



DEVELOPMENT AND ENERGY IN AFRICA

CASE FOR BOTSWANA

KICK-OFF WORKSHOP

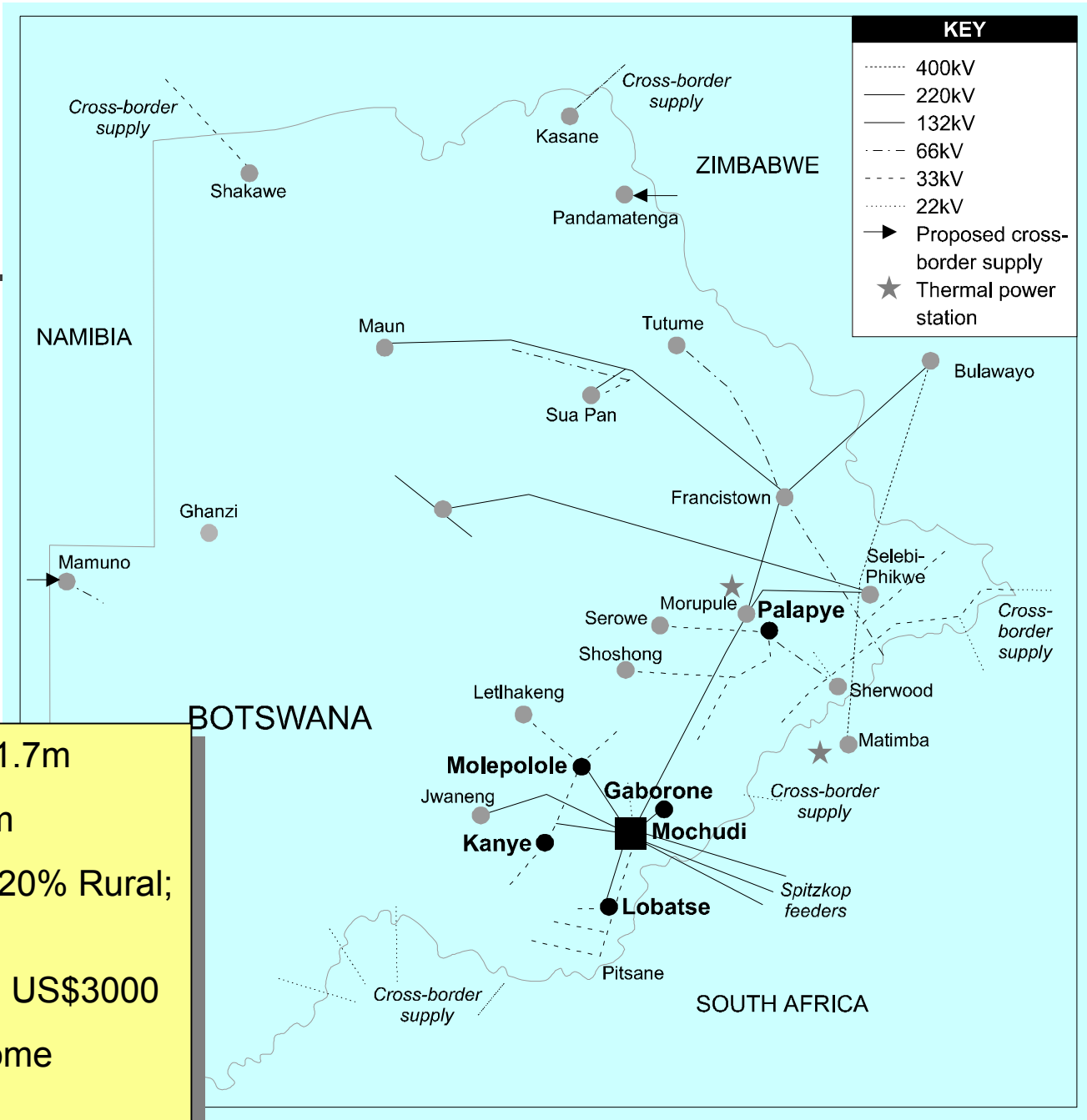
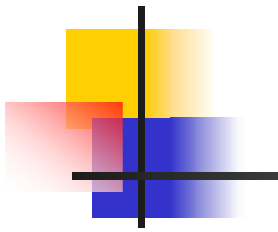
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Presentation outline

- ABOUT BOTSWANA ECONOMY
- NATIONAL ENERGY POLICIES/
(INTERVENTIONS)
- CASE STUDIES
- CONCLUSIONS
- EXPECTATIONS FROM DEA



Population 2001=1.7m
 Area=582000sqkm
 Electricity access 20% Rural;
 % Urban
 per capita Income US\$3000
 Upper Middle Income



DEVELOPMENT ASPECTS

- ECONOMY DOMINATED BY NON-RENEWABLE COMMODITY-DIAMOND-diversification the main agenda
- 95% OF FOREIGN EARNINGS, 50% OF GOVT REVENUE; 33% OF GDP
- AGRICULTURE ONLY 2.4% OF GDP FROM OVER 50% PRE1966-STILL IMPORTANT FOR THE POOR
- Unemployment 23.8% affecting 15-29 yrs
- HIV STRAINING ON RESOURCES-17% INFECTION PREVALENCE
- Large share of SME-75% <6employees <US\$50000 income
- FDI flat for many years at 6% of GDP



Poverty levels

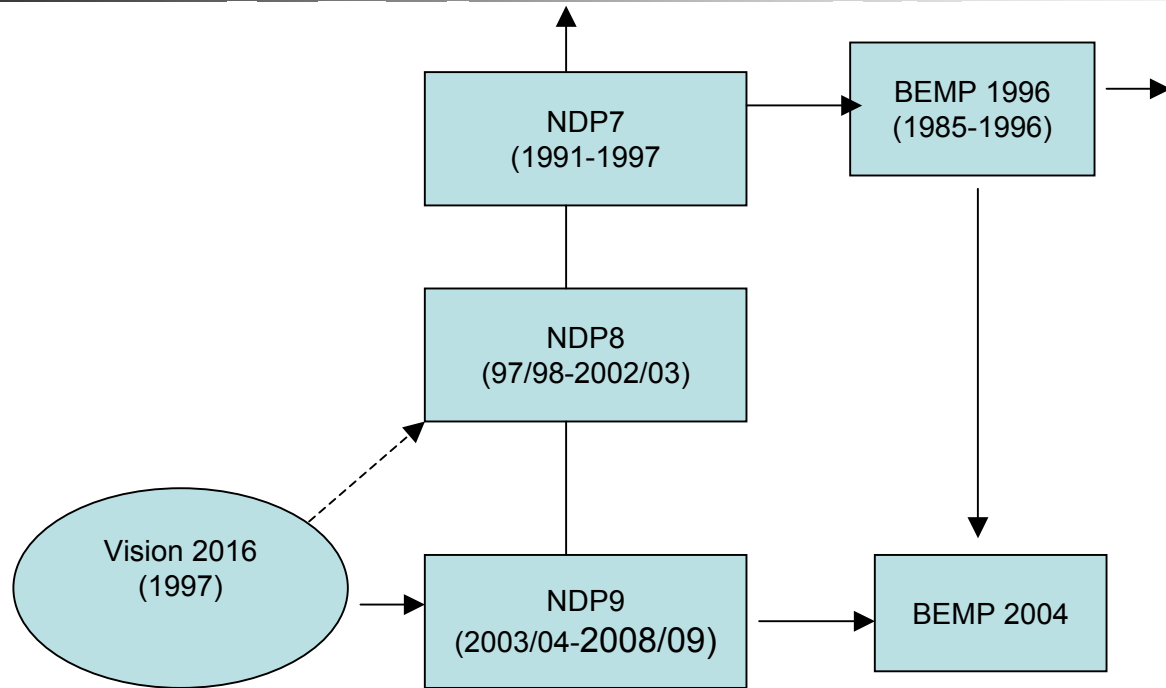
- The poverty datum line (PDL) for Botswana at the 1994 \$/Pula exchange rate was US\$1.23/day-23.4% below a 1\$/day in 2002/03.
- Recent survey results suggesting that the current proportion living under the PDL is now 37% (2001) Dropped from 47% (1993/94)and 59%.(1985/86)
- Skewed income with 10% owning 69% of wealth
- Female headed households poorer
- To eradicate poverty GDP growth rate must be 8% now 5.5%; Invest 41% of GDP now 32%



Success-MDGs

- In 1999
- 97% access to safe drinking water
- 88% within 15km of health centre
- 90% of children access to primary education; 70% to JC Education; 51% senior secondary (O-level)

Energy Policy Framework for Botswana





EVOLUTION OF ENERGY SECTOR POLICY

- VISION EMPHASIZES REGIONAL COOPERATION AND SOLAR EXCELLENCE
- NDP 7 (1991-1996) The corresponding energy goals were to secure a cost effective and diversified supply mix that included development and management of indigenous resources taking into consideration environmental soundness
- NDP 8 (1997-2003) The concept of Integrated Energy Planning was introduced in the energy goals of NDP8 emphasizing the role of Government as that of facilitation and the importance of developing capacity for the various aspects of IEP.
- NDP9 the Government aims to provide least cost of energy supply that reflects the true costs of supply. Importance will also be placed in avoiding risk of supply and vulnerability to supply disruptions. Utility monopoly will be monitored to safeguard interests of consumers and investors. NDP9 also ushers in the importance of gender and social equity and justice.



NDP9 POLICY MEASURES

- Ensure adequate supplies of fuelwood (*promotion of sustainable fuelwood management practices and appropriate combustion equipment; community management of natural resources*)
- Increase access to electricity and make it more affordable (*electrification of urban poor and continuation of rural electrification; continuation of RCS & Solar electrification finance scheme*)
- Beneficiate coal and make it accessible and affordable
- Ensure the availability of appropriate energy sources to meet household needs and promote rational least cost choices (*Supporting introduction and use of other fuels and appliances; dissemination of information on available energy sources and use*)
- ○ Ensure adequate and affordable supplies of paraffin and LPG. (*Investigate the price controls for LPG*)



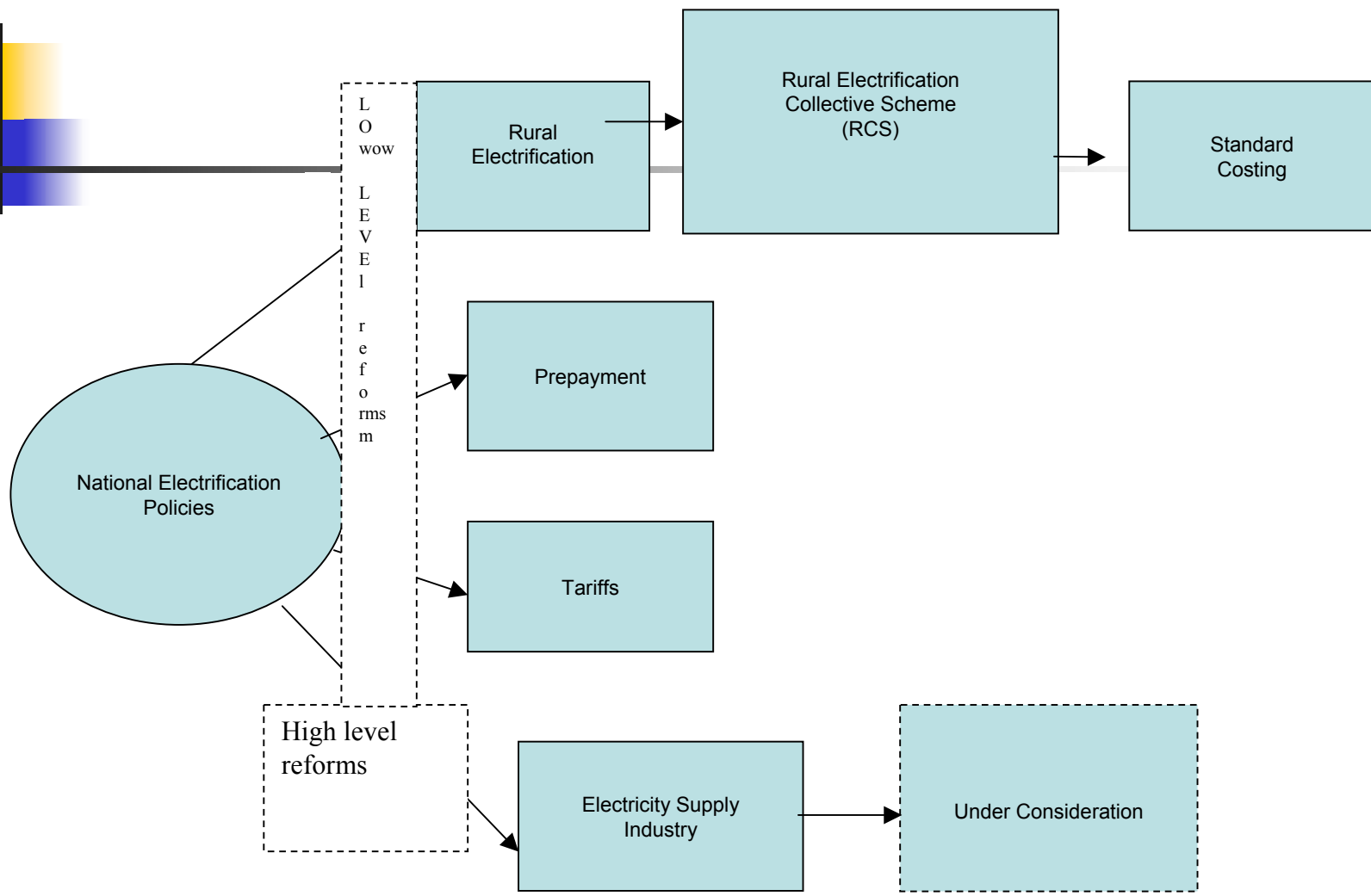
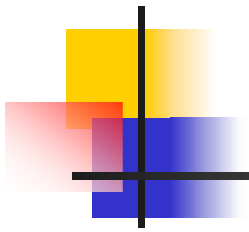
Focus of energy policies

- Focus on improving access-eradicate energy poverty
- Increase access to modern energy
- From energy perspective energy in isolation
- Compartmentalized planning
- No integrated project planning
- However cases of water projects that have utilized solar pumps



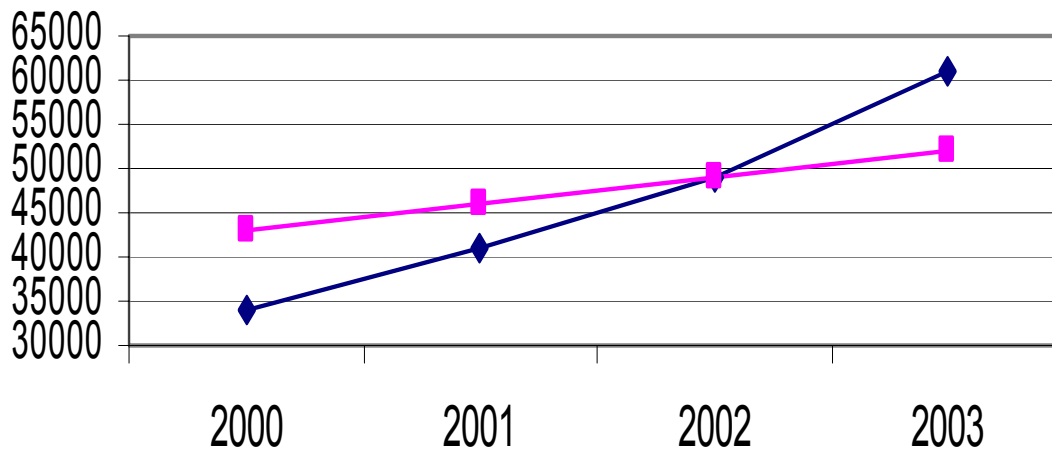
Case studies

- Rural electrification collective scheme (RCS)
- National PV electrification project
- Coal Expanded utilization-households/institutions
- LPG deregulated market



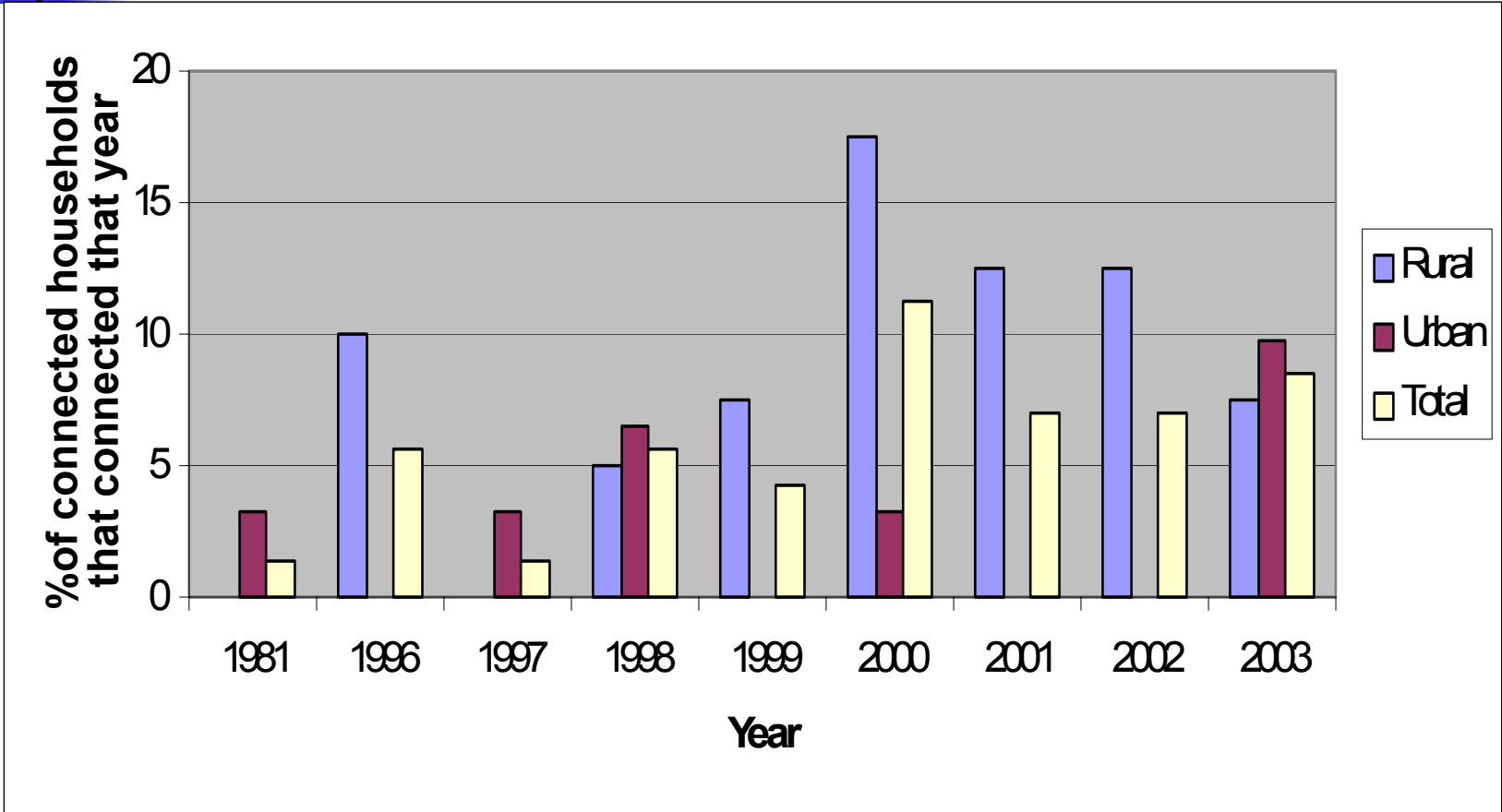
Households connected to electricity: urban and rural

No of households connected



	Aug-00	Aug-01	Aug-02	Aug-03
◆ Rural	34169	41156	49147	60767
■ Urban	43119	45890	48779	51833

Year





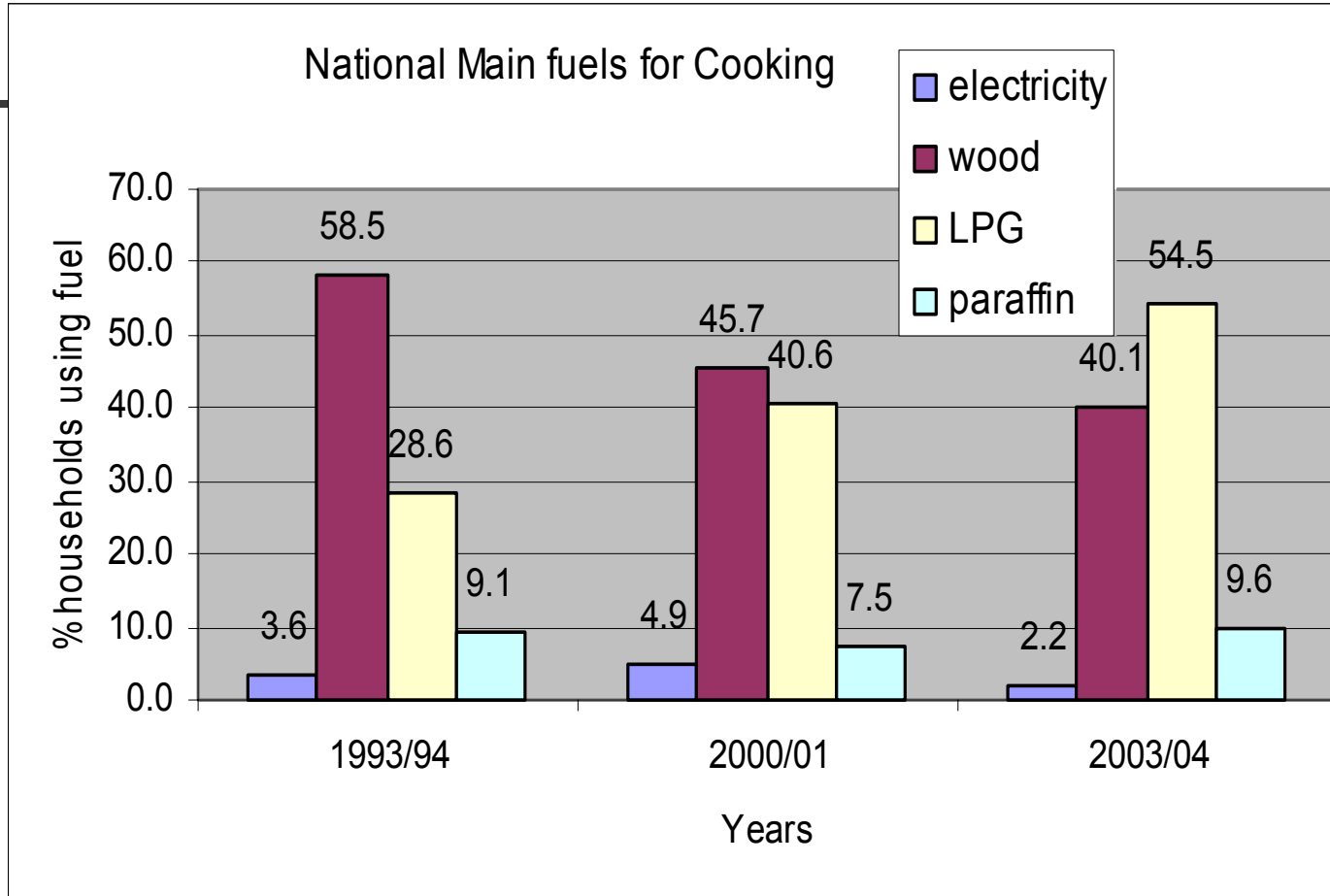
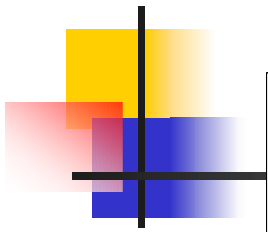
NPVREP

- CASE OF CONFLICTING POLICIES (HIGHER COSTS FOR NEW TECHNOLOGIES)
- INSTITUTIONAL ARRANGEMENTS-UTILITY IN COMPETITION WITH PV PROVIDER (NOW REMEDIED)-energy governance
- Some indicators-clinics giving service at night, school chd reading at night, improvement in performance at school, hair dressing at night, some economic activities such as chicken runs

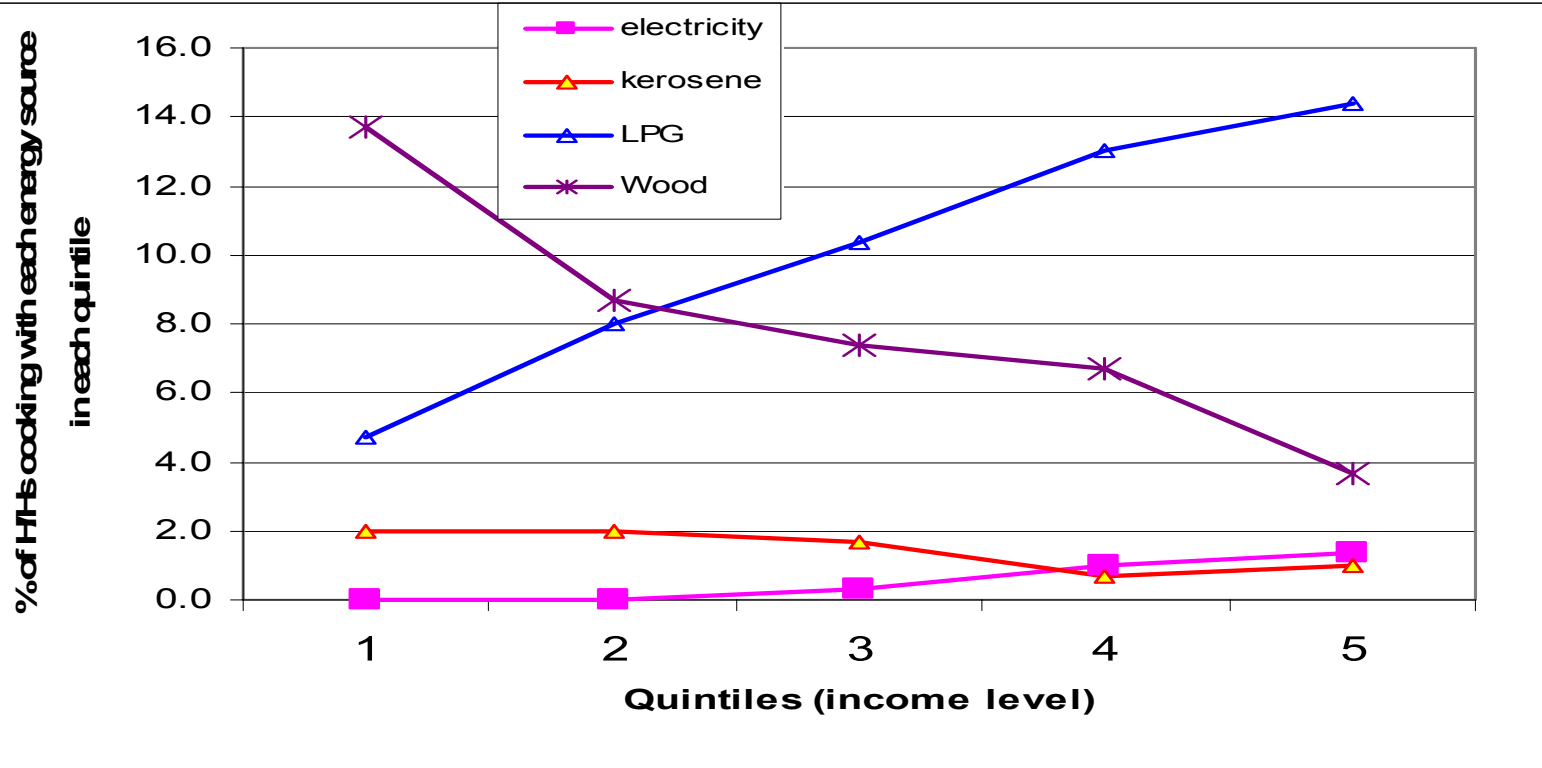
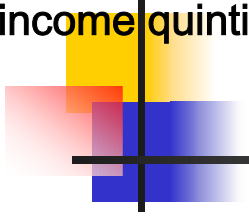


LPG-DEREGULATED MARKET- governance

- PRIVATIZATION OF LPG SUPPLY AND DISTRIBUTION HAS PAID OFF-with large bottlers supplying to distributors-with lower overheads
- LPG penetration took hold in urban areas first before spilling over to rural areas-market expansion.
- INCREASED LPG USE GOES HAND IN HAND WITH GROWTH IN DISTRIBUTION AND HENCE EMPLOYMENT
- UNPRECEDENTED GROW IN NUMBER OF LPG DISTRIBUTORS-Supported by govt citizen empowerment fund



Proportion of households that cook with energy source/fuel as main source/fuel by household income quintile.



COAL



- CREATION OF COAL DEPOTS FOR COAL DISTRIBUTION ALSO CREATING EMPLOYMENT
- Coal beneficiation opportunities
- Coal stove fabrication-stds



CONCLUSIONS

- ENERGY AS ENERGY INTERVENTIONS HAVE SOME IMPACTS OF ACCESS AND CREATING ENERGY PROVIDERS
- HOWEVER NO CLEAR INDICATORS WHETHER THESE COULD BE ATTRIBUTED TO POVERTY ALLEVIATION
- REQUIRE INTEGRATED PLANNING-ADDRESS DEVELOPMENT NEED AND SEE WHERE ENERGY FITS IN.



EXPECTATIONS FROM DEA

- MISSING LINK in assessing impacts of energy interventions (BEMP revision; W/B reform impact study).
- Interventions without targets and clear indicators for M&E
- Assessment framework- will be a planning tool, decision making tool, impact assessment tool and M & E tool.



DILEMMA

- Case studies that link energy and development
- Attributing success to energy-when many variables
- Stakeholder adoption-may require training



SOME THOUGHTS

- IDENTIFY APPLICATION AREAS FOR ENERGY TO INDUCE DEVELOPMENT
- DEVELOP INDICATORS FOR THOSE (economic, social, environment) and other
- ENSURE FUTURE INTERVENTIONS ARE EVALUATED AGAINST THOSE INDICATORS



DO ENERGY INTERVENTIONS SERVE AS CATALYST FOR PA & DEV?

- YES BUT ADHOC PLANNING WITHOUT LINK TO DEVELOPMENT NEED
- **SHOULD POLICY MAKERS CARE ABOUT CREATING AND EXPLOITING SUCCESSFUL ENERGY INTERVENTIONS?- VERY MUCH SO- OUR EXPERIENCE**