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# Developing Energy Programs in Post-Conflict Countries

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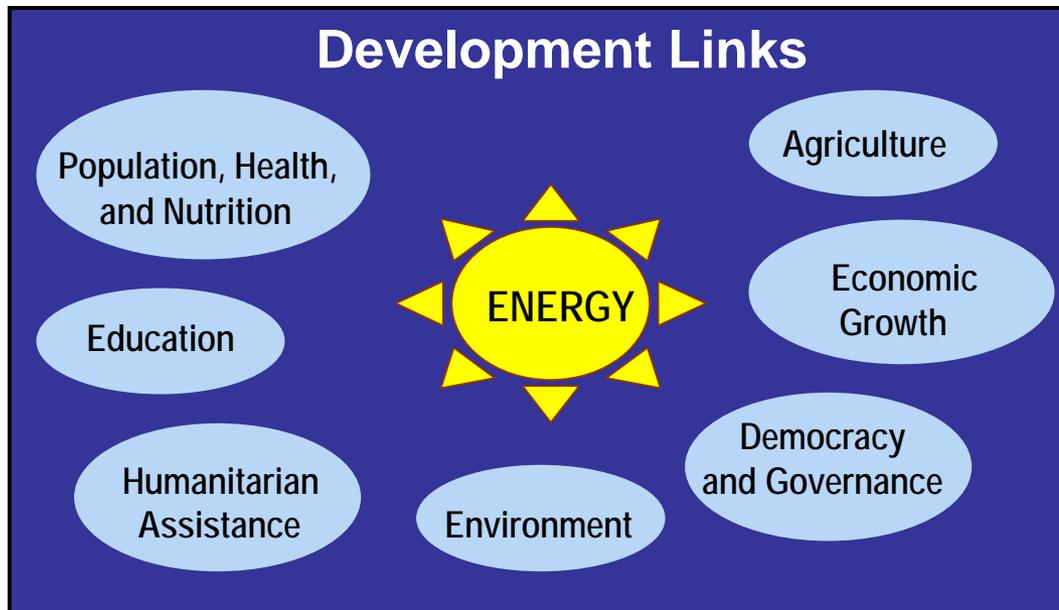


## **Presentation Outline**

- **Energy and Development**
- **Energy as a Subset of Infrastructure**
- **Empirical Design Factors for Energy Programs:**
  - **Setting a Trajectory Over Time**
  - **Mapping Imperatives/Needs to Resources**
- **Country Example: Liberia**



**The provision of energy services: strongly linked to global social, economic, and political development**



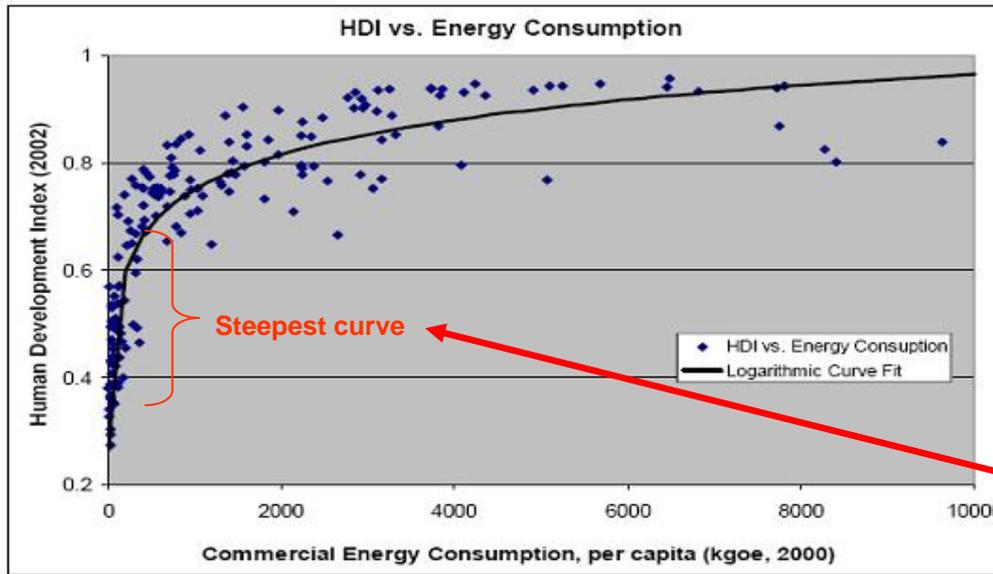


## Energy Access Varies Greatly by Region

<i>Region (2005) (in Developing Countries)</i>	<i>Electricity Coverage (%)</i>	<i>Un-served Population (millions)</i>
• Sub-Saharan Africa	26	547
• North Africa	95	7
• South Asia	52	706
• East Asia & China	88	223
• Middle East	78	41
• Latin America	90	45
TOTAL	75	1,577

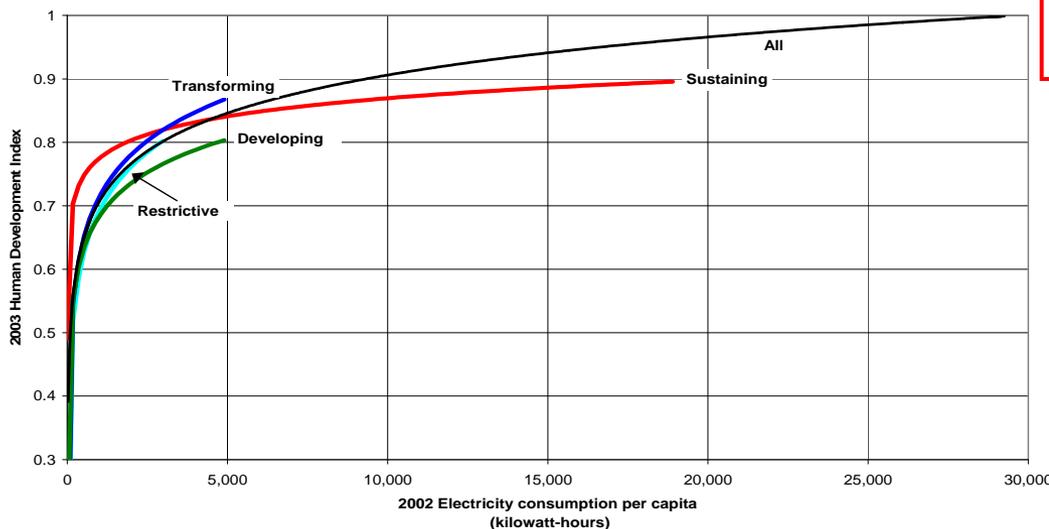


## Energy Access is Key to Development



- Strong positive correlation between energy consumption and human development across all countries

- Energy impoverished countries improve human development rapidly with increased energy consumption



- Strong positive correlation between energy consumption and development across all F country categories



## Globalization and Infrastructure Development:

“The driving idea behind globalization is free market capitalism - the more you let market forces rule and the more you open your economy to free trade and competition, the more efficient and flourishing your economy will be. ... Globalization also has its own set of economic rules - rules that revolve around opening, regulating, and privatizing your economy”

Thomas Friedman  
(The Lexus and the Olive Tree)



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## Global Security and Infrastructure Development:

“This new world must be defined by where globalization has truly taken root and where it has not. ... But show me where globalization is thinning or just plain absent, and I will show you regions plagued by politically repressive regimes, widespread poverty and disease, routine mass murder, and, most important, the chronic conflicts that incubate the next generation of global terrorists. These parts of the world I call the Non-Integrating Gap, or Gap.

... The only global future truly worth creating involves nothing less than eliminating the Gap altogether.”

Thomas Barnett  
(The Pentagon’s New Map)



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## **Infrastructure Programs Often Involve:**

- Developing National Strategies
- Creating Enabling Environments to Attract Investment and Encourage Efficient Service Delivery
- Increasing Human Resources for Service Delivery
- Fostering Private Sector Participation & Investment
- Facilitating Innovative Financing Approaches
- Improving Disaster Preparations & Responses
- Linking to Other Development Sectors



## Energy's Somewhat Unique Features:

- Energy takes a variety of forms
- Energy resources differ widely in their scale of development and utilization
- Few countries are energy independent
- Many rebuilding and developing countries are only partway through the transition from traditional to modern forms of energy
- Energy availability has strong links to the viability of other development programs (e.g., PEPFAR)
- Energy use has strong environmental and health impacts from the local to regional to global levels
- Energy can be inefficiently produced, transformed, transported, and utilized by end consumers, leading to waste



## Setting a Trajectory Over Time Requires:

- Recognizing the three time horizons:
  - Short-term – 3 to 18 months
  - Mid-term – 18 months to 3-4 years
  - Long-term – 3-4 years to 10+ years
- Keeping an Eye on the Long-term Goal for Energy Service Provision
- Laying the Foundation for Service Provision during the Mid-Term
- Satisfying Imperatives and Needs in the Short-Term while Keeping Future options open



## The Long Term Energy Goal:

- The efficient and sustainable provision of energy services to support economic growth and social development.
- This end state requires:
  - Financially solvent energy sectors
  - Widespread access to energy services
  - Incentives for efficient service provision and end use
  - Diversity of energy supplies for security
  - Environmentally sound practices



## **The Mid-Term Foundation for Energy Services:**

- Adoption of a national energy vision and program that addresses the needs of both the political/economic centers and the rural areas
- Clear separation of the policy, regulatory, and operational roles within the sector
- A firm legal basis
- Effectively-functioning institutions
- Cost recovery w/targeted subsidies for the needy
- Strong private sector participation
- Public participation in decision-making



## Short-Term Imperatives versus Future options:

- Short-term priorities take several forms:
  - Humanitarian needs
  - Political imperatives (diplomacy)
  - Military imperatives (defense)
  - Economic and social needs (development)
- Short-Term interventions must be designed to achieve the long-term energy services goal while not eroding the mid-term energy foundation – options must be kept open!



## Resource Mapping Requires Identifying:

- The USG's available assets:
  - USAID financial resources
  - USAID instruments
  - Military resources for security
  - Resources from other USG entities (State, TDA, etc.)
- The available assets of other bilateral and multilateral donors
- The Host-country's assets:
  - Physical resources and state of development
  - Infrastructure and its condition
  - Institutional capability and roles/responsibilities
  - Human capital
  - Financial resources



## Designing the Energy Program Involves:

- Articulating a comprehensive program that:
  - Addresses the short-term imperatives/needs
  - Lays the mid-term foundation for the long-term goal
  - Is complementary/coordinated with other donors
  - Takes into account the security situation
  - Utilizes ALL available resources effectively
- Identifying the specific tasks needed to implement the program, crafting them into effective SOWs w/budgets, identifying the appropriate instruments, and procuring the resources.
- Implement the activities in a mode that encourages creativity and feedback from our assistance providers.



## Examples of USAID Mission Interventions:

- Strengthening **energy sector governance** and **energy markets** through policy, legal, regulatory, and commercial reform to facilitate private/public investment;
- Improving the **operational and commercial performance** of public and private sector institutions, including utilities and community-based groups;
- Supporting the consummation of **specific private sector transactions**, particularly those involving multiple countries, to more economically provide energy for economic development;
- Directly supporting the **installation of renewable energy systems** in selected alliances with governments, communities, and the private sector, including the necessary resource assessments; and
- In post-conflict/post-disaster situations, **rehabilitating or replacing energy facilities** to restore services.



# Country Example: USAID/Liberia's Energy Program

## Imperatives:

- In January 2006, President Ellen Johnson-Sirleaf made political commitment to restore electricity services to Monrovia within 150 days (by Liberian Independence Day in July)[**Political Imperative!**]
- No existing provision of public electricity services, so economic and social development impeded. [**Development Imperative!**]
- Calm and stable security situation due to UNMIL, therefore no defense imperatives.
- Humanitarian situation stable.
- GoL has no money to invest in rebuilding the power sector, so committed to seeking private sector solutions w/investment, as well as committed to widespread urban and rural energy access.



## Available Resources:

- **USG assets:**
  - Strong US Embassy support
  - Modest USAID and TDA financial resources (~\$3-4 million)
  - EGAT Energy IQC available
  - Capable & decisive USAID Mission and regional (CO) staff
- **Donor Assets:**
  - EC with significant financial resources
  - Ghana/VRA with technical expertise plus commodities
- **Host-Country Assets:**
  - GoL willing partner (President, Ministry, Utility)
  - Utility and Ministry weak institutions
  - Infrastructure completely destroyed
  - Limited financial resources



## **Program Design and Implementation:**

- After consultation with the GoL and donors, USAID drafted a program description and MOU defining activities, roles, funding, and conditionalities for the Emergency Power Program (EPP) that addressed the political imperative.
- USAID drafted an energy SOW and negotiated a task order through EGAT Energy II IQC for a program of technical assistance and commodities to support the EPP, which also supported an EPP Phase 2.
- Finally, USAID drafted an energy SOW and negotiated a task order for a program that: (1) assists the GoL to clarify its long-term goals and policies; (2) begins laying down the energy foundation in the mid-term; and (3) includes selected urban and rural pilots to demonstrate results in the short-term.



## Short-Term Results: Liberia Emergency Power Program (Political Imperative)

- Provided critical power to Monrovia by Independence Day to meet commitment by new President to show new government's effectiveness
  - Supplied 2 MW for 2 hospitals, 424 other customers, and 20 km of streetlights
  - Steadily improving cost-recovery (90-95% for commercial clients, 80% GoL), allowing GoL to purchase its own fuel in January '07
- 
- ***The EPP demonstrated that electricity services can be provided on a cost-recovery basis, which is critical to sustainability and attracting future private sector investment***





## Mid-Term Results (Energy Foundation):

- ***To Expand Monrovia's Power Supplies to Support Mid-Term Economic Growth:***
  - The IFC has been signed on by the GoL to organize a tender for a private sector investor/operator concession in Monrovia.
  - However, with the arrival of Mittal Steel as an anchor customer, a large power plant might be built at Buchanan by an Independent Power Producer with power wheeled to Monrovia.
- ***To Build Institutional Capacity and the Knowledge Base:***
  - UNIDA is assessing the country's hydro potential, while US TDA is studying the rehabilitation/upgrade of the Mt. Coffee hydro facility.
  - A private firm is proposing to replant the palm oil concessions, which could provide bio-diesel for the Buchanan power plant.
  - The two phases of the Emergency Power Program are strengthening the capacity of both the Ministry of Land, Mines, & Energy and the Liberian Electricity Corporation (LEC), but a management contract is being considered for LEC in the future.



## Long-Term Results (Energy Goal):

- ***To clarify and implement a long-term vision for the energy sector:***
  - A National Stakeholder's Forum was held in October 2006 to discuss energy policy, which resulted in a National Energy Sector White Paper.
  - The Forum achieved broad support for the GoL's commitment to an energy sector built on private sector participation and investment, with government as policy maker and regulator.
- ***To clarify the approach to expand rural energy services:***
  - A Rural Energy Dialogue was held in October 2007 to review the experience of other country's and to discuss the draft Rural Energy Action Plan.
  - The Forum achieved broad consensus on supporting multiple modalities (rural co-ops, small private entrepreneurs, etc.) to meet rural energy needs, on the GoL's role as enabler and light regulator, and on utilizing Liberia's extensive renewable energy base (hydro, biomass (wood chips), palm oil, solar, wind, etc.) when economic to do so.



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**“Development requires facilitating investment and growth and empowering poor people to participate in that growth.”**

**~ Ioannis N. Kessides**

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