance from donors/IFIs to build sustainable capacity for policy and reform development and implementation

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Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

Final Word:

Where we are and where we want to go.
Is the following an overall summary of this two-day Workshop?

Energy Sector – Existing and Future Key Roles and Responsibilities

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

	Public Sector			Private Sector	
	Government	Regulatory Bodies	Parastatals / Public Entities	Private Sector	Community & Individuals
Policy making	Overall policy responsibility remains with the MEWD				
Planning	Planning is presently the responsibility of the Government (MEWD). Depending on the nature of sector reforms, responsibility may continue to be a Government function, may be transferred to jointly held by the Regulatory Bodies and System Operators, or may be transferred entirely to the private sector				
Regulation		Economic regulation remains responsibility of ERB			
Ownership			All electricity assets are currently owned by ZESCO, KNBC, and CEC. Plan is for new generation assts to be owned by the private sector (IPPS). Partial or full private sector ownership is optional after ZESCO's restructuring in the future.		Micro generation and small regional schemes and networks may be owned and operated at the community level
Funding	Currently, responsibility for funding rests with the Government and Aid Agencies as the sector is operating at loss or barely breaking even. After sector restructuring and privatization, the funding responsibility is expected to be mostly with the private sector.				Rural energy will require the Government support but may be in part carried out by the private sector
Operation			Currently, ZESCO, CEC, and KNBC operate and manage the whole electricity systems. In the future, it is expected that private sector will involve in power sector management and operation. Petroleum distribution is liberalized.		

Module IV: Enhancing Policy Development Reform Process – Policy Agenda and Potential Institutional Arrangements

THANK YOU VERY MUCH !