THIRD ANNUAL CONFERENCE ON CARBON SEQUESTRATION

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Financing the Incremental Costs of Advance Technology

Barry K. Worthington
Executive Director
The United States Energy Association

Invest Requirements in Developing Countries

- $6 trillion (US) needed – 2001 – 2030 –
- More than past 3 decades.
- Most difficult for electricity in developing countries.
- $600 billion to provide universal access.

How Much Money Is This?…

- US spending on healthcare – 2003 $1.7 trillion.
- Uncollected U.S. federal taxes $250 billion
- Proposed EC 2013 budget $181 billion
- Comcast offer for Disney $54 billion
- Annual revenue for Coke $20 billion
- Estimated costs of US energy bill $14 – 31 Billion
- US chicken exports $1.5 billion
- Michael Jackson personal debt $270 million

Literature reviews indicate that while availability of financing is noted as a barrier, rarely is incremental capitol cost of advanced technology singled out as a key issue.

In IPCC Report, section labeled* "Barriers to Technology Transfer Between Countries" "…*The capital costs of EST's (environmentally sound technology's) are generally higher than conventional technology"

[Only reference to capital cost in entire section.]

Most Explanations "Miss the Boat" of Focusing on Higher Capital Costs for Advanced Technology

Developing Countries Needs…

- Capacity building
- Investment-friendly environments, socially and environmentally responsible
- Technological leap-frogging
- Education and training
- Focus on local conditions

Macro-Economic Parameters

- Market Reform/Regulation
- Commercialization → Possible Privatization
- Encouraging Foreign/Private Investment
- Rule of Law/Property Rights/Contract Sanctity
- Institutional Structures
- Capacity Development

None of these overcome higher capital costs of advance technology.

Most discussions refer to private capital, not official development assistance as solution to energy poverty.

Don't look to traditional U.S. electric power investors, i.e., IOU's/IPP's.

Stock Prices – Selected U.S. Power

	Close 10/14/02	52 Week Hi	Close 2/11/04
Enron	*Delisted*		
Mirant	***Bankruptcy***		
AES	1.39	17.92	9.52
TXU	22.90	58.80	24.7
CMS	6.56	24.80	9.08
Duke	19.12	40.45	21.73
El Paso	6.40	53.61	8.89
Aquila	3.99	31.80	4.29
AEP	19.78	48.80	33.49
	Meanwhile Dow Jones Utility Average up 38% - 12 months		

Sellers

AEP
Duke
El Paso
Entergy
Mirant
NRG
Reliant

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Buyers

AIG
Berkshire Hathaway
Goldman Sachs
JP Morgan
KKR
Wachovia

Financial Instruments

- Loan guarantees or direct loans
- Tax exemptions/credits
- Direct subsidies i.e., construction and/or production
- Emission credits
- Export credit insurance
- Ameliorate risk – political/credit
- Sovereign guarantees
- Capital cost buy-down

Access Non-Traditional Financing for Power Projects

- Non-utility corporations, i.e., Berkshire Hathaway
- Insurance Companies
- Pension Funds
- Innovative long-term bonds with delayed principal payout
- Break project financing into construction/operation
- Increased government/private sector coordination

Conclusion

- New models of trade assistance; development assistance needed to coordinate with private sector.
  - Clean Energy Technology Export Initiative
  - WSSD Outcomes
  - Global Development Alliance
  - Global Development Bonds

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