

Using Energy Efficiency To Finance Building Rehabilitation

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Session 1F

*Bringing New Life to Abandoned Properties:
Creative Deployment of Public Sector Financing*

**Reclaiming Vacant Properties: Building
Leadership to Restore Communities**

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Topics Addressed

- The “Why,” “When,” and “For What” of Public Investment in Regeneration
- The Payoffs to State and Local Financing for such Investments
- Two Obvious Tactics
- Proof of Economic Payoff: ESCOs
- Extending the ESCO Logic
- Conclusion



Why Public Financing? When?

To Overcome Short-Term Self-Interest

- low *price elasticity* of demand for power
- missing *complements* or *substitutes*
- low private investment rates of return
- ignored inter-jurisdictional externalities

To Stimulate Public and Private Action

- demonstrate feasibility & success
- correct over-general building regulations
- promote more public-private coordination
- permit public ownership, control of assets

Two Quick Examples Illustrate the Logic



Land use planning for more residential, commercial density

- “densification” actions & impacts vary
- density values change w/ land availability
- conflicts in building preservation vs. renewal
- transportation system path dependence

Public financing available to: acquire land, build infrastructure, address contamination risks, increase private value placed on density & reuse, and generate more local jobs



New standards for construction and retrofitting of buildings for energy efficiency

- building materials, not just standards, matter
- “affordability” includes all operating costs
- infrastructure shapes attainable efficiency
- regulatory reasonableness affects investment
- retrofit costs can undermine building reuse

Public financing needed to satisfy investment standards & not retard nongovernmental spending on long-term energy efficiency measures



New Tax Revenues: The State and Local Government Payoffs

- From income from new jobs, businesses
- From sales taxes on new spending
- From increased property values

→ do states and/or local governments **Under-Invest** in new energy or efficiency projects?

-- Perhaps because they forget they could experience net revenue gains?



Two Obvious Tactics That Value and Depend on Reusing Existing Buildings

- Increasing Density of Land Use, Buildings, Economic Activity, thus promoting lower car use, more mass transit, etc.
- Retrofitting Existing Buildings for Energy Efficiency, thus avoiding the costs of new construction and lowering aggregate energy use.

Increasing Density

- If 60% of all of new construction by 2050 (2/3 of which has yet to be built) was built on a dense development pattern, we could cut emissions by 79 million tons of CO₂ annually by 2030.
- “Vacant and abandoned properties occupy about 15 percent of the area of the typical large city ...”
Those sites impose spreading costs:
 - municipal services to keep the properties from becoming active threats
 - property values and tax revenues losses associated with abandonment
 - costs to nearby homeowners – and businesses
 - patterns of spreading blight that can be generated by abandonments

Retrofitting for Energy Efficiency

- Investing in underutilized and inefficient buildings as well as those suffering from abandonment
- The biggest energy cost saving associated with reuse may be that the building does not have to be replicated
- The rehabilitation costs may be compensated for in part by the costs-avoided by not tearing down a building
- The potentially largest return may be operations costs avoided with a more energy- and utility-efficient building
- Energy efficiency improvements are the “low hanging fruit” that can provide investment grade financial returns
- Studies from across the US show that state investments can help to reduce electricity use – and can generate jobs in the process.



ESCOs Prove the Returns

- Energy Service Companies (ESCOs) bid on rehabilitation jobs and provide assurances of minimum savings in the future over a baseline utility service consumption level, *assuming no increased utility cost in the future.*
- ESCOs guarantee property owners that their operating cost savings will at least equal the costs of debt service on the contracted efficiency rehabilitations
- The rapid expansion of ESCO contracts demonstrates the availability of investment-grade returns to investments in energy efficiency in existing buildings.
- The industry has serviced large clients – major firms, state and local governments, universities, schools districts and the like.
- Public sector financing may be needed for smaller firms and homeowners, using the ESCO logic



Extending the ESCO logic

- A government could administer use of public sector capital for ESCO-type projects for a portfolio of smaller buildings
- Borrowing could be through tax-exempt bonds, lowering capital costs
- Publicly owned abandoned buildings could be included in the program
- Private owners of structures could voluntarily participate, permitting the sponsor to assess them for their expected utility cost savings or share of the contract total cost at the end of each year.
- Assessments could run with properties, not owners, so improvements would be maintained by subsequent owners
- The monthly and total annual cost savings could help some property owners avoid foreclosures in the current market.
- A bidding process to serve a multi-million dollar project will generate higher qualified contractors than small property owners could attract
- Risk is spread across many buildings and installations, which lowers contractors' uncertainty, compensating in part for the higher cost of planning and executing retrofits on many small buildings
- Local governments could include local worker, supplier requirements



Conclusion

- Private sector funds are already flowing to energy efficiency rehabilitations
- The economic return logic also applies to abandoned and vacant buildings
- Private returns can increase
 - Housing Affordability – lowering operating costs
 - Local Business Efficiency and Competitiveness
- Public returns include new taxes, lower cost
- Public funding exists
- Tools to raise more funding are available

Thank you!

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