



AMERICAN DEVELOPMENT  
INSTITUTE

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SUMMARY

ADI Energy was hired by DCAM to investigate the economic and operational impacts of installing a biomass energy plant at the Massachusetts Police State Academy (MSPA) facility in New Braintree, MA. ADI Energy's goal was to reduce MSPA's fuel costs and carbon footprint in accordance with Executive Order 484.

**Size:** 10 buildings and 20 residential buildings

SERVICES

- Life cycle cost analysis
- Capital investment and maintenance planning
- Consumption usage analysis
- Site evaluation
- Resource assessment
- Consumption usage analysis
- Environmental and regulatory analysis
- Investment grade audit energy
- Preliminary assessment for energy
- Alternative energy services
- Energy engineering
- Energy financial analysis
- Plant optimization
- Utility reductions
- Biomass heating plant

MEASURES

## Division of Capital Asset Management - MA Massachusetts Police State Academy



### UNIQUE VALUE TO CUSTOMER

The Commonwealth of The Massachusetts contracted with ADI Energy to provide a more efficient, economical solution to the Massachusetts Police State Academy's growing energy costs.

ADI Energy developed a solution whereby a new biomass plant would be installed at the facility with an estimated initial investment of \$835,000. The Massachusetts Police State Academy will save between \$105,000 and \$130,000 and will eliminate over 600 tons of CO<sub>2</sub> on an annual basis.

ADI Energy provided the Massachusetts Police State Academy with an assessment and recommendations on the existing cooling systems, biomass as a fuel source, technology options, project economics analysis and the evaluation of the potential of cogeneration and Ground source heat pumps (or GEO-Exchange) at the site. The two options for boiler plant configuration were also evaluated. ADI Energy concluded that construction of a new building for chip storage and/or the new boiler system is the most appropriate at this time since the Massachusetts Police State Academy's current boiler plant is grossly oversized. This potential project could be installed in one year.

