



Energy Improvement Districts (EIDs)

Presentation to:
Connecticut Energy Advisory Board



An EID is...

A privately financed,
clean power and thermal distribution system
that is locally monitored, managed and
controlled. EIDs utilize local generation,
thermal energy and renewable
energy resources.



Pareto Energy

- Financial specialists, lawyers and engineers
- Experts at enabling, planning and financing EIDs
- Work in conjunction with the U.S. Conference of Mayors
- Support commercial energy users in more than 30 cities across at the U.S.



Legal Approach

- Businesses form an Energy Improvement District to plan and finance infrastructure
 - Governing board and infrastructure plan approved by the municipality
- Infrastructure improvements begin, using tax free private activity bonds
- Energy users enjoy more reliable, less costly and greener service



Technical Approach

- Control and install power locally at critical locations and tailor it to specific timing and uses.
- Invest in energy savings and modular micro generators to mitigate commercial power costs.
- Take optimal advantage of combined heat and power using micro grids.



- Create electric reliability insurance that covers product loss and business interruption from power disruptions.
- Cost effective renewable energy sited at or near its point of use
 - Demand Management
 - Aquifer Thermal Energy Storage
 - Solar Energy
 - Combined Heat and Power
 - Waste to Energy



Financial Approach; Sources of Funds

- Savings: coordinate demand management and conservation, and earn discounts for large volume purchase of energy saving technologies.
- Generation Efficiency: 80-90 percent, because recycled heat from on-site generation can be used locally for heating and cooling.
- Micro Grid Efficiency: efficiency improved because firms differing power use schedules can plan and share generation. Modular micro generators can be delivered much faster and in the right size and with customization.
- Financing Efficiency: fund many projects at once according to detailed and optimal plans developed through participation of all local stakeholders; make use of tax-free EID bonds.
- Grants: provide a robust test bed for new technologies being supported by federal government agencies and private foundations.
- Environmental Credits: sell credits for reducing local pollutants and greenhouse gases.



Financial Approach

Uses of Funds

- All financing by private activity bonds and private equity
- Detailed Project Design (\$75-150 thousand)
- Commissioning, EID Formation, Project Financing (\$500 thousand - \$1 million shared among EIDs in several communities)
- Project Construction (\$1,500 - \$2,500/KW)
- Targeted Cost of Power: fixed at grid rate with a 50 percent rebate of savings below grid rate

