Annex A: Workshop Agenda

Energy and Poverty Workshop, Addis Ababa, Ethiopia October 23 To 25, 2002

DAY 1: Wed	nesday October 23, 2002	
8:15 - 9:00	Registration/Participant List	
9:00 - 9:45	Opening session:	
	 <u>Welcome address</u>, Honourable State Minister of Infrastructure, Philippos Wolde Mariam <u>Energy-Poverty in the African Context</u>, Ananda Covindassamy Introduction, organization and objectives of the Workshop, Dominique Lallement 	
Chairper	PART 1: What are the links between energy and poverty? rson: Hon. State Minister of Finance & Economic Development, Mekonnen Manyazewal	
9:45 -11:00	Panel of Ministers on Energy, Poverty, the Millennium Development Goals and the link to the Poverty Reduction Strategies	
	 Short presentation by each Minister <i>Ethiopia, Ghana, Uganda, Zambia</i> Panel debate on Poverty reduction, the MDGs and the link to the PRSP 	
11:00-11:20	Break	
	What is the impact of energy sector reform on the poor?	
	 <u>Overview of reforms around the world</u> (electricity, woodland, etc.), <i>Alix Clark</i> The impact on the poor and on poverty reduction, <i>Koffi Ekouevi</i> 	
11:20-12:30	What benefits can be derived from modern energy uses?	
	• Measurement of benefits that accrue to the poor from the use of electricity and other modern energies, Aleta Domdom	
12:45-14:15	Lunch	
PART 2	2: How can energy help increase the effectiveness of poverty reduction interventions in other sectors?	

Chairperson: Hon. Minister of Energy and Minerals, Syda N. M. Bbumba			
	Developing consumer oriented Monitoring and Evaluation frameworks:		
	Operational experience from India and Cambodia, Rekha Dayal		
14:15-14:45	 Relevance, issues and methods for measuring projects poverty impact Results from experience in India and Cambodia on links between electricity, poverty and gender Methodological / practical advice for following workgroups 		
14:45-15:00	Organization and objectives of Sectoral Workgroups, Stephen Karekezi		
	SECTOR WORKGROUPS		
15:15-17:00	Sector Workgroups		
17:00-18:30	Meeting for Ministers with Heads of Donor delegations		
18:30-20:00	Presentation/Discussion of Global Village Energy Partnership		
20:30-22:00	Dinner-Cocktail and Cultural Show, Hilton		
DAY 2: Thursday October 24, 2002			
8:30-10:00	Reporting from workgroup '' <u>Health</u> ''		
	Reporting from workgroup '' <u>Education</u> ''		
	Reporting from workgroup " <u>Agriculture & Water</u> "		
	Reporting from workgroup "Small and Medium Enterprises (SMEs)"		
10:00-10:30	Response from various stakeholders (Donors, Private Sector, NGO)		
10:30-11:00	Break		
PART 3: How to design and implement energy services delivery mechanisms focused on poverty reduction? Chairperson: Hon, Minister Energy and Water Development, Kaunda Lembalemba			
11:00-12:45	Case studies		
	A wide variety of strategies can widen access to better energy services		
	 Inter-fuel substitution: Liquefied Petroleum Gas program, the case of Ghana, Emmanuel Quaye-Foli Improved stove and forest management, the case of Ethiopia, Asres Woldeghiorghis Rural Energization Plan: the case of Sri Lanka, Lalith Gunaratne 		
13:30-14:30	Lunch		

14.30-16.00	• Utility performance improvement: the case of Zimbabwe Simbarashe	
14.50-10.00	Manowenowende	
н. 1	• Integrated source of energy services: multifunctional platforms the	
	case of Mali, Abeku Brew-Hammond	
15:45-16:00	Introduction, organization and objectives for Country Workgroups, Stephen Karekezi	
	COUNTRY WORKGROUPS	
16:30-19:30	Six Country Workgroups	
	Each country delegation to decide whether to open discussion to other participants.	
	Donor delegation to spend 30mn with each country delegation to discuss possible financing source for action plan.	
20:00- 22:30	Dinner Outside of Hotel	
DAY 3 Friday October 25, 2002		
8:00-10:00	Reports from country workgroups and next steps: <u>Ethiopia, Ghana, Kenya, Tanzania, Uganda</u> and <u>Zambia</u>	
10:00-10:30	Break	
10:30-11:30	Plenary discussion Feedback from participants on the workshop	
11:30-12:00	Concluding remarks from World Bank representatives	
	Closing address by Honourable State Minister of Finance and Economic	
	Development, Mekonnen Manyezewal	
12:00-13:30	Lunch	
13:30-18:00	Field Visits	

Annex B: List of Workshop Participants

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Annex C: Global Village Energy Partnership

Harnessing energy for poverty reduction:

people, productivity and partnerships

A Truly Global Partnership

The Global Village Energy Partnership¹ brings together developing and industrialized country governments, public and private organizations, multilateral institutions, consumers and others in an effort to ensure access to modern energy services by the poor. This Partnership of partnerships aims to help reduce poverty and enhance economic and social development for millions around the world. Its work will be carried out under a 10-year "implementation based" program. The Partnership's objectives are to:

- *Catalyze* country commitments to village energy programs and guide policies and investment in this area.
- *Bridge* the gap between investors, entrepreneurs and energy users in the design, installation and operation of replicable energy-poverty projects.
- *Facilitate* policy and market regulatory frameworks to scale up the availability of energy services.
- Serve as a *marketplace* for information and best practices on the effective development and implementation of energy-poverty projects/programs.
- *Create* and maintain an effective coordination mechanism for addressing energy-poverty needs.

The Global Village Energy Partnership builds on existing experience and adds value to the work of its individual partners. It reaches out to non-energy organizations in the health, education, agriculture, water, transport, telecommunications and enterprise sectors, and offers a range of technology solutions to meet their needs. This covers renewable energy, energy efficiency, modern biomass, liquefied petroleum gas (LPG) and cleaner fossil fuels. The Partnership will help achieve the internationally recognized Millennium Development Goals. The Partnership will also address gender issues in order to reduce health and environmental hazards and increase social and economic welfare; it will build on the knowledge and capacity of each member of the community in energy service delivery and use.

Services

The Global Village Energy Partnership will provide "on demand" a number of innovative services.

Action Plans will provide the 'implementation vehicle' for energy related activities set forth in national and/or local poverty reduction strategies and sustainable development plans.

¹ "Village" refers to individuals and households in rural, peri-urban and urban areas that lack access to modern energy services.

Capacity Development will enhance policy frameworks, entrepreneurial development, consumer organization, and credit systems aimed at expanding the number and the capabilities of enterprises operating in rural markets. It will also increase access to and availability of energy services.

Funding Facilitation will work with a broad range of local, bilateral and multilateral financiers, expanding existing programs and financial instruments to better suit the needs of investors and energy consumers.

Knowledge Management and transaction is a service that will enable the sharing of information on innovative approaches, lessons learned and best practices for improved energy service delivery, while providing a forum for networking among partners.

Results and Impact Monitoring and Evaluation will track energy services and their impact on poverty reduction and sustainable development, while enhancing partner accountability for tangible results.

Who will benefit?

The Global Village Energy Partnership will yield benefits to various groups.

- Local communities will have more effective social services (health, education), linkages to markets (telecommunications), and enhanced opportunities for attracting enterprises and investments.
- *Households* will have higher incomes, more jobs, and a better quality of life from improved lighting, power, heating, and social services.
- Community and civil society organizations, non-governmental organizations and entrepreneurs will benefit from training and inclusion in a network of service providers, technicians and project managers, and from increased business opportunities.
- *National governments* will see reduced poverty in the population; increased economic growth; improved fiscal balances; better environmental conditions and enhanced energy security.
- *Domestic and international financial institutions* will be able to expand their investment portfolios.
- *Multilateral and bilateral aid donors* will benefit from improved access to critical information, lessons learned and enhanced effectiveness of their respective programs in all sectors.
- *Private sector companies* will benefit from access to information, improved public sector partnerships, and expansion into new business areas (energy products, services, appliances).

Desired Outcomes

With an increased volume in investments and availability of modern energy services, the Global Village Energy Partnership will help attain the Millennium Development Goals.

Although specific indicators will be developed as part of the Results Monitoring Service, it is also expected that the following will be achieved:

- A significant number of countries with nation-wide energy-poverty-reduction programs based on modern energy services.
- At least 400 million people previously unserved will have access to modern energy services.
- At least 50,000 new communities served (schools, hospitals, clinics).
- A cadre of trained entrepreneurs and institutions capable of developing and implementing village energy projects and programs.
- Increases in productivity, income, environment, equity and quality of life, including gender equality.

For More Information on the Global Village Energy Partnership

The Technical Secretariat of the Global Village Energy Partnership currently resides with the United Nations Development Programme/World Bank-Energy Sector Management Assistance Program.

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Global Village Energy Program website: <u>www.gvep.org</u> (under construction) Further information on the Millennium Development Goals: www.developmentgoals.org

Annex D: Slide Presentations









Electricity reform and the poor

Presentation by: Alix Clark

Comments to: alix@worldonline.co.za

Modern Energy Services and Poverty Reduction

Workshop sponsored by the World Bank and Ethiopian Government

Addis Ababa, Ethiopia, 23-25 October



Resource background

- <u>2000 to early 2003</u>: International Energy Initiative (IEI) research project on "Expanding the Provision of Energy Public Benefits While Electricity Sectors in Developing Countries are Reforming" (Brazil, Ghana, SA, India, Indonesia, Pakistan, Thailand)
- <u>Upcoming</u>: Esmap and Dfid project on "Assessing the Impacts of Electricity Reform on Africa's poor people" (+/- 8 African countries)



Our research observations: Electricity reform and the poor

- Electricity reforms (in particular, tariff and subsidy reforms) are unlikely to impact on the poorest of the poor because they do not use electricity anyway;
- Huge and widespread change is happening in electricity sectors just about everywhere...
- Opportunities to scale up grid- and off-grid electrification during reforms are being missed, especially in Africa.



	Positive impact	Negative impact or <i>no impact</i>
<u>Tariffs</u>	Tariffs likely to drop in Thailand (new IPPs, cheaper energy sources)	Tariffs likely to increase in SA, Ghana, Pakistan, India, Indonesia
Subsidies for energy consumption	Subsidies for the poor are being maintained in Brazil, India, Indonesia, Ghana, Pakistan, SA, Thailand	
<u>Grid progs</u> .	Indonesia with captive power, Ghana's electrif. objectives, SA & Brazil only later on	Chile & Brazil initially Thai prog already successful, Pakistan, SA independent of reform

	Positive impact	Negative impact (or no impact)
<u>Off-grid</u> progs.	Designed & implemented independently	Designed & implemented independently
<u>Customer</u> services	Don't know enough here	Reforms not progressed enough? Does the private sector do a better job?
Public-interest energy efficiency	EE helps alleviate electricity crisis in Brazil, Ghana pushes EE to cushion effects of price increases	EE threatened by reforms in SA, Thailand

Now is a good time...

- 1. The energy world is changing...
- Reforms are introducing new players, new sources of finance, new investment opportunities, different rules of the game.
- We must develop a new mindset on delivering electricity to Africa's citizens.
- We must think further on ways to encourage more competition into electricity delivery, sustained private sector participation, independent regulation and decentralised implementation.
- 2. There is currently a greater ability to absorb change.

9 - Modern Energy Services and Poverty Reduction: Ethiopia, October 2002

Scaling up electricity access during reforms...

- Regulatory instruments to:
 - Incentivise private sector participation, and
 - Encourage <u>competition</u> (Chile and Argentina)
- Financing arrangements which <u>reduce pressure on</u> <u>governments</u> (Chile and Argentina)
- <u>Ring-fenced funding</u> for grid and off-grid access programmes (Ghana, SA, Thailand, Indonesia, Brazil)
- <u>Tariffs that are cost reflective</u>, and <u>subsidies</u> which target the poorest electricity users (these range depending on context) and halt waste

Scaling up electricity access during reforms...

- <u>Subsidies</u> which focus if possible on once-off payments rather than ongoing energy consumption;
- Sound government policies which recognise <u>energy</u> <u>efficiency</u> as a powerful value adder to access efforts;
- Government frameworks that encourage <u>integrated/co-ordinated development</u>;
- <u>Institutional infrastructure</u> to support an ongoing electrification programmes (South Africa);
- Increased role for <u>rural co-operatives</u> and NGOs.













General Method for Evaluating Benefits

- Determine measure for each final output
- Education: time spent studying
- Entertainment: time spent listening to radio
- Health: morbidity rate
- Convenience: time saved doing household chores
- Protection: feeling of security
- Productivity: output or income
- Observe the difference in final output between electrified and unelectrified households
- Isolate the effect of electrification on the observed
- difference



Potential [®] wit	Benefit f h No Ele Philippi	or 4 million ectricity ines	n HH
Benefit/Gain	US\$ Benefit/ Unit Month	US\$ Benefit/ Household /Month	Total Potential Philippine Benefit (Million US /month)
Cheaper Lumens (per HH)	37	37	147
Cheaper Radio/TV (per HH)	19	19	77
Education (per Employed Adult)	6	20	80
Time Savings (per HH)	24	24	97
Busuness Productivity	36	8	30
(per Business only)			
Total (excl. Lumens)			284

	Potential Ben with No	efit for o Electri Shutan	15,000 city
Benefit/Gain	USS Benefit/ Unit Month	US\$ Benefit/ Househol d/Month	Total Potential Bhutan Benefit (Million US\$ /month)
Cheaper Lumen	ıs (per		, ,
With Access	"Ellik. "Likhlards: 24236-51	17	9.02
Without Access	\$	13	2.35
Business Produ	ctivity	23	1.20
(per Business or	1ly)		
Labor Income S (per Employed .	Saved 0.53 Adult)	1	0.01



- Benefit assessment techniques can be applied in different energy programs
- Such techniques are long overdue in evaluating social infrastructure projects
- They offer better understanding of the relationship between social and infrastructure projects and development outcomes.







	e ^{r al} huara		
		OPERATIONAL EXPERIENCE SATS	

	X	PROGRAMS & INVESTMENTS PREPARED AND MANAGED USING PARTICIPATORY APPROACHES HAVE HIGHER RATE OF SUSTAINABILITY (LEARNING FROM THE DRINKING WATER SECTOR)	
	*	USE OF PARTICIPATORY APPROACHES CONTRIBUTES TO BETTER FUNCTIONING & SUSTAINED SYSTEMS AND SERVICES	
	*	USE OF PARTICIPATORY APPROACHES COSTS LESS THAN 2% OF OUTLAYS	
	*	TIME SPENT UPFRONT FOR CONSULTATION & INVOLVEMENT OF STAKEHOLDERS PROVIDES INSIGHTS, RESOLVES ISSUES AND SAVES TIME LOST IN FURTHER STAGES OF PROGRAM DEVELOPMENT AND IMPLEMENTATION	
4	*	USE OF PARTICIPATORY APPROACHES HELPS BUILD OWNERSHIP AND ACCOUNTABILITY	_







		THE CAMBODIA INITIATIVE THE OPERATION
	THE PROCESS	PARTNERSHIP BETWEEN WORLD BANK, MINISTRY OF MINES & ENERGY, CAMBODIA, WINROCK FOUNDATION & THE MALLIKA CONSULTANTS
	THE METHODOLOGY	TWO ESTABLISHED COMPLIMENTARY METHODS – PARTICIPATORY ASSESSMENTS (PAs) & SOCIO- ECONOMIC IMPACT SURVEYS (SIS) COMBINED FOR QUALITATIVE & QUANTITATIVE ANALYSIS
	THE OUTPUTS	*DEVELOPED A USER CENTERED M & E FRAME WORK FOR THE RENEWABLE ENERGY COMPONENT OF THE PROJECT
		*BUILT CAPACITY FOR PAS AMONG LOCAL INSTITUTIONS & EXPERTS
		*SENSITIZED GOVERNMENT ON THE DEMAND RESPONSIVE, PARTICIPATORY APPROCAHES AT POLICY LEVEL, ENCOURAGING RESPONSE
	THE COSTS	• APPROXIMATELY 0.6% FOR DESIGN OF M&E FRAMEWORK FOR THE PROPOSED 17 MILLION DOLLARS RENEWABLE ENERGY COMPONENT
8		* RECURRING COSTS OF SIA FOR FURTHER STAGES OF IMPLEMENTATION AND M&E (NELIGIBLE, AT ABOUT \$ 999 PER COMMUNITY)



		CAM M &	BDIA IN E IN TH	ITIA ⁻ E PR		ГСҮС	LE	
M & E COMPONENT	PRE	PARATION	DESIG		IMPLEME	VTATION	POST. IMPACT 2	PROJECT
PARTICIPATORY COMMUNITY ASSESSMENT	EXTENSIVE ASSESSMENT TO IDENTIFY PRIORITY NEEDS		EXTENSIVE PARTICIPATORY ASSESSMENT TO SHAPE PROJECT DESIGN		LESS INTENSIVE FOLLOW-UP ASSESSMENTS		ANALYSIS AND DOCUMEN- TATION OF PROJECT IMPACTS	
SOCIO-ECONOMIC IMPACT SURVEY		PILOT SURVEYS DESIGN BASED ON NEEDS IDENTIFIED IN PARTICIPATORY WORK		MARKET SURVEY		BASE LINE AND FOLLOW-UP SURVEYS		ANALYSIS AN DOCUMEN- TATION OF PROJECT IMPACTS
10		1	<u> </u>	1			1	






		CAVEATS
	USING PARTICIPATORY APPROACHES MEANS	BUSINESS NOT AS USUAL
	COMMITMENT & POLITICAL WILL	ESSENTIAL & CONSISTENT
	NEED TO GO WITH EYES OPEN	EFFORTS TO SUIT LOCAL CAPACITY & RESOURCES
14	BUDGETS FOR SIA ACTIVITIES	DEFINED & SECURE

				CA	VEATS	
	CONSISTENT	ATTENTION T	O SIA TH	ROUGHOUT PROJI	ECT CYCLE	
	STAGE	PREPARATION	DESIGN	IMPLEMENTA-TION	ASSESSMENT	
	CONVENTIONAL M&E					
15	COMBODIA M&E APPROACH					









IN GHAN	A		
TYPE OF FUEL	1983	1990	2000
GASOLINE	207000	351000	410000
KEROSINE	132000	172000	173000
DIESEL	252000	308000	412000
RFO	37000	19000	50000
LPG	3000	7000	26000
ELECTRICITY	308000	411000	529000
WOODFUEL	2339000	3745000	4795000
CHARCOAL	0	414000	674000
* consumption in toe		**source: PE	TROTECH





FUEL TYPE	% GROWTH PER YEAR
GASOLINE	1.5 - 4.0
KEROSINE	0.2
DIESEL	1.2 –1.3
RFO	0.6
LPG	14.0
ELECTRCITY	10
WOODFUEL	2.5 - 3.0
CHARCOAL	3.0 - 5.0

GHANA'S LPG SOURCE LPG is produced from the Tema Oil Refinery(TOR) It is a mixture of 70% propane and 30% butane The country currently requires about 45,000 barrels of crude per day About 27% of total export earnings spent on petroleum products in 2000

YEAR	DEMAND	PRODUCTION	IMPORTS	EXPORTS
	'000 kg	'000 kg	'000 kg	'000 kg
1981	6,388	6,809		162
1982	6,529	7,085	-	141
1983	3,098	3,251		0
1984	4,351	4,708	—	663
1985	4,137	5,732	-	987
1986	4,713	6,243		1,510
1987	4,627	6,447	=	1,692
1988	4,939	5,861	_	240
1989	6,387	6.895		885

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According to the Ghana Living Standards Survey (GLSS) of 1988:

- Only 4.8% of the population in Accra used LPG.
- Only 0.8% of the population in other urban areas used LPG.
- Nobody in the rural areas used LPG.

COUNIRY	POPULATION	'000 kg	PER CAPITA in
			kg
GABON	1,100,000	10,355	9.4
SENEGAL	7,000,000	29,500	4.2
CONGO	1,990,000	1,103	2.2
CAMEROUN	11,000,000	23,035	2.1
COTE d'IVOIRE	11,200,000	22,844	2.0
NIGERIA	110,000,000	108,000	1.0
GHANA	13,900,000	6,387	0.5
TOGO	3,400,000	727	0.2
BURKINA FASO	8,500,000	1,641	0.2
MALI	7,900,000	788	0.1
source: PETROTECH			



THE GHANA LPG PROMOTION

- The promotion started in 1990
- Short term aim to eliminate flaring of LPG at TOR
- Long term aim ensure households that use charcoal and firewood for cooking adopt use of LPG.



LPG PRICE P		MID (90s)
COST DESCRIPTION	Codic/Irg	TISS/lrg
	<u>(07.02</u>	0.34
1. Ex- remnery price	007.92	0.20
2. Filling plant expenses	53.86	0.02
3. Promotional levy	61.18	0.03
sub total	722.96	0.31
4. Dealers margin	24.38	0.01
5. Marketers margin	33.80	0.02
6. Transporters margin	47.27	0.02
Ex-Pump Price	823.40	0.36
Home delivery service charge		
5 kg cylinder	80.00/kg	0.04/kg
14.5 kg cylinder	75.86/kg	0.03/kg
	Source:	MINISTRY OF ENERGY

SOME OF THE PROMOTIONAL STRATEGIES

- LPG Promotion Unit set up within the Ministry
- Ministry was primary investor and fixes the prices of LPG.
- Promotional levy used for creating required awareness and demand for the increased use of LPG.
- Door to door LPG delivery Service Providers charge additional fee for delivery gas to individual residences.
- Cylinders given out to households at amortized price and part of cost was recouped when gas was purchased.
- Government institutions eg. Hospitals, boarding schools etc were encouraged to convert their kitchen to LPG burners.
- Commercial cooked food sellers were given assistance.

SOME OUTPUTS FROM THE PROGRAMME

- Increase in cylinders in circulation from 80,000 in 1989 to 600,000 in 1997.
- Overall LPG consumption increased from 5,267 MT in 1989 to 32,000MT in 1996.

- Two (2) LPG cylinder Manufacturing Plants are operational in Ghana with total production capacity in excess of 135,000pieces of a combination of 5kg and 14.5 kg cylinders.
- The private sector has established many LPG distribution outlets for both cars and domestic cylinders.
- Elements of traditional cook stoves have been used as basis for the design of locally manufactured LPG stoves.

L	LPG IN (GHANA	IN kg (19	90 – 199 4	l)
REGION	1990	1991	1992	1993	1994
(NATIONAL)	(0.43)	(0.67)	(0.92)	(1.30)	(1.60)
GREATER ACCRA	2.90	4.24	5.93	8.06	10.59
ASHANTI	0.28	0.46	0.58	0.80	0.71
WESTERN	0.17	0.26	0.34	0.62	0.62
CENTRAL	0.14	0.25	0.33	0.56	0.46
EASTERN	0.06	0.15	0.21	0.37	0.45
VOLTA	0.03	0.08	0.11	0.29	0.43
NORTHERN	0.06	0.08	0.13	0.20	0.20
UPPER EAST	0.02	0.08	0.07	0.10	0.15
BRONG AHAFO	0.03	0.06	0.11	0.11	0.11
UPPER WEST	0.00	0.02	0.06	0.04	0.05



INOJECI	(2002-	2004)	
REGION	2002 ('000kg)	2003 ('000kg)	2004 ('000kg)
(NATIONAL)	(69,208)	(73,423)	(77,454)
GREATER	44,539	45,842	47,013
ASHANTI	7,549	8,282	8,959
WESTERN	3,624	3,976	4,301
CENTRAL	2,646	2,903	3,140
EASTERN	3,824	4,196	4,196
VOLTA	3,643	4,264	4,927
NORTHERN	1,673	1,959	2,263
UPPER EAST	466	545	630
BRONG AHAFO	956	1,119	1,294
UPPER WEST	289	335	391



-UP FOR LPG (SIN	CE DEC. 2001)
BUILD OP (ceals)	0.15
1,217.39	0.15
182.61	0.02
100.00	0.01
321.20	0.03
1,731.20	0.21
109.70	0.01
136.03	0.02
193.07	0.02
30.00	0.01
2,200.00	0.27
500.00 (max) per bottle	0.06
1,400.00 (max) per bottle	0.17
	UP FOR LPG (SIN BUILD UP (cedis) 1,217.39 182.61 100.00 321.20 1,731.20 109.70 136.03 193.07 30.00 2,200.00 500.00 (max) per bottle 1,400.00 (max) per bottle

FUEL COST VERSUS % HOUSEHOLD USAGE

TYPE OF FUEL	FUEL COST	FUEL COST	%OF
	(cedis/kwh)	(US\$/kwn)	USE
FIREWOOD	42	0.005	62.5%
CHARCOAL	115	0.014	30.6%
LPG	182	0.022	4.1%
KEROSINE	209	0.025	1.1%
ELECTRICITY	400	0.048	0.4%
CROP RESIDUE	0 - 20	0-0.002	1.3%

*SOURCE: W. A. TOGOBO/MINISTRY OF ENERGY

NOTE: THE MOST EXPENSIVE FUEL IS THE LEAST USED BY HOUSEHOLDS

RESOLVING ISSUE OF FUTURE SUPPLIES

- TOR built in 1963 with capacity of 28,000 bpsd
- Expansion and modernisation work carried out in two phases
- Phase 1 revamping and expansion to process 45,000bpsd
- Phase 11 installation of secondary conversion plant (RFCC)



- When RFCC becomes operational, there will be excess LPG for export as TORs capacity will be increased from 27,713MT to about 166,873MT
- (source: Samsung Revamping Studies/Foster Wheeler USA Corporation Report)

JOKIN	ST ОF СС Г. 2002)	FUEL (SEP	COMPAR
US\$	CEDIS	DESCRIPTION	FUEL
3.96	32,500	14.5 kg bottle	LPG
1.07	8,800	1 Gallon	KEROSINE
0.18	1,500	1 bundle of 9kg (Accra)	FIREWOOD
4.88	40,000	100 units (50-300 tariff category)	ELECTRICITY
11.95	98,000	100 units (above 300 tariff category)	ELECTRICITY
5.49	45,000	1 bag of 46 kg (Accra)	CHARCOAL

According to the Ghana Living Standards Survey (GLSS) of 2000:

- 22.7% of the population in Accra use LPG
- 5.2% of the population in other urban areas use LPG
- 0.6% of the population in the rural areas use LPG

LESSONS

- LPG is mainly used by medium to high income households
- Majority of the poor use the cheapest fuel despite the inconveniences
- Price of fuel is a major determining factor for fuel choice for the majority (the poor)
- Out of about 18.5 million Ghanaians, over 16.8 million have their meals cooked from wood fuel (firewood and charcoal)

RECENT MONITORING OF LPG OPERATIONS

- Done by the Energy Commission
- Monitor / enforce compliance with regulations
- Ascertain Best Operating Procedures (BOPs) and Job Safe Practices (JSPs) in supply, storage and marketing of LPG.

SHORT COMINGS IDENTIFIED

- OMCs have different sets of rules
- Deficiencies in LPG appliances (eg cylinder accessories), handling of appliances lack of training for personnel
- No National regulations, codes of practice and guidelines for Good Safety Practices in the LPG industry yet
- High cost

STEPS BEING TAKEN

- On-going consultations towards the development of a National LPG code of Practice and Guidelines for Good Safety Practices.
- The final product is expected to be guidelines not only for safe handling and transportation of LPG cylinders but also the following:



- b. Handling and storage of LPG cylinders and accessories of commercial installations
- c. Handling and storage of LPG cylinders and accessories at domestic installations
- d. Domestic/commercial/industrial cylinders
- e. LPG retail outlets and filling plants
- f. Low pressure regulators
- g. Mobile LPG filling plants

THANK YOU FOR

YOUR ATTENTION













































Government's Motivation to Electrify Rural Areas

- Health, Education, and other Infrastructure facilities have contributed towards a comparatively high quality of life when considered in relation to the per capita income.
- The Human Development Index (HDI) for Sri Lanka is substantially above the average HDI value for developing countries.
- To maintain this trend electricity is considered an important facility.

CEB'S STRATEGY FOR RURAL ELECTRIFICATION IN SRI LANKA

- Identify the electrified and unelectrified villages in rural areas
- △ Assess socio-economic situation of the villages
- ☐ Identify prospective developments of the village
- ☐ Define the selection criteria (based on a 12% IRR)
- ☐ Identify villages for grid extension based on a feasibility study
- ☑ Extend power lines to the village

The CEB has projected that 80% of households will get the grid 2010

Government Initiatives on Off-Grid Energy

- Government has played a pivotal role in introducing technologies such as solar PV, wind power, biogas and efficient cookstoves
- This enabled private sector and NGOs (with micro financing) to drive the commercial solar PV market in rural areas, for instance
- Sri Lankan government, World Bank, GEF project – Energy Services Delivery Project has catalyzed off-grid and renewable energy developments from 1997 (US \$ 53 million)

Energy Services Delivery Project (1997-2002)

- Provide financing through private banks to companies marketing solar PV systems, developers of off-grid micro hydro systems and grid connected mini hydro
- Off-grid projects have a GEF grant of US \$ 100 per solar PV system and US \$ 400 per kW for micro hydro project
- Has catalyzed private public partnerships in rural electrification –
- New project Renewable Energy for Rural Economic Development (RERED) commenced in July 2002

Community Electrification Programmes

- Micro Hydro (also known as Village Hydro) programme was initiated by ITDG by mobilizing village communities and introducing simple technology
- Over 130 such projects exists operated through an Electricity Consumer Society (ECS)
- Last 20 projects have been commercially funded through the ESD project







Barriers to Development

Ten years of off-grid energy market development has created much awareness of the role of technologies such as solar PV and micro hydro.....However:

There are yet some general barriers at the government level where off-grid energy is not incorporated into mainstream energy policy, which only focuses on large scale generation and grid extension – Politicians yet offer grid extension for votes


Barriers continued....

 Funding will be a problem once the World Bank projects end (The ESD and the new RERED project has technical assistance funds for a project facilitator to assist the community from the start to commissioning)

Public Private Partnerships

It is accepted that the private sector or CBOs alone cannot reach the entire market and also have an impact on rural livelihoods. So, Public/Private Partnerships are essential.

- Micro (village) hydro projects are good examples to work with to further develop the area so they become independent of the donor aid programmes
- The Uva province solar PV project is a good example of private/public/MFI partnerships

How Have All These Initiatives Effected Poverty ?

- There is a common notion that electrification brings economic benefits
 - Productivity growth in Industries
 - Substantial savings in fuel & maintenance costs
 - Able to engage in more productive hours
- In reality this not the case in the short-term even in areas where the CEB grid has been extended to

Effect on Poverty However, there are localized benefits to households Improvement in quality of life Better health from improved indoor air quality Children can study longer hours resulting in better performance Access to information and entertainment (TV/Radio) Security These would bring about longer term benefits to the community leading to future economic growth



А	Matrix	for	Assessing	Effect	on F	over ty
			0			2

Source: MEND Project funded by UK-DFID (Ghana, Bangladesh, Columbia, Sri Lanka) – June 2002

Criteria	Solar PV Household	Micro Hydro	Grid
Income	Х	XX	XXX
Water			XX
Transport			
Employment	X	X	XX
Energy	XX	XX	XX

Criteria	Solar PV Household	Micro Hydro	Grid
Education	X	X	x
Food Security		X	XX
lealth	XX	XX	XX
lousing			

A Matrix for Assessing Effect on Poverty

Source: MEND Project funded by DFID (Ghana, Bangladesh, Columbia, Sri Lanka) – June 2002

Criteria	Solar PV Household	Micro Hydro	Grid
Crime/	X	Х	XX
Security/			
Peace			
Sanitation			XX
Social Exclusion	X	X	XX





 Sri Lankan Government, World Bank and GEF project as a continuation of the ESD project established to improve quality of life in rural areas by providing electricity access to remote communities through off-grid renewable energy technologies through private sector participation.

The RERED Project Goal

 Provide electricity access to 100,000 households and 1,000 rural small and medium enterprises and public institutions directly through off-grid solar, community hydro and biomass systems, leading to measurable increases in household income and quality of life.

This 5 year US \$ 133 million project commenced in July 2002 as the ESD project ended



In Conclusion

- There is a new paradigm in energy supply with offgrid technologies where the private sector and NGOs and not government utilities alone are playing a role
- There is decentralization and more end-user participation in the process
- Improving of rural livelihoods will also require creative thinking to break old ways of doing things and involving the stakeholders to participate and make decisions – governments have to play the role of facilitator and promoter to enable this

















Zimbabwe Power Sector							
Demand	Demand Statistics						
Maximum Demand	2000 MW	10. 19					
Energy Sent Out	GWh	100×					
- Internal gen.	7500 (60%)						
- Imports	4800 (40%)						
	<u>12300</u>						
Energy Sold	GWh						
- Ind. & Commerce	5900 (55%)						
- Mining and Agric.	2700 (25%)						
- Domestic	2100 (20%)						
	10700						

Zimbabwe Power Sector Technical performance indicators

Indicator	1999	2000	20012
Total System Losses (% sent out) (target 10-12%)	12.8	13.3	14.6
Generation Plant Availability (%) (target 90%)	65.8	72.5	75
Days for new connections (target 30 - 45 days)	35	23	32
Electrification Level(%) (target 100% in 2040)	39	40	42

Zimbabwe Power Sector Financial Statistics					
	2001	2000	1999		
Revenue	510.0	432.7	253.3		
(US\$ million)	(255.0)				
Net Profit	89.4	65.2	(44.1)		
(US\$ million)	(44.7)				
Ave. Price	4.90	3.85	2.26		
(USc/kWh)	(2.45)				
Current Ratio	0.72	0.62	0.58		
Debtors (days)	28	33	32		

Profitability Performance (1990/91 to 2000/01)						
Year	Net Surplus (US\$mil)	Year	Net Surplus (US\$mil)			
1990	(0.8)	1996	10.0			
1991	(24.1)	1997	9.6			
1992	(14.5)	1998	(174.1)	-		
1993	6.7	1999	(44.1)			
1994	9.9	2000	65.2			
1995	10.0	2001	89.4	menga		



Tariff Rhetoric : Domestic Customer and Political View							
	YearAve	. Price	Year	Ave. Price			
	1990	5.68		31.01			
	1991	6.55	1997	38.21			
	1992	11.60	1998	53.10			
	1993	20.50	1999	90.50			
	1994	24.61	2000	191.70			
	1995	24.61	2001	267.30			

Tariff Reality : Business Customer and Investor View						
Year	Ave. Price(USc/ kWh)	Year	Ave. Price(USc/kWh)			
1990	2.64	1996	2.97			
1991	2.51	1997	3.13			
1992	1.81	1998	1.33			
1993	3.26	1999	2.26			
1994	2.88	2000	3.85			
1995	3.25	2001	4.90 (2.45)			





Revenue and Consumption by customer category

Category	Consu-	Revenue	Numbers(?
ger,	mption(%of	(% of	% of total)
	total)	total)	
Agric	10	15	2.3
Mining	15	15	0.2
Domestic	20	15	88.0
Industry	40	35	0.5
Commerce	15	20	9.0
TOTAL	100	100	100.0





















Impacts of the UNDP Multi-Functional Platform Approach

Income generation for women and men

- Empowering women
- Increasing school attendance for girls and their educational performance
- Access to electricity
 - Access to potable water
 - Opening up opportunities for
 - environmental sustainability through use
 - of biofuels like jatropha oil

S			
		 (2) P	



MDG Goals and Targets	MFP contribution to achieving Goals
Goal 1: Eradicate extreme poverty and hunger	Increased and diversified income for women through greater productivity in agro processing using MFP energy services, and more time and energy to engage in income-generating activities
Goal 2: Achieve universal primary education	Increased school attendance through MFP energy services substituting for child labour and MFP energy services increasing women's income particularly to cover schooling costs
Goal 3: Promote gender equality and empower women	Positive impact on girls' schooling through reducing girls' labour much more than boys' as MFP services target the mechanisation of girl-specific tasks and relatively higher educational performance and attendance for girls, as a result of less time spent on unpaid labour, making it more likely that they transit to secondary education
Goal 7: Ensure environmental sustainability	MFP end-use equipment - the electric pump - can be used to pump water water from closed and cleaned bore holes and wells and use of Jatropha oil (a biofuel) has positive environmental impacts

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Jatropha Platform (AREED/Malifolkecenter) <u>Revenue Streams</u>



- Jatropha fuel for own use and sale to other platforms
- Jatropha oil for soap production
- Sediment for use as fertilizer
- Mechanical energy for milling and peeling rice, millet, etc
- Electricity for battery charging

KITE :

214 Anne D: Slide Presentation Jatropha Platform (AREED/Malifolkecenter) Commercial Appraisal NVESTMENT Equity: US\$ 2,400 Debt: US\$ 12,600 Total: US\$ 15,000 LOAN REPAYMENT PERIOD – 5 YEARS PROJECTED PROFITS Year 2: US\$ 2,150 Year 5: US\$ 13,000

































Annex E: Sectoral Workgroup Presentations

How Can Modern Energy Services Contribute to Poverty Reduction ?

> Guidelines for Sectoral Workgroups 23-24 Oct, 2002



5 Sectoral Groups

- Health
- Education
- SMEs (Small and Micro/Medium Enterprises)
- Agriculture and Water
- Agriculture and Water
- Country delegates from ministries, agencies and donor agencies in charge of energy, environment, finance, gender, private sector and NGOs distributed in the 5 groups

Key Questions & Output

- What are the sectoral priorities for reducing poverty (special emphasis on specified targets in Poverty Reduction Strategy Papers PRSPs) ?
- How can energy services assist in the realization of sectoral priorities and targets ?
- Output: Based on above, list the key energy interventions that should be given priority

Background Material

- Plenary presentations
- PRSP document for each country
- PRSP extracts listing priorities for each sector in each country
- PRSP extracts listing identified energy interventions and targets
- WB/ESMAP publications & Special Issue of Energy Policy Journal on energy services for the poor

5 Sectoral Groups Moderators and Rapporteurs

- Health: Mrs. D. Kayo (BARO 339)
- Education: Mr. S. Mangwengwende (AWASH 341)
- SMEs: Mr. S. Karekezi (GIBE 345)
- Agriculture and Water: Dr. Abeeku Brew-Hammond (HARRAR GRILL)
- Agriculture and Water: Mr. O. Kalumiana (HARRAR GRILL)
- Groups to select rapporteurs


PRSP Priorities - Water

15 poverty reduction actions Grouped in main categories

- 1. Increasing access to safe and clean water & sanitation/Affordability
- 2. Financing water supply & sanitation
- 3. Institutional, legal & regulatory framework/Governance
- 4. Cross cutting issues
- 5. Productive uses

Water Increasing access to safe and clean water & sanitation/Affordability Production _ Treatment Conveyance -----Distribution Conservation & Development _ Quality Monitoring Institutional, legal & regulatory framework/Governance Regulation — Ownership issues (PPP, Linkage to energy), _ Role of Central & Local Govt ----Cross cutting issues ----Gender Agro-forestry/watershed Mgt _



Water

Energy interventions

- Fiscal & Financial incentives/Affordability e.g
 - Smart subsidies
 - Reduce/waive taxes on components
 - Credit
- Private sector involvement
- Promotion/information dissemination
- Incentives for local production of components
- ✓ N.B. These interventions apply to Financing water supply & sanitation; Institutional, legal & regulatory framework

PRSP Priorities - Agriculture

- 28 poverty reduction actions
 - Main elements
 - 1. Productivity/Technology Development & Dissemination
 - 2. Irrigation
 - 3. Agro-processing & marketing/Agri-business
 - 4. Institutional, legal & regulatory framework/Land reforms
 - 5. Finance
 - 6. Cross cutting issues
 - 7. Infrastructure

Agriculture

• Priorities

- a.Productivity/Technology Development & Dissemination
 - Yield per unit (Improved seed, Fertilizer, etc)
 - Agricultural mechanization
 - Quality standards

Agriculture

• Priorities

- b. Irrigation
 - Yield per acre
 - Drought mitigation
 - Cropping period
 - Sustainable markets
 - Food security/Nutrition/Crop diversification
- c. Agro-processing & marketing/Agri-business
 - Value adding
 - Quality control/improvement
 - Preservation & Storage
 - Food security/Nutrition/Crop diversification



- Geothermal

Agriculture

• Energy interventions

- Fiscal & Financial incentives/Affordability e.g
 - Smart subsidies
 - Reduce/waive taxes on components
 - Credit
- Private sector involvement
- Promotion/information dissemination
- Incentives for local production of components
- Reliability

Important considerations

- Agriculture through biomass is a major source of energy
- Water through hydro power is also a major source of energy
- Need for transparency in resource allocation for equity & allocative efficiency





Key MDGs and Relevant Targets for the Health Sector

- MDGs
 - Reduce child mortality
 - Improve maternal health
 - Combat HIV/AIDS, malaria and other diseases
- Other Relevant Targets
 - Reduce people without access to clean, safe drinking water
 - Increase benefits of new technologies, particularly information, communications, technologies and education

Linking the MDGs and Health Sector Priorities		
MDGs/Targets	Health Sector Priorities	
Reduce Child Mortality and Improve Maternal Health	-Improve life expectancy -Reduce maternal mortality rate -Improve health service delivery, including staff retention, motivation and training; lab services -Reduce fertility rates -Reduce fertility rates -Reduce waste and environmental pollution -Reduce stunted growth -Reduce indoor air pollution	

Linking the MDGs and Health Sector Priorities (Cont'd)

Health Sector Priorities
-Increase immunization coverage -Reduce HIV/AIDs and other communicable diseases

Linking the MDGs and Health Sector Priorities (Cont'd)

MDGs/Targets	Health Sector Priorities
Reduce people without sustainable access to safe drinking water	-Increase access to clean water and rehabiliation and protection of water points
Increase benefits of new technologies, particularly for information, communications, telecom and education	-Increase access to ICT and communication networks for health data and information

Energy Uses and Technology Options

- Uses
 - Electricity
 - Heating
 - Cooling
 - Cooking
 - Shaft Power
- Technologies
 - Renewable energy, energy efficiency, grid extension, diesel, kerosene, LPG, modern biomass, municipal solid waste, batteries, hybrids, inter-fuel substitution



Health Working Group Participants

- Mrs. Dorcas Kayo, Moderator
- Mr. Godfrey Turyahikayo, Rappoteur
- Mr. Didelis George Dakpallah, Ministry of Health, Ghana
- Dr. Faustin Njau, Ministry of Health, Tanzania
- Mr. Sitra Mulepo, Ministry of Health, Uganda
- Mr. Freddie Mubanga, National Food & Nutrition Commission, Zambia
- Mr. Joel Imitira, Ministry of Energy, Kenya
- Mr. Kingsley Nana Arthur, Ministry of Finance, Ghana
- Mr. Joel Maweni, World Bank
- Ms. Rekha Dayal, Mallika Consultants, India
- Ms. Judy Siegel, GVEP Consultant, US
- Mr. Maxwell Mapako, AFREPREN, Kenya
- Mr. Peter Davies, Dfid, UK





Workgroup Report

SMEs

- Small, micro, medium enterprises and informal sector.
- Major off-farm employer of the poor in rural areas as well as in peri-urban zones.
- Provides enterprise creation opportunities for the rural and urban poor.
- One of the few sectors that is growing rapidly in Africa.
- Typical SME activities include a wide range of businesses involved in agroprocessing, service sector and manufacturing.

Priority Energy Interventions for the SME sector

- Current energy policies target large enterprises. Need for new energy policies that are supportive of (and involve) SMEs.
- Bulk of energy subsidies captured by large formal sector enterprises. Need smarter energy subsidies that support SMEs through the provision of:
 - Micro credit finance services
 - Training and capacity building
 - Adaptative R&D that promotes energy technologies appropriate for SMEs

Priority Energy Interventions for the SME sector

- Should give preference to energy interventions that involved SMEs associations and related small/micro finance institutions.
- In addition to promoting improved electricity services for SMEs, attention should be given to other forms of energy e.g. bioenergy, solar, wind, animate power and fossil fuels.

Priority Energy Interventions for the SME sector

- Promote involvement of SMEs in energy service provision. For example, production, distribution, and maintenance of energy devices and appliances such as improved stoves, solar dryers, solar water pasteurizers, solar water heaters, windpumps, hydro rams and solar water heaters.
- Support appropriate institutions that facilitate quality assurance, training and capacity building aimed at SMEs involved in the energy sector.



• Because of the target groups who are largely traditional rural and peri-urban communities, SME energy interventions should take account of key cultural and gender issues.

Workgroup on Education Sector

Report of workgroup session 23rd October 2002

Introduction to PRSP priorities

- Representatives from Uganda and Ghana provided a background to their country PRSP priorities
- Uganda
 - Major priorities are: access, quality and equity
- Ghana
 - Major priorities are access, quality and equity

Energy inputs to achieving PRSP priorities for education

• Priority: universal access to primary education

- Improved modern energy services could tackle the low level of enrolment for girls by reducing household chores such as collecting firewood
- Modern energy could reduce the ill-effects of inefficient biomass energy use on the health of children
- Energy for productive uses in schools could reduce the cost of education and therefore increase enrolment

Energy inputs to achieving prsp priorities for education

- Priority: improving the quality of education
 - Reducing teacher turnover ratio and improving teacher/pupil ratio
 - Modern energy could allow for improvement of facilities in schools which could lead to retention of teachers, e.g. internet access could facilitate distance learning for teachers
 - Provision of improved energy services in remote areas could reduce the number of teachers in deprived areas due to lack of modern energy (electricity)
 - improved energy services to schools is important for powering equipment that can improve the quality of education, e.g. provision of LPG could enable schools to undertake laboratory experiments

Energy inputs to achieving prsp priorities for education

- Priority: improving equity in provision of education
 - Reducing domestic chores for the girl child by providing improved energy services could increase the enrollment of girls in school

Experience in providing energy in the education sector: Uganda

- Secondary schools took the initiative to provide energy for themselves
- Heavy involvement of the PTA
- Missionaries also played important role
- Some village banks have provided financing





- For new grid extension, use optical fibre cable to reduce costs
- Link school enrolment to production of food in schools, which could be enhanced by providing energy for irrigation
- Need to interact with other sectors (water, health, agriculture) in preparation of energy programs for education, to ensure inter-linkages between sectors and minimize overlaps
- Undertake energy needs assessments for education to get a better understanding of where interventions are needed and to be able to prioritize them



- Energy needs assessments for the education sector could also be useful in the following ways:
 - Better use of fixed assets, e.g. use of classrooms in the evenings for other activities
 - Teacher training and extra classes for students
 - Quasi replacement of text books by internet

Other emerging issues

- Energy enhances efficiency of schools through double shift system especially in urban and peri-urban areas
- Could result in savings for classroom buildings
- Education sector provides unique market for energy service providers
- Include capacity building on energy technologies in energy projects for the education sector
- Challenges of energy provision to education sector include:
 - Lack of accurate and timely information on existing opportunities
 - Financing
 - Difficult to create government and private sector partnerships

Annex F: Country Workgroup Presentations

How Can Modern Energy Services Contribute to Poverty Reduction ?

Country Workgroups 24-25 Oct, 2002























REVIEW OF SECTORIAL KEY TARGETS

- ★ Representatives from the various sectors assessed the various targets in their specific sectors and prioritized them taking into consideration how the sectors could be involved in attaining the targets.
- ▲ In all six targets were prioritized out of a total of sixty-nine enumerated from five sectors in the summary of the Ghana PRSP provided.













NO	REQUEST	SECTOR RESPONSIBLE	
1	Assistance to conclude the Action Plan for energy intervention for Poverty Reduction Support for LPG promotion program	MINISTRY OF ENERGY	
2	Support MFP Programme in Ghana	MINISTRIES OF TRADE & INDUSTRY/ AGRIC	
3	Support to deepen SMEs & Productive uses of electricity in already electrified areas	MINISTRIES OF TRADE AND INDUSTRY AND AGRICULTURE	

REQUESTS TO DE	VELOPMENT PARTNEF CONT'D	RS FOR ASSISTANCE	Sol Sol Sol
NO	REQUEST	SECTOR RESPONSIBLE	
4	Support to increase scale of agro processing in rural areas	MINISTRY OF FOOD AND AGRICULTURE	CONSTRUCTION OF THE
5	Support for small water systems in rural and peri- urban areas (boreholes, mechanised systems etc)	MINISTRY OF WORKS AND HOUSING AND GHANA WATER COMPANY LIMITED	6888
6	Support of modern energy services for schools and health centers in rural areas	MINISTRIES OF HEALTH AND EDUCATION	E.
COORDINATING ROLE		MINISTRY OF ENERGY/ MINISTRY OF FINANCE	

Ene	ergy Interventions	Activities	Timing	Comments
•	Accelerated access to the rural electrification programme in the country through: Grid extension Off-grid options Mini and Micro hydro	 Carry out feasibility studies on potential options Include cost of connection in future REP programmes Address the legal and regulatory barriers to the entry of new players (including barriers to SMEs operating in the energy sector) Provide affordable energy services to rural trade and production centers Promote decentralized energy services Promote Research and Development into new and renewable sources of energy Disseminate information on investment opportunities 	 Immediate Long term Long term Long term Inmediate Immediate Medium term 	
2.	Provision of financial and fiscal incentives to promote electrification	 Introduce smart subsidies Reduce/waiver taxes on components Establish credit schemes 	 Long term Medium term Long term 	
3.	Sustainable Management of Biomass Resources	 Promote agro-forestry Promote the wider adoption and use of efficient energy stoves, charcoal briquette stoves and other biomass energy recovery technologies 	ImmediateImmediate	Cross- cutting issue
4.	Provision of affordable energy services (LPG, Kerosene) by the private sector to the rural areas	 Provide the necessary fiscal and financial incentives for the private sector to deliver LPG and kerosene to remote areas Set up of needs based filling points for LPG distribution Standardize LPG valves and regulators 	 Medium term Long term Long term 	LPG study has commence d
5.	Reliability of energy services	 Create appropriate balance of systems in essential services Build local capacity for O&M of RETs Create appropriate backup services including spare parts for energy technologies 	ImmediateImmediateMedium term	Cross- cutting issue
6.	Energy needs assessments	 Under take institutional needs assessment (health, education institutions in remote areas) Select and adopt appropriate technology options Promote an integrated approach to energy supply 	 Immediate Immediate medium to long term 	
7.	Improve efficiency in the distribution sector in the interconnected system	 Reduce costs of supply to SMEs Reduce technical and non-technical losses Reduce O&M losses 	medium to long term	

KENYA WORKGROUP REPORT

Key:		
Immediate	-	Between now and six months
Medium term	-	Between six and twelve months
Long term	-	More than twelve months
















Sector	Priority Areas	Energy Interventions	Short-term Action Plan (3-6 months)
Agriculture	Increasing production and productivity	 Irrigation Agricultural mechanization Technology development and dissemination 	 Information and education Energy needs assessment
	Accessing markets	 Agro-processing and marketing Capacity Building for farmer-based organizations Market information Standards and Quality control Credit fund 	- Preservation and Storage
Education	Expanding access	- Providing Lighting	- Undertake energy needs assessments
	Improving Quality	- Providing energy for water pumping	in schools
	Ensuring Equity	 Providing energy for ICT 	 communication Capacity building for headquarter
Health	Improving maternal and reproductive health	 Energy for lighting Energy for refrigeration Set up blood banks Energy for pumping 	 Develop specifications for energy packages Selection of beneficiary health units Capacity building at district level
	Control of HIV/AIDS and other communicable diseases	 Energy for water heating Improved stoves Energy for communication 	
	Improved nutrition and child health	-	
	Increased health education and promotion		
	Improved communication		
	Attraction and retention of skilled manpower		
Water	Increasing access and affordability to safe and clean water and sanitation	 Fiscal & Financial incentives/Affordability e.g Smart subsidies Reduce/waive taxes on components Credit Private sector involvement Promotion/information dissemination Incentives for local production of components 	 Energy needs assessment Establish energy packages Undertake 5 PV pilot schemes for water supply Undertake 5 windmill pilot schemes for water supply
	Financing water and sanitation energy packages		
	Developing adequate institutional, legal and regulatory framework/governance		
	Handling cross-cutting		

COUNTRY WORKGROUP SESSION - UGANDA

	issues of gender and environment, etc Highlighting productive uses of water for income generation		
SMEs	Expand the outreach of micro finance services to districts and locations Improve training and capacity building Formulate new energy polices that are supportive of SMEs Improve credit lines or equity to make sustainable micro finance institutions	 Energy for heating, lighting, agro- processing, ICTs, cottage industries, mechanization, cooking Initiate Research & Development for energy technologies appropriate for SMEs Support appropriate institutions that facilitate quality assurance, training and capacity building of SMEs Provide appropriate and affordable energy technologies for SMEs 	 Revise investment and tax policy to promote SMEs Carry out capacity building and sensitization of SMEs on opportunities available for self power generation and distribution Carry out needs assessment activities
	Promote micro export	- Review of energy policies	

How Can Modern Energy Services Contribute to Poverty Reduction ?

Ethiopia Country Workgroups 24-25 Oct, 2002

WSDP (2002 – 2016) components

- Irrigation (small, medium and large schemes)
- Drinking Water Supply & Sanitation (urban & rural)
- Hydropower Development (small, medium & large schemes)
- Water Resources Management
- Institutions and Capacity Building.





Irrigation & Provision of Potable Water

- Detailed assessment + pilot schemes
 - Testing various energy technology options for raising water (wind, PV, diesel, grid electricity, animate power, multi-purpose micro hydro installations for electricity generation and pumping water for irrigation and potable purposes)
- Potable Water for Drinking
 - Technology options for water purification include sand filters, solar pasteurizers, UV light, aeration

Agroproc	essing
 Grinding grain Diesel Electricity Hydro-mechanical Wind 	 Dryers Solar dryers Diesel Electricity Biofuels
 Storage Transportation Maintenance of Lighting 	n of workshop equipment

Detailed Assessment of Pilot Schemes for Irrigation and Potable Water

- Lead institutions
 - Regional Agriculture, Water and Energy Bureaux
 - Ethiopian Rural Energy Development and Promotion Center
- Time frame
 - 6 months

Detailed Assessment of Pilot Schemes for Irrigation and Potable Water

- Form of donor support – Technical and financial
- Budget (subject to formal Government approval)
 - US\$ 540,000 for detailed assessment of 6 sites suitable for pilot schemes

Annex G: Participants Feedback Questionnaire: Results and Analysis

(Results of 36 out of 71 participants)

		% 4 or			
Questions	Mean ¹	5^{2}	Lowest ³	Highest ⁴	N^5
Relevance of this workshop to your country's needs	4.5	97.1%	2	5	35
Overall usefulness of this activity	4.5	94.3%	2	5	35
Relevance of this activity to your current work or functions	4.5	90.9%	3	5	33
Improvement in your appreciation of the complexity of the issue	4.3	88.9%	2	5	36
Usefulness for you of the Country workgroups	4.2	87.9%	3	5	33
Relevance of this workshop to your work	4.3	86.1%	3	5	36
Extent to which you found areas that could lead to further cooperation with other on the issue	4.0	85.3%	2	5	34
Usefulness for you of the case studies in part 3 of the program	4.1	82.9%	3	5	35
Usefulness for you of the Sector workgroups	4.1	82.9%	2	5	35
Extent to which the content of this activity matched the announced objectives	4.2	82.9%	3	5	35
Usefulness for you of the panels expose	4.1	82.4%	1	5	34
Relevance of the workshop's announced objective to your needs	4.2	80.6%	2	5	36
Improvement in your understanding of the position of other groups involved in the issue	4.2	80.0%	1	5	35
Focus of the workshop on the issues that you need to address	4.1	80.0%	3	5	35
Relevance of this workshop to your institution/organization's needs	4.0	80.0%	3	5	35
Usefulness for you of the discussions and questions and answers sessions	4.1	80.0%	3	5	35
Usefulness for you of the reports from the Sector workgroups	4.1	80.0%	3	5	35
Extent to which you found new sources of information useful for your work	4.1	80.0%	3	5	35
Effectiveness of the activity in maintaining your interest during its full duration	4.0	77.1%	3	5	35
Workshop's help in enabling you to review your current plan with broader perspective	4.0	77.1%	3	5	35
Usefulness for you of the presentations in part 1 and 2 of the program	4.0	76.5%	1	5	34
Usefulness for you of the reporting from the Country	4.0	75.0%	2	5	36
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3.9	74.3%	2	5	35
3.9	73.5%	1	5	34
4.1	72.7%	3	5	33
3.9	71.9%	2	5	32
3.9	69.7%	2	5	33
3.8	64.7%	3	5	34
3.9	63.9%	1	5	36
3.8	61.8%	2	5	34
3.8	61.3%	2	5	31
3.6	54.5%	2	5	33
3.5	45.5%	2	5	33
3.3	42.9%	1	5	35
2.9	40.0%	1	5	35
	 3.9 3.9 4.1 3.9 3.9 3.8 3.9 3.8 3.8 3.8 3.6 3.5 3.3 2.9 	3.974.3%3.973.5%4.172.7%3.971.9%3.969.7%3.864.7%3.963.9%3.861.8%3.861.3%3.545.5%3.342.9%2.940.0%	3.9 $74.3%$ 2 3.9 $73.5%$ 1 4.1 $72.7%$ 3 3.9 $71.9%$ 2 3.9 $69.7%$ 2 3.8 $64.7%$ 3 3.9 $63.9%$ 1 3.8 $61.8%$ 2 3.8 $61.3%$ 2 3.6 $54.5%$ 2 3.5 $45.5%$ 2 3.3 $42.9%$ 1 2.9 $40.0%$ 1	3.9 $74.3%$ 2 5 3.9 $73.5%$ 1 5 4.1 $72.7%$ 3 5 3.9 $71.9%$ 2 5 3.9 $69.7%$ 2 5 3.8 $64.7%$ 3 5 3.9 $63.9%$ 1 5 3.8 $61.8%$ 2 5 3.8 $61.3%$ 2 5 3.6 $54.5%$ 2 5 3.3 $42.9%$ 1 5 2.9 $40.0%$ 1 5

Notes:

- 1 Arithmetic average rating of all respondents to the question on a scale of 1 to 5, where 1 =minimum and 5 =maximum.
- 2 Proportion of participants who answered with a "4" or a "5" out of all respondents to the question.
- 3 Lowest rating awarded by at least one participant to the question.
- 4 Highest rating awarded by at least one participant to the question.
- 5 Number of respondents to the question

Annex H: Treatment of Energy Issues and Objectives in PRSP Documents

Documents:

- Ethiopia: August 2002
- Ghana: April 2002
- Kenya: I-PRSP July 2000
- **Tanzania**: October 2000 and Progress Report December 2001
- Uganda: March 2000 and Progress Reports 2001 and 2002
- Zambia: April 2002

NB: This is a working document, prepared to provide workshop participants with an overview of major sector priorities as defined in Poverty Reduction Strategy Papers of participating country. The table format is only for easier reference and does not imply any judgment of value on the part of the organizers.

Zambia	Chapter 12, <u>Energy</u> . - Introduction - Situation Analysis - PRSP Strategies for Poverty Reduction in the Energy Sector Objectives, Policy Appendix 2-10, <u>Energy</u> Policy Actions and Costings Appendix 2-10, <u>Energy</u> Policy Actions of the areas ⇒ Increase electricity access rate for both rural and urban areas ⇒ Reduce dependency on wood fuel/promote efficient use of altermative energy resources ⇒ Create new energy delivery infrastructure and increase electricity exports to neighbor countries ⇒ Supply and utilize petroleum most efficient and cost- effictive manner Objectively Verifiable indicators Appendix 3-10 Energy
Uganda	Subparagraph in Actions which directly increase the ability of the poor to raise their incomes ⁵
Tanzania	
Kenya	Physical Infrastructure Sector Priorities, Subparagraphs on Energy 4 ⇒ Short-term Measures to Address Power Crisis ⇒ Medium to Long Term Measures to Address Power Crisis ⇒ Medium to Long Term Measures to Ensure Adequate Power Supply: ⇒ Measures to Increase Access to Modern Forms of Energy ⇒ Further deregulation of the petroleum market ⇒ Exploration and Development of Indigenous Energy Resources
Ghana	Production and Employment: Key issues, paragraph on Energy provision for production in rural areas ⇒ Renewable Energy Technologies
Ethiopia	Subparagraph on Rural Electrification in Key Sector Development Policies and Strategies ¹ Paragraph on Energy in Private sector and Export development ² ⇒ Improve quality and adequacy of supply by using the huge hydropower resources of the country as well as to ⇒ Provide cost- efficient power to customers ⇒ Percentage of population having access to electricity will increase from 13% to 17% by 2004/05
Preliminary evaluation	Integration of an Energy Sector Chapter

¹ Ethiopia PRSP, August 2002, Chapter 7, p 63

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Prelimina	ry evaluation	Ethiopia	Ghana	Kenya	Tanzania	Uganda	Zambia
	Poverty			"Overcorning the existing shortfall in electricity supply and reduce its cost"		"Energy for the poor will be promoted by encouraging the use of more efficient cooking	"Rehabilitation of existing infrastructure in roads, railways, electricity, and petroleum oil (as
	Reduction Priority Actions					technologies and by smart subsidies for rural electrification,	opposed to the creation of new ones) will receive priority
Occurrences						entrepreneurs to invest in power infrastructure in rura growth centers" ⁹	"Another side effect of poverty and higher unemployment is that due to lack of an
of "energy" implications							alternative to wood fuel used in heating and cooking, there has been increased

² Ethiopia PRSP, August 2002, Chapter 8, p 111-112 ³ Ghana PRSP, April 2002, Chapter 6, p 75 ⁴ Kenya I-PRSP, July 2000, p 13 ⁵ Uganda PRSP, March 2000, p 17 ⁶ Zambia PRSP, April 2002, p 192 ⁷ Zambia PRSP, July 2000, p 10 ⁹ Uganda PRSP, March 2000, p 10 ⁹ Uganda PRSP, March 2000, p 10 ⁹ Uganda PRSP, April 2002, p 48 ¹⁴ Zambia PRSP, April 2002, p 117

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Prelimina	ry evaluation	Ethiopia	Ghana	Kenya	Tanzania	Uganda	Zambia
	Electrification	"Project shall meet the demand for electricity for agricultural, commercial, SMEs, residential, education and health sectors" Percentage of electrified Woredas towns expected to reach 73% by the end of the project [#] ¹³	By 2004, proportion o rural communities with access to electricity for domestic, commercial and industrial uses increases15% to 20% ¹³	"To increase access to electricity in the rural areas, where poverty is prevalent, the Government will invest about US\$13 million annually under its rural electrification program" ¹⁴		"A rural electrification program has been prepared which will be a joint public- private partnership using 'smart subsidies' to private providers for grid providers and other infrastructure for electrification" ¹⁵ 12% rural electrification by 2010 ¹⁶	"To ensure sustainability, the priority areas for rural electrification will be in farming blocks so as to create a link between energy and production" <u>Rural Electrification</u> <u>Programme</u> . ¹⁸ Grid extension • Solar energy • Construction of small power stations
	Rural Development		"Long-term goal for rural development to reduce disparities in income and standards of living between the rural and urban populations. Provision of electricity improved during the plan period with the percentage of the rural population with access to electricity rising from 8.7% in 1992 to 17.6% in 1992 to				

¹² Ethiopia PRSP, August 2002, p 63
 ¹³ Ghana PRSP, April 2002, p 64
 ¹⁴ Kenya L-PRSP, July 2000, p 14
 ¹⁵ Uganda PRSP, March 2000, p 54
 ¹⁶ Uganda PRSP, April 2002, p 14
 ¹⁷ Zambia PRSP, April 2002, p 102
 ¹⁸ Zambia PRSP, April 2002, p 33

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Prelimina	ry evaluation	Ethiopia	Ghana	Kenya	Tanzania	Uganda	Zambia
	Rural Industrializati on					"Government has developed an energy for rural transformation programme" ²⁰	"Facilitating the provision of appropriate energy sources for small and medium- scale entrepreneurs, especially rural-based ones" ²¹
	Reducing Women's Work Load	"Continue to invest in areas that contribute to reduce women's heavy workload-such as water supply services, flour mills, energy*22					"Time and energy savings from the drudgery of water fetching release women and children to participate in educational and socio- cultural activities" ²³
	Privatization/ Reform of Energy Utilities		Unbundling of the electricity supply system 24	Privatization of electricity Distribution and Generation	"Implement forcefully reforms that will help reduce the excessive cost of utilities (including electricity) to industry" ²⁵	"Inadequate and unreliable electricity is ranked as the most binding infrastructure constraint to growth by most firms. In 2000, installed electricity generation capacity increased from 180 MW to 260 MW" ²⁶	"Structural reforms in the energy sector will have a positive impact on the cost of production and, therefore, export competitiveness" ²⁷ "In electricity, the concessioning and other reforms of ZESCO should help reduce the cost of electricity to the copper mines" ²⁸

²⁰ Uganda PRSP, March 2000, p 62
 ²¹ Zambia PRSP, April 2002, p 66
 ²² Ethiopia PRSP, Angust 2002, p 125
 ²³ Zambia PRSP, April 2002, p 91
 ²⁴ Ghana PRSP, April 2002, p 75
 ²⁵ Tanzania PRSP, October 2000, p 18
 ²⁶ Uganda PRSP, April 2002, p 47
 ²⁷ Zambia PRSP, April 2002, p 47
 ²⁸ Zambia PRSP, April 2002, p 47

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Tanzania Uganda Zan	Table 6:"Develop wiFinancing of theresources pWater sectorcoordinationWoter sectorsectors, par2001/02 -agriculture,2003/04,and tourismElectricitysubcategory		Application of "While Zam" VAT to petroleum to enjoy con products at advantage i standard rate of various Further reform commodities neasures to be constraints i developed in time high energy for 2002/03 for 2002/03 transport co budget ³⁴ transport co budget ad high inter and charges to hinder ag
Kenya			
Ghana		"Take all steps necessary to increase the availability of energy to boost industrial growth and production" ³²	Reviewing and revising existing taxes, fees and user charges: "it is suggested that energy and utility pricing be based on the principle of cost recovery" ³³
Ethiopia	"Meeting hydropower generation capacity needs arising from electricity demand in the economic and social sectors" ²⁹		
nary evaluation	Water Resources Development	Government medium term priorities	Fiscal Management
Prelimir			

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 ²⁹ Ethiopia PRSP, August 2002, p 87
 ³⁰ Tanzania PRSP, October 2000, p 26
 ³¹ Zambia PRSP, April 2002, p 96
 ³² Ghana PRSP, April 2002, p 48
 ³³ Ghana PRSP, April 2002, p 48
 ³⁵ Tanzania PRSP, April 2002, p 57

Zambia	Summary of provincial consultations on interventions for poverty reduction: ³⁸ Copperbelt region: Reduce electricity tariffs Southerm Region: Energy prices should be poverty sensitive
Uganda	"A rural electrification program has been prepared which will be a joint public- private partnership using 'smart subsidies' to private providers for grid providers and other infrastructure for electrification" ³⁷
Tanzania	Table 2 <u>Central</u> <u>Government</u> <u>Operations</u> , Footnote 3: Development expenditure "includes fees, charges, and operating margins collected by the Tanzania Revenue Authority and disbursed to Tanzanian-Italian Revenue Authority and disbursed to Tanzanian-Italian Revenue Authority and disbursed to Tanzanian-Italian Revenue Subsidy to TIPER includes T Sh 5 billion as a special subsidy in 1999/2000, all subsidies to the petroleum sector are included" ³⁶
Kenya	
Ghana	
Ethiopia	
ry evaluation	Pricing Reform/ Subsidies
Prelimina	



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The promotion of liquefied petroleum gas will be stepped up once the West African Gas Pipeline Project comes to African Gas Pipeline Project comes to fruition. Widespread fuels wood extraction that is contributory to soil fertitity depletion and reduced productivity can be minimized by the introduction of LPG into rutual communities" "Rural kenosene programme will be initiated and implemented to	Preliminary eva	luation	Ethiopia	Ghana	Kenya	Tanzania	Uganda	Zambia
enable communities have easier access to the commodity" ³⁸	Atte	uels		"The promotion of liquefied petroleum gas will be stepped up once the West African Gas Pipeline Project comes to fruition. Widespread that is contributory to soil fertility depletion and reduced productivity can be minimized by the introduction of LPG into rural communities" "Rural kerosene programme will be initiated and intiated and intiated and intiated and intiated and intiated and intiated communities have easier access to the commodity" ³⁹				"Liquid Petroleum Gas (LPG) will be used to undertake the necessary studies first before determining the way forward" ⁴⁰

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³⁹ Ghana PRSP, April 2002, p 76 ⁴⁰ Zambia PRSP, April 2002, p 101

Preliminal	y evaluation	Ethiopia	Ghana	Kenya	Tanzania	Uganda	Zambia
	Petroleum Market		Deregulation of the petroleum sector ⁴¹	Continued exploration of fossil fuels "The Petroleum Act is being reviewed to broaden the scope for further for further deregulation of the petroleum market"			"Supply and utilize petroleum in the most efficient and cost- effective manner" ⁴³ "Petroleum is the major energy source that is imported and accounts for about 12 percent of total national energy demand" ⁴⁴
	Fuel Taxation		"To deal with shocks: establish an Emergency Shock Fund, which will be financed from several sources including 50 percent of the excise tax on fuel" ⁴⁵				

 ⁴¹ Ghana PRSP, April 2002, p 75
 ⁴² Kenya I-PRSP, July 2000, both p 14
 ⁴³ Zambia PRSP, April 2002, p 99
 ⁴⁴ Zambia PRSP, April 2002, p 101
 ⁴⁵ Ghana PRSP, April 2002, p 51

Preliminary evaluati	on Ethiopia	Ghana	Kenya	Tanzania	Uganda	Zambia
		Proposed actions on which civil society	"Other efforts will be directed at		•	"For the majority of poor Zambians
Energy		concentrate: "promote energy efficiency and	energy appliances (stoves. etc) that			fuel, the objective is to develop more efficient
Efficiency	/	conservation measures for	encourage environmentally			wood energy utilization in order to reduce
-		domestic, commercial and industrial users" ⁴⁶	sound resource exploitation and promote better			demand on the forests, which provide this type of fuel" ⁴⁸
			health among the population" ⁴ 7			Efficient production and use of charcoal ⁴⁹

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⁴⁶ Ghana PRSP, April 2002, p 167 ⁴⁷ Kenya I-PRSP, July 2000, p 14 ⁴⁸ Zambia PRSP, April 2002, p 14 ⁴⁹ Zambia PRSP, April 2002, p 101

Prelimina	y evaluation	Ethiopia	Ghana	Kenya	Tanzania	Uganda	Zambia
*	Alternative Energy Resources		By 2004, proportion of total renewable energy used by to% 10% ⁵⁰ Technologies ⁵¹	"Develop geothermal resources, key resource for producing electricity competitively, Kenya is the only country in the region with the technical expertise and competence" ⁵²			* Promote wider application of proven New and Renewable Sources of Energy technologies in meeting the energy technologies in meeting the energy remote areas. ⁵⁵ Solar energy. ⁵⁴ despite the abundance of sunlight, utilization of solar photovoltaic technology very low. Problem: high upfront cost of installation, so target rural institutions that may not be connected to the grid <i>Micro-hydro</i> : schemes will target individual households, cost about \$200 per household
						A	<i>Mini-hydro</i> : in the northern part of the country where small waterfalls already exist for electrification of rural communities Substitution of charcoa in urban households
							with millennium gelfuel

⁵⁰ Ghana PRSP, April 2002, p 64
 ⁵¹ Ghana PRSP, April 2002, p 75
 ⁵² Kenya I-PRSP, July 2000, p 14
 ⁵³ Zambia PRSP, April 2002, p 99
 ⁵⁴ Zambia PRSP, April 2002, p 102

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Preliminary evalu	ation	Ethiopia	Ghana	Kenya	Tanzania	Uganda	Zambia
		"Lack of access to assets and technolooy means					"Other economic sectors that
Impor links be	tant tween	that production is time and energy intensive ^{® 55}					poverty reduction effort either directly or indirectly through inter-
infrastri /service the pov	ucture is and verty	"Without an adequate road network it is highly			,		linkages are tourism, manufacturing, mining, and energy" 5
dimens	sions	likely that interventions in all sectors (e.d. health.					"Encourage the rehabilitation and
		water, agriculture, energy, education) to improve rural					communications communications
		livelihoods and reduce poverty will					support investment in manufacturing" ⁵⁸
		be severery constrained ^{® 56}					"The mining sector is critical in poverty reduction and in the
							economic
							development of the Zambian economy" ⁵⁹

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da Zambia	Summary of provint consultations on interventions for poverty reduction: ⁶¹ Copperbelt region: Reduce electricity tariffs Southern Region: Energy prices shot be poverty sensitiv	e ability o ir th as ectricity	Sectoral Share of PRSP Budget, 2002 2004 Energy \$114,000,000 = 9.5' of total budget
Ugan		"Enhance the of the poor to diversify thei incomes suc access to ele supply" ⁶²	
Tanzania			<u>Vulnerable</u> <u>groups</u> : Improve infrastructure network (water, electricity, roads and telecom services) in rural and suburbs of urban areas ⁶³
Kenya			
Ghana	 Increasing accessibility to energy should include extension and expansion of national grid Include Rural Kerosene Distribution Programme and LPG transportation package in access to energy Highlight need to develop alternative energy sources ⁶⁰ 		
Ethiopia			Policy measure: Expedite implementation of private sector participation in the production of electricity, 2002/03
y evaluation	Analysis of comments offered on various drafts of the PRSPs	Future Challenges	Poverty Reduction Policy Matrix/ Sectoral Costs
Preliminar			

⁶⁰ Ghana PRSP, April 2002, all p 183 ⁶¹ Zambia PRSP, April 2002, p 148 ⁶² Uganda PPR 2002, p 63 ⁶³ Tanzania PRSP, October 2000, p 44

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Prelimina	y evaluation	Ethiopia	Ghana	Kenya	Tanzania	Uganda	Zambia
						See Annex 1 ** ⁶⁴	See Appendix 3-10 65
	Core PRSP indicators					 Use of electricity at home 	reproduced ***
						 Access to businesses using electricity including 	
						food processing	
	Overview of the Major Outcomes of the Consultation Process	"Promote alternative sources of energy like stoves that conserve firewood" ⁶⁶					

⁶⁴ Uganda PRSP, March 2000, p 34 ⁶⁵ Zambia PRSP, April 2002, p 192 ⁶⁶ Ethiopia PRSP, August 2002, p 167

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Sources of Finance	Foreign Currency Million USD	Local Currency Million USD	Total
ADF	42.27	4.65	46.92
BADEA	9.35	-	9.35
World Bank	28.96	6.44	35.40
Government and other Donors	59.95	8.38	68.33
Total	140.53	19.47	160.00

**Annex Table 1: Goals, targets and indicators in the PEAP 2000.

PEAP goal	Targets	Costings	Monitoring indicators	Observations
3. Actions which directly	12% rural electrification by	Costs of 'smart subsidies' for	Use of electricity at home.	Public expenditure
increase the ability of the	2010	private investment to be	Access to businesses using	should be
poor to raise their incomes		estimated.	electricity including food	included in budget
3.7 Rural energy.			processing.	rather than
				earmarked.
		Promotion of environmentally		
		friendly energy may need		
		resources;		
		NEMA and MOE to		
		collaborate		

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APPEN	

OBJECTIVES	OBJECTIVELY VERIFIABLE INDICATORS	(units)	TYPE	BASE	Year	TARGET	Year
Overall: To ensure optimum supply and utilization of energy	Contribution of energy to GDP	(%)	Ŀ	11.5	2001		2004
	Level of electricity consumption	(GWh)	Ŀ	5,716	2001	7,300	2004
To increase electricity access rate for both	Electricity connection fee (K)	(wacha)					
rural and urban areas	Rural households with access to electricity	(%)	Ь	2	1998	15	2010
	ZESCO concessioning		N/A		ľ		
To reduce dependency on wood fuel and							
promote efficient use of alternative energy	Urban households with access to electricity	(%)		48	1998	50	2010
resources					2	}	
To create new energy delivery	Development of the National Electrification Plan		-	Completed	2004		
infrastructure	Households using wood fuel for cooking	(%)	ц	72	1998	63	2004
and increase electricity exports to	New solar applications in rural schools and health centers (n	umber)	_	NA		200	2004
neighbouring countries	New household solar applications (in	iumber)	_	NA		1100	2004
	Increased electricity exports	(GWh)	ц.	752	2001	1,400	2004
To supply and utilize petroleum in the	Complete feasibility studies and commence construction of Kafue		N/A	Feasibility	2002		
most efficient and cost-effective manner	Gorge Lower and Itezhi-Tezhi hydro-electric project		_	Construction			
	Total petroleum consumption (T	Tonnes)	-	Started	2004		
	Management of strategic petroleum stocks		-				
	ZNOC concessioning		N/A	N/A		strategy put	
	TAZAMA concessioning		N/A			In place	2003

Type of indicator : I = Intermediate, F = Final TBD = To be determined, N/A = Not Applicable, ... = Not available

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documents:	
in PRSP	Ario Hinro
Priorities	Y
Sector	

Agriculture Education

Health SMME Water

Documents sources:

- Ethiopia: PRSP August 2002
- Ghana: PRSP April 2002
- Kenya: I-PRSP July 2000
- Tanzania: PRSP October 2000 and Progress Report December 2001 •
- Uganda: PRSP March 2000 and Progress Reports 2001 and 2002 •
- Zambia: PRSP April 2002

Reduction Strategy Papers of participating country. The table format is only for easier reference and does not imply any judgment of value on the NB: This is a working document, prepared to provide workshop participants with an overview of major sector priorities as defined in Poverty part of the organizers.

Agriculture

Uganda	Achieve fully	repaired district	roads by 2006	Achieve 12% rural	electrification by	2010		tmprove	agricultural	research bv	promoting demand	driven farmer	responsive	research		Increase	productivity of	assets owned by	the poor		Establish national	advisory services	•	Improve access to	markets		Increase on-farm	employment	opportunities		Increase off-farm	employment	opportunities	especially in agro	industries and	services								
	•							•								•								•			•				•													
Zambia	 Generate income 	and employment	through increased	agricultural	productivity.	<u> </u>	 Enhance the 	sector's	contribution to the	national economy.		 Contribute to 	increased	production and	productivity through	development of	land and	infrastructure.		 Ensure national 	and household	food security	through	dependable annual	production of	adequate supplies	of basic foodstuffs	at competitive	prices through	development and	discomination			Ensure that the	existing agricultural	resource base is		Improved through a	targeted support	system tor rood	security.	•		
Tanzania 👘	Improve and expand	irrigated farming		Reduce proportion	of population that is	food poor by 3.5%	points by 2003		Reduce proportion	of population that is	food poor by half	from 27% to 14% by	2010		Ensure growth of	agricultural sector by	at least 5% by 2003		Revive agricultural	cooperatives	-	Improve access to	agricultural research	and extension	services		Provide demand	driven research, and	crop extension	services		Support labour	intensive agro	processing (Notably	of cashew nuts,	cotton, coffee and	other crops)		Rationalize physical	controls that	constrain crop	movement within the	country and across	I and here the second sec
Kenya	Promote food	security	 Promote income 	and employment	generation from	crops and	agricultural	products	 Develop arid and 	semi arid areas	 Improve water 	supply in rural	areas	Encourage agro-	forestry practices in 1	private farms	Improve land	tenure system dive	the poor access to	land	 Rehabilitate and 	maintain all	physical	infrastructure.	particularly feeder	roads	•	 Establish an 	effective and	efficient marketing	system for	agricultural	produce that	enables producers	to maximize returns		Overcome the	shortfall in	electricity supply •	and reduce its cost		Create an effective	agricultural	
Ethigpia	 Increase proportion of 	farmers with access to	dug out water facilities in	Northern Ghana to 15%		 Ensure effective 	management of urban	and rural waste and	sanitation systems		 Develop safe liquid and 	solid waste management	1	 Provide capacity building 	for environmental health		 Establish of regional 	offices of public utilities	and regulatory	commission to respond	more effectively to	community requests		Increase access of urban	population to safe water	from 70% to 78%																		-
Ghana 🕴	 Enact land acquisition 	reforms	 Encourage cash crop 	production (cashew	nut)	Support the private	sector to add value to	traditional crops	(cocoa)	 Assist private sector 	increased production of	grains e.g. maize, rice	and tubers	 Ease access to farming 	inputs (fertilizers,	insecticides high	yielding seed varieties	and irrigation-based	techniques.	 Develop marketing 	channels for	agricultural produce	addressing gender	dimension of	production including	access to credit.	 Establish small-scale 	irrigation schemes	especially in northern	savannan.	 Keduce price volatility 	and minimize	production risks	particularly those	related to post-harvest	losses		Remove taxation on	cocoa production and	break-up monopolies in	the distribution system	with a view to minimize	gaps between	-
Sector		;	Agriculture					·																				-									<u> </u>							-

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Encourage farmers to organize themselves in groups or cooperatives with a view to improving their prospects for obtaining credit from financial incertifitiom	a well as carrying out crop specific research and other initiatives to bolster output and raise quality of their products.			
 Practical, cost effective extension to the small holder Ensure the control of crop and livestock pests and disease 	development and transfer through training programs for peasant farmers with increasing focus on women farmers	 Reinforce inspection and quality control of farm inputs through improved legislation and empowerment of farmers associations 		
 Support improvements in storage facilities to minimize post-harvest losses Improve road network to streamline distribution 	Develop small scale irrigation schemes Increase total area under irrigation from 0.04% to 0.12% Support agro-	Processing techniques and equipment which reduces the time burden on women Reduce dependence on traditional farming techniques that are time intensive and result in low productivity.	 Support development of farmer based organisations to facilitate credit and markets Increase proportion of government expenditure on agricultural development 	 Increase total land area under agriculture from 25% to 30% Increase the proportion of rural communities with access to electricity for domestic, commercial and industrial uses from 15% to 20%
Agriculture				

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Education

Sector	Ghana		Kenya	Tanzania	Zambia	Uganda
Education	Reduce	Achieve 60% participation rate	 Increase primary 	 Increase secondary 	 Increase access to 	 Ensure 100%
	interruption of	nationally at the end of the	school enrolment	enrolment from 5%	upper Basic	primary school
	education from	Education Sector Development	and completion	to 7% by 2003	Education and	enrolment by 2003
	pre-school to	Programme			improve its quality	(including district
	age 17		Enable more poor	 Reduce illiteracy by 	and relevance.	levels and poor
		Increase girls' participation in	children to attend	100% by 2010	< Increase	households)
	Develop a model	primary education from 36% in	secondary school		gross	
	senior secondary	1995/1996 to 45% at the end		 Increase gross 	enrolment	 Increase transition
	schools in every	of the period	 Improve access to 	enrolment to 85%	rates to 95%	of primary to
	district.		basic education by	by 2003	by 2004	secondary or
		 Increase gross enrolment to 	lowering cost borne			vocational training
	 Provide free 	50% by 2002 and 65% by	by parents	 Increase transition 	 Increase access and 	of 65% by 2003
	basic education	2005		rate from primary to	retention in High	
	including		 Provide bursaries, 	secondary level	School programmes	 Increase literacy
	provision of	 Establish new primary schools, 	loans and	from 15% to 21%	and ensure quality	levels to 85% after
	school clothing,	upgrade existing ones and	scholarships for	by 2002	education.	a five year
	meals for	refurbish of old schools	school children from	Reduce drop out	< Increase	programme
	children in the		poor households to	rates from 6.6% to	gross	
	three northern	Establish 16 new boarding	cover user charges	3%	enrolment	Reduce school drop out
	regions.	schools to serve students from			rates to 50%	rate
		under served nomadic regions	Revise teacher to pupil	 Increase net 	by 2004	Raise cognitive
	 Accelerate the 		ratios upwards	primary school		skills of primary
	implementation	Provide pre-service training and	 Increase adult 	enrolment from	 Improve the quality of 	school graduates
	of all	professional upgrading courses for	literacy from 75% to	57% to 70%	and access to the)
	programmes and	primary school teachers	80%		literacy programme as	 Increase enrotment
	projects which	Improve ratio of schooldirls to		Increase number of	well as enhance the	from 25.000 to
	improve quality	schoolbovs to 1:1 by 2002	Increase pross	etidente necejna at	capacity of providers.	50 000 by 2003 with
	of life especially		primary enrolment	a enertified mark in	< Increase	40% females
	education	Increase number of miman	from Ro% to 92%		literacy rate	
		echoole to 12 505 hv 2002		from 20% to 50%	to 75% bv	Increases school
	Increase access	Source in it is an and			2015	completion rates to
	to alternative		cohod completion	by zuus.		
	education by	Reduce primary school drop	scribol completion		Reduce disparities in	%Or
	children in	out rate to 4.2% by 2002		Achieve gender	education including	Achieve 008/
	Accra, Kumasi		% CC	equality in primary	gender disparities	Actileve 30% pust
	and the three	Increase expenditure on				
	northern regions	education as a proportion of	Increase secondary	equcation by zuus.	•••••••	empioyment rate
	to 100 000	the total budget to 14.5% by	school enrolment		midease access,	
		2003	from 23% to 40%	 Increase proportion of 	duality ariu relevance	 Increase pupil to
	Increase transition rates			primary school age	or imparted	classroom ratio
	from P6 to Junior	 Expand and strengthen non- 	Decentralize	children successfully	knowledge under me skills training	trom 98:1 to 82:1 by
	Secondary School 1	formal and distance education	management of	completing primary		7004
	from 96% to 98%	programs to increase access	schools and	equcation		locrate nunit to totocher
		In rural areas	leacheis		Increase access, improve	ratio from 54-1 to 45-1 in
			Dertions and refice a		guality and ensure relevance	
		Enhance qualified man-power			of tartiany adjunction	1007
		availability by opening new training	curriculum to ensure quality		or icinary education.	
		programs	and relevance			

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Sector	Ghana		Ethiopla		Kenya	Tanzani		Zambia	Uganda	
	 Develop moc 	del health	ш •	xpand primary	 Reduce infant 	•	teduce in-patient case	 Increase the 	 Reduce under five 	ø
Health	centres in ev	rery district	ž	ealth care service	mortality rate from	5	atality rate for under-five	life	mortality from 15	2
			8	overage from 45% to	74 to 65 per 1,000	0	hildren from 12.8% in	expectancy of	to 103 per 1,000	
	 Replace casi 	h and carry	9	0%	 Reduce under five 	-	997 to 8% by 2010	the	by 2005	
	system of fin	ancing health			mortality rate from			population.	1	
	care with a s	ystem that is	~ •	educe the under five	112 to 98 per 1000	•	teduce burden of	<reduce< td=""><td> Reduce infant </td><td></td></reduce<>	 Reduce infant 	
	more equitat	ole.	E	iortality rate to 160	 Reduce maternal 	σ	isease through reduced	under 5	mortality from 88	
			<u>a</u>	er 1,000 by 2005	mortality rate from	2	norbidity.	mortality rate	to 68 per 1,000 by	~
	 Establish a s 	sustainable			590 to 500 per			by 8%	2005	
	health financ	ing	•	educe infant	100,000	•	teduce infant mortality	Increase life		
	arrangement	t to protect the	E	nortality rate to 95	 Reduce incidence 	2	ate from 99 per 1000 in	expectancy to	 Reduce maternal 	
	poor.		ā	er 1,000 by 2002	of stunting from	-	999 to 50 by 2010 and	50 years by	mortality from 506	~
	: !				37.5% to 35%	7	0 by 2025.	2020	to 354 per 100,00	0
	Enhance effi	ciency in	•	nprove access to	 Reduce the crude 					
	service deliv	ery	Ē	ealth services to	death rate from 12	•	teduce maternal	 Encourage 	 Increase deliverie 	ŝ
			ιö i	5% by 2002 and	to 10 per 1000	E	nortality rate from 529	lifestyles that	attended by skiller	<u>_</u>
	Improve safe	e water supply	ס	0% by 2017	Reduce wasting among	a.	er 100,000 to 450 per	support	workers from 39%	
	in rural distri	cts	•	chiouro 700/	children under five from		00,000 by 2003	neattn.	to 50% by 2005	
			ς. <u></u>	culleve / 0 /0 amunication hu 7003						
	 Develop cap 	acity building	5	amunization by 2002	Shift financial,	r.	(educe under tive	• Foster	Improve DPT	
	TOL ENVIRONM	ental	•		human and other	2	nortality rate from 158 to	environments	immunization for	
	sanitation		•	Icrease health share	resources from		27 per 1,000 by 2003	that support	under one year ol	σ
			5	f total budget to 7%	curative services to	•	testore life expectancy to	nealth.	children from 47%	
	 Institute effection 	ctive			preventive rural	ŝ	2 years by 2010	<reduce th="" the<=""><th>to 54%</th><th></th></reduce>	to 54%	
	managemen	it of urban	。 。	hift resources from	health services			proportion of		
	waste syster.	ns	3	rban hospital based	 Expand family 	-	Icrease access to	children who	Increase proportion of	
			ō	urative services to	planning services	ā	dequate, safe and clean	are stunted	approved positions filled	
	 Ensure safe 	liquid waste	ā	reventive care to	and improve	3	ater in rural areas from .	to 43%	by trained health worker	
	managemen		ā	each the rural	information and	4	8.5% to 55% in 2003		from 47% to 46%	
			ā.	opulation	education	g	nd to 85% in 2010	 Strive for 	 Improve outpatien 	ĭt
	 Increase urb 	an population			 Reduce population 			equity in	department	
	with househ	old latrines	Implemei	nt the HIV/AIDS	growth rates from	•	teduce prevalence of	access to	utilization per	
	from 34% to	45%	policy		2.4% to 2% in the	S.	tunted growth from	health	capita from 0.43 to	0
					short term	4	3.4% to 20%	opportunities.	0.47 per capita	
	 Reduce total 	I fertility rate			Control the spread of HIV/			<pre></pre> Increase the		
	from 4.6 in 2	000 to 4.2 in			AIDS	•	teduce prevalence to	% of rural	 Increase deliverie 	s
	2004				Provide all public	3	asting from 7.2% to 2%	households	in health units fror	F
					healthcare facilities			within 5km of	23% to 31%	
	 Reduce new 	r HIV infections			with an appropriate	•	teduce malaria fatality	a health		
	among the 1	5-49 age			and adequate	¥.	or under five years from	racility to	 Increase 	
	group to 24%	, ,			supply of drugs	-	2.8% to 10% by 2003	%0 <i>/</i>	immunization	
	•							:	coverage for	
	 Increase hes 	ath facilities to			Ensure affordability	Increase	coverage of births by	- Provide	mothers and	
	people living	with			of essential primary	trained st	taff from 50% to 80% by	assured	children	
	HIV/AIDS in	fection to 30%			health care drugs	2003		quality nearth		
					and treatment to	•	acrease percentage of	services.	 Reduce HIV/AIDS 	
	 Reduce infar 	nt mortality			the poor	0	hildren under two years	<80% of posts	prevalence by	
	rate from 57	ner 1000 to 50				3	ho are immunized	in health	25%	

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Uganda		 Reduce tertlifty rate to 5.4 		Reduce stunting to 28%																																9
Zambia	facilities should be	filled		and technical	guidance to service	providers.																														
anzanja	against measles and DPT from 71% to 85% by 2003		Provide quality health	service and re-orient services through essential	health package delivery	Strenothen and re-orient	the delivery of secondary	and tertiary health services to ensure more	effective support of	primary health care	Promote and coordinate	private sector and civil	society activities in the	Rehabilitate	malfunctioning and non	operative water supply	schemes, protection of water soluries and some	expansion of new	schemes (to be	determined by local	education, especially to	mothers and	reinforcement of	reproductive health and family planning		public nealth awareness through peer education in	schools	:	Strengthen the program	management of childhood	illness.		districts with HIV/AIDS	awareness campaigns to	/5% by 2003	
Kenya	Increase provision of of notable water	in in poor areas	and working with all	enable them to	assume reconcibility for	managing and	maintaining water	salidins	 Enact legislation for the 	privatization of urban water	supplies •			 •							•				•				•				•			
Emiopia																																				
	rate from 57 per 1000 to 50 per 1000	. 1	Reduce total under five mortality rate from 110 ner	1000 to 95 per 1000	. Reduce the nerrentare of	children under five years	who are malnourished			Keduce maternal mortality	to 160 per 100,000	Evolution contractions	worm	Increase proportion of	people consulting qualified	from 30% to 50%	Increase the percentane of	total government spending	on health from 5.7% to 7%		from 75% to 90%		 Increase proportion of 	supervised deliveries from 49% to 55%	Increase prenatat care	coverage from 52% to 58%	 Improve uptake of ante- 	natal care from 96% to	98%		 Increase rural population 	with household latrines	10% to 25%	Reduce the total population with	unsafe methods of waste disposal	
38CIOF			Health																																	

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Small and Micro Enterprises

Ucanda	Fstahlich 850	polytechnice	by 2003		Increase	number of	trained	graduates to	100,000 bv	2003		Exnand the	Ditreach of	micro finance	services to	districts and	locations	Incalinity	Concolidata			programme in	Tin MICTO	r inance Institutions		(IMITI) SUD Sector and	entruct credit	delivery to	nrivata cartor.	led MFIs		Formulate	subbortive	policies	•	Transfer funds	recovered by	the Youth	Entrepreneurs	Schemes	(YES) and the	Entandikwa	secretariat as	credit lines or	equity to	sustainable	micro finance	institutions
Zambia	Facilitate training and	re-training in	entrepreneurship skills	for the unemployed.	Increase the number of	entrepreneurs	receiving training in	business management	and technical skills to	500 by 2004	Support the	construction of	industrial estates for	leasing to McSMEs		Encourage the supply	of intermediate invuto	from McSMFs and	large-scale entermises			Elicourage	procurement or goods	McSMEs senscially in	Micomes, especially in			Review and harmoning	the evicting lead and	requisition framework	to remove barriers to	smooth operation of	McSMEs.		Increase the number of	enterprises registered •	with the Small	Enterprises	Development Board	(SEDB) from	150/annum to	300/annum by 2004		Encourage the repeal	or amendment of any	statutes or regulations	that hinder women and	youth the access to,
Tanzania	 Provide training 	on organizational	and financial	management	aspects for	primary societies	or cooperatives		 Enact the new 	land Act and	ensuring that	related	regulations	facilitate the use	of land as	collateral for	purposes of	commercial	transactions		 Encourage on 	aoina efforts bv	NGOs and local	Banks to provide	credit. training	and other forms o	support to the	informal sector, as	well as small and	medium scale	enterprises		 Promote labour 	intensive agro	processing .	:	Ensure enabling	environment for micro,	small and medium	enterprises and informal	sector activities			•				
Kenya	 Improve technology 	development and	transfer through	participatory group	extension and	private sector	development		Open new markets	for labour intensive	manufacturers,	services and agro	products		 Institute support 	measures targeted	at providing	adequate	infrastructure and	development of	technical and	management	capacity for the	growing and small	enterprise sector		 Implement action 	plan to stabilize	street vendors and	hawkers who	represent 70% of	the MSE sector		 Privatize the World 	Bank-Financed	MSE Iraining and	l echnology Project	to allow it act as a	catalyst for the	provision of	services to the Jua	Kall sector						
Ethiopia	Expand the	coverage of micro-	financing institutions		Attain horizontal	equity of taxation	among medium and	large scale nims		Kemove and amend	regulatory	Impediments which	hinder private sector	development		Improve urban land	leasing systems to	ensure the	availability of land	for use as collateral														•														
Ghana	 Improve diffusion of 	appropriate	technologies and	vibrant training	programmes .		Promote the	generation of not-			tural areas	:		or useable	vocational training	schemes.		Reform of	traditional land	administration	system to give	those in the	informal sector	access to land as a	monetary asset.		Reform or	strengthen	traditional	apprenticeship	system		Support organisations of	ersons with disabilities	ind organisations that	epresent the poor.	Promote	proticiency of	technologies and	advancement of	informal sector	labour force.		Develop systems	and mechanisms to	Tacintate	coordination and	linkages between
Sector	Small and Micro	Enterprises					-											-									•						•			<u> </u>	•							•				_

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Ugan	-	-romote mi																				
Zambia	and control of	such as land, credit.	information and	technology.	Design and implement	measures that will	facilitate expeditious	acquisition of titles to land to ensure	improved access to	credit innance for McSMEs.	Encourage the	participation of women	and youth in private and public credit	schemes.	 Facilitate provision of appropriate energy 	sources for small and medium scale	entrepreneurs,	especially rural based ones .	Provida husiness and	trade information to	McSMEs and informal sector entrepreneurs.	,
Tanzanja																		<u>.</u>				
Kenya																						
201a					.																	
EDI	rs of			l mica	port	and			~	iions	Cape		ery of	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~								
Ghana	the formal and informal sector	the economy		Establish smar hisiness anter	zones with sur	infrastructure a	Intermediate	Transfer Unit	(ITTU) advisor	profitable locat in Tamate	Takoradi and (Coast by 2002	 Increase delive 	ITTU by 50% b 2004								
Sector																						

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Idhae		anal and a second se	Ethiopla (1) (2)	<u>kenya</u>	Tanzania	Zambia	1846.3	Inanda	
	•	Increase proportion of	 Increase access to 		•	Increase access to safe		ALL DUCK	_
		tarmers with access to dug	clean water to 36%	 Improve the 	Increase the	drinking water in urban			_
Water		out water facilities in Northern	by 2002	institutional, legal	nrovision of	areas from 80% in 1000	•	Improve access to	
		Ghana to 15%		and policy	ademiate safe and	to 100% in 2015		safe water in rural	
			 Increase the share 	framework for the	clean water to rural			aleas nom 33% In	_
	•	Ensure effective	of the total budget	development and	areas from 48 5% in	- Increase account of		2001 to 50% by	_
_		management of urban and	allocated to clean	management of	2000 to 555 by 2003	drinking water in rural		×004	_
		rural waste and sanitation	water	water supply		areas from 37% in 1998	•	morova access to	
		systems		,	 Enforce water 	to 75% in 2015		Safe water in	
	•	Develop cafe liquid and collid		Develop water	quality laws			urban areas from	
		weste management		supplies in rural,	regulations rights	 Increase access to 		62% in 2001 to	
				urban and peri-	and standards in	improved sanitation from		65% by 2004	
	•	Provide canacity huilding for		ulban areas	water sources	73% to 100% in urban		•	
		environmental health		Involve private	Emacute [acc]	areas by 2015	•	Increase new rural	
				sector in financing				water connections	
	•	Establish of regional offices		and management	communities to	Surfation from 68% to proved		trom 2,900 in 2001	
		of public utilities and			protect water	rural areas by 2015			
		regulatory commission to		 Rehabilitate and 	resources	Pevelon and implement	•		
		respond more effectively to		construct water		the Kafue hasin nilot		urban water	
		community requests		conservation	Carry out regular	integrated water sector		connections from	
	•			facilities in arid and	water supply quality	management project		6,300 in 2001 to	
	,	Increase access of urban		semi arid areas	surveillance und			7.000 in 2004	
		population to safe water from 70% to 78%		-	apply the WHO	Establish			
					quality standards	comprehensive			
	•	Increase access of rural		community based		framework for effective			
		population to safe water from		catchment	Carry out	development and			
					hydrological and	management of national			
				sualegies	hydro geological	water resources to			
	•	MODIFIZE TINANCIAL RESOURCES		•Strengthen community	surveys	ensure they are			
				management or rural water		sustainable and			
		extension coverage of urban		IOF DUMAIN AND INVESTOCK	 Strengthen water 	equitable through			
		water systems		nse	resource and quality	participatory means			
	•	Strengthen the Ghana Water				Develop around water			
		Company to effectively			 Increase spending in 	exploration and			
		manage service contracts and extensions			rural water supply	sanitation to rural population			
		<u> </u>			•Promote lise of rain water				
	•	Reassess lifeline tariff to			harvesting				
		protect poor nousenolds living in compound houses							
	•	Set up a unit within ministry of works and housing to							
		monitor provision of water to			~				
		the poor							
						_		_	

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Water

Joint UNDP/World Bank ENERGY SECTOR MANAGEMENT ASSISTANCE PROGRAMME (ESMAP)

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