

U.S. Energy Efficiency and Clean Energy Funds

"Panacea or Pipe Dream?"

Presentation For

Asia Clean Energy Forum 2008

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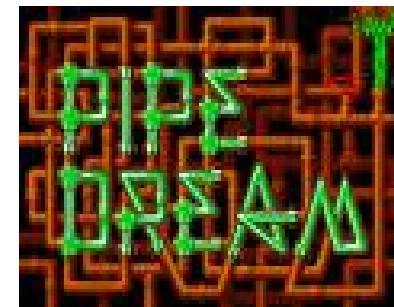
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I'm Here To

- ◆ Provide Overview of U.S. Energy Efficiency Funds
- ◆ Examine What Worked & Didn't and Why
- ◆ Create a Dialogue with Forum Participates



PANACEA OR PIPE DREAM?

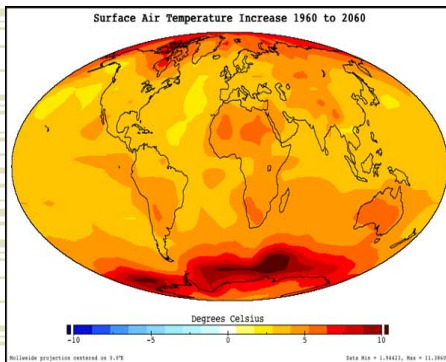
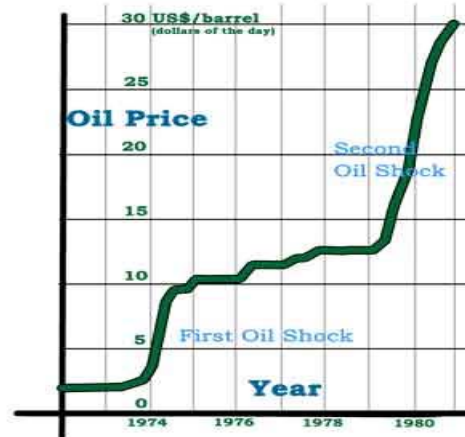
Panacea is defined as “universal remedy or solution, cure-all, or magic potion ”

Pipe Dream is defined as “dream, wishful thinking, fantasy, or delusion”



Energy Efficiency & Clean Energy Funds

Clean Energy Funds Important Globally For Same Reasons As U.S.



4 Common U.S. Energy Efficiency & Clean Energy Funds (\$)

- ◆ **Public Sector Funds** - Revolving funds, tax-exempt bonds
- ◆ **Private Sector Funds** - Banks, utilities, green capital funds, energy service companies (ESCOs)
- ◆ **Incentives/Dedicated Funds** - Interest buy downs, rebates, clean technology funds (wind, bio fuels, etc.)
- ◆ **Credit Enhancements** – Gov't loan guarantees, energy efficient home mortgages (EEMs)



Examples of Successful Clean Energy Funding Programs

- ◆ **Public Sector Funds** – \$96 M Texas LoanSTAR revolving fund with \$240M loans & 5.6 yr. avg. payback since 1990
- ◆ **Private Sector Funds** – “Green” mutual funds invested in environmentally responsible corp., green bonds, bank capital
- ◆ **Incentivized/Dedicated Funding** – Numerous “utility loan” programs such as Austin Energy’s Residential & Commercial loans for appliance/weatherization/commercial lighting @ 0%.
- ◆ **Credit Enhancement Funding** – Dept. of Energy (\$38.5B) & Agriculture [\$2.1 B] Loan Guarantee Programs



Key Reasons for Successful U.S. Clean Energy Funding Programs

- ◆ **Dedicated public sector funds** – Key word is dedicated i.e., “Low-cost dollars chasing green projects.”
- ◆ **Loan Guarantees (new to clean energy in U.S. & my favorite)**
Can leverage \$billions without Gov’t. tax dollars. Gov’t. guarantees lowers risks, the costs & project paybacks.
- ◆ **Use of existing banking channels** – Lenders already in the business and know what they are doing. Also, low transaction costs plus good at marketing. Utilities like this one.



Not So Successful, U.S. Clean Energy Financing Mechanisms

- ◆ **Energy Efficient Mortgages (EEMS)** – One of biggest disappointments in U.S. last 20 years
- ◆ **Performance guaranteed loans** – Too many unknowns
- ◆ **Some ESCO projects** – Very much a mixed bag. Difficult to do right on both sides.



Reasons For Lack Luster Performance of Some U.S. Clean Energy Funds

- ◆ **Based on False Assumptions** - Lack of private funds, that low interest rate will increase demand, that financing is a *Silver Bullet*.
- ◆ **Boutique Loan Products** – Very specialized with low volumes that that becomes a non-profitable loan product (not sustainable).
- ◆ **High Transaction Costs** – Added fees for certification (i.e. energy rating), added paper work & long lead times.
- ◆ **Greater Credit Risk** - New/emerging technologies, volatile energy prices, difficulty in verifying savings & performance, few lenders with energy engineering experts or vice versa.



Homework/Good References

- ◆ **US EPA Report:** “State Clean Energy Funds” (www.epa.gov/combdhpp/state-policy/funds_fs.html)
- ◆ **NGO Reports:** (1) “State Residential Energy Efficiency Loan Programs,” **Energy Programs Consortium, M. Brown,** Sept 2007 (<http://www.cee1.org/>)
(2) “Funds for Energy Efficiency Projects, **Alliance to Save Energy,**” Apr 2002 (www.ase.org/)
- ◆ **State Loan Programs:** *California Energy Commission* (<http://www.energy.ca.gov/>), *NYSERDA* - (<http://www.getenergysmart.org/>), *Texas State Energy Conservation Office* - (<http://www.seco.cpa.state.tx.us/>)
- ◆ **World Bank Reports:** (1) “Financing Energy Efficiency: Lessons from recent experience in Brazil, China, and India,” May 2006
(2) “Development & Climate: Financing Challenges,” A. Miller, IFC, Sep 2006

Summary of Lessons Learned & Questions?

- - Clean Energy Funds rightfully recognized as an essential public tool but not a Silver Bullet or panacea.
- Success of U.S. EE financing has varied widely
- - Study U. S. models carefully to not repeat missteps



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Why Risk It? Consider The Alternatives

