



AMERICAN DEVELOPMENT
INSTITUTE

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SUMMARY

ADI Energy performed solar hot water audit for the various swimming pools located in the City of Boston including Paris St., Mason St., Curtis St., Draper St. and Mildred Avenue and provided sound recommendations on each pool facility in terms of energy savings.

Energy Conservation Massachusetts
Wind Energy Massachusetts

Size: 5 swimming pools

Department of Energy Resources-MA City of Boston, MA



UNIQUE VALUE TO CUSTOMER

The DOER requested that ADI Energy perform Solar Thermal Feasibility Studies for municipal facilities in Boston. The facilities were selected by the City of Boston's Solar Boston program; the sites were identified as having potential to benefit from solar water heating installations. The reports generated as part of the audits will be used to identify the priority sites for future solar hot water installations.

ADI Energy provided the Department of Energy Resources (DOER-MA) and the City of Boston a report that details the audit and associated analysis and the resulting feasibility of the potential project. ADI Energy also evaluated the varying layout designs for each building facility in order to maximize the energy output of the solar heating system and provided conceptual design that maximizes the output of the system while minimizing its investment.

SERVICES

- Energy audit
- Energy savings analysis
- Energy profiling
- State utility incentive program recommendations
- Preliminary assessment for energy
- Energy consultants
- Energy engineering
- Energy reduction
- Renewable energy services

MEASURES

- Solar Thermal System Design

Location	Occupants (Actual)	Pool size (KGal)	Current Gas Cost ('000)	Current Annual Gas Usage (DTherms)	Heating Energy (Dtherms)	Estimated Gas for Pool and DHW (Dtherms) ^{***}	Gas (Therms)/Gal Pool Water	Gas (therms) / Person	Solar Investment ('000)	Number of Panels	Annual Savings ('000)	Payback (Years)
Curtis *	140	61	\$ 62	3,859	2,542	1,317	63	28	\$ 150	35	4.9	30.55
Draper	166	95	\$ 94	5,851	3,944	1,907	61	35	\$ 147	50	7.5	19.6
Mason	166	95	\$111	6,948	5,041	1,907	73	42	\$ 147	50	7.5	19.6
Mildred **	180	151	UNK	UNK	UNK	2,326	N/A	N/A	\$ 124	40	2.3	54.36
Paris	166	95	\$ 46	2,865	958	1,907	30	17	\$ 147	50	7.5	19.57

* Curtis Pool closed from Dec 2007 through June 2008

** Mildred school currently uses a cogeneration unit for pool heating

*** Based on Energy Analysis Model