



Technologies for Federal Housing

Subsidized Public Housing

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Issues Facing Public Housing

- Age and Condition of Housing Stock
- Decline in Funding:

Operating Subsidy

HUD documented a \$283M shortfall in funding for 2006 attributable to utility expenses alone

Capital Funds

- Continuing Increase in Operating Cost which includes Utilities

Energy Performance Contracting (EPC)

WHAT AND WHY

One Tool in the Toolbox
(of which there aren't many)



EPC Benefits

- Utility Cost Savings
- Capital Funds Available for Other Use
- Improved Housing Units
- Reduction in On-going Maintenance Costs
- Extra Points for Competitive Grants
- Energy Services Company (ESCO) Managed Project

Knoxville's Community Development Corporation

- The Housing and Redevelopment Agency for Knoxville, TN
- 3,600 Public Housing Units
- 13 Developments
- \$2.9M in annual master-metered utility costs
- \$2.7M in annual tenant utility allowances
- Ameresco selected as ESCO for 20 year project



KCDC Energy Measures Selected

- Replace Toilet Valves and Flappers
- Replace Toilets
- Replace Showerheads
- Replace Faucet Aerators
- Install *Energy Star* Front Loading Washers
- Upgrade Common Area Lighting
- Upgrade Apartment Lighting
- Install *Energy Star* Vending Machine Controls
- Install *Energy Star* Packaged Terminal Heat Pumps with Limiting Thermostats
- Install *Energy Star* Refrigerators
- Replace Windows
- Replace Rooftop Units
- Replace Gas Furnaces
- Upgrade Common Area HVAC
- Replace Membrane Roofing

KCDC EPC Benefits

Cash Flow Projections

Total Savings	\$27,883,955
Debt Service	\$15,350,189
Fees	\$2,852,196
Excess Savings	\$11,055,895

KCDC EPC Benefits

Utility Reduction Projections

- Electricity 20%
- Water 20%
- Natural Gas 3.5%

KCDC EPC Benefits

Environmental Projections

- Reduce water by over 50M gallons annually
- Reduce greenhouse gas emissions by appx 4,000 tons annually
- Reduce sulfur dioxide gas emissions by appx 23,000 annually
- Reduce nitrogen oxide emissions at power stations by appx 22,000 pounds annually



Would you like to know more about this session?

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- Please don't forget to fill out and drop off your session evaluations.



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