

# Energy Savings Performance Contracting

## Saving Facility Resources

### Case Study



## Washington State Department of Corrections - Washington Corrections Center



### Project Description:

The Washington Corrections Center in Shelton, Washington is operated 365 days a year and was built in the early to mid 60's. Each building is served by steam and condensate piping delivered by a central boiler. This project installed a new utilidor with steam and condensate lines to replace the existing 40-year old system. The existing boiler controls were upgraded to automate the boiler plant and provide remote system dial-up alarm notification

**Project Completed Total:** July, 2005  
**Project Cost:** \$5,587,612  
**Project Number:** GA Project #2003-067 A (1-1)

<b>Annual Energy Project Savings:</b>			
<b>Electrical</b>	\$0	<b>kWh</b>	0
<b>Natural Gas</b>	\$393,584	<b>Therms</b>	354,545
<b>Fuel</b>	\$0		0
<b>Water</b>	\$0	<b>Gallons</b>	0
<b>Maintenance</b>	\$0		
<b>Total Annual Avoided Costs:</b>			
<b>Guaranteed</b>	<b>\$140,045</b>	<b>Verified</b>	<b>\$393,584</b>

## Funding Sources:

Loans:	\$1,150,000
Utility Incentives:	\$0
Other: (Capital)	\$4,437,612

## Project Managers:

### Client Contact Information:

Kent Nugen,  
Program Manager,  
Department of Corrections  
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### General Administration's Contact:

Jim Hayes,  
P.E., Energy Engineer,  
Department of General Administration  
(360) 902-7281

### Energy Service Company's Contact:

Mike O'Conner,  
President,  
Quantum Engineering and Development  
(206) 522-4270

## Highlights:

**This project dramatically improved the steam distribution systems at the Shelton facility for increased building efficiency and equipment life.**

*Quantum Engineering conclusive report*

## Emission Reductions:

*Annual Reduction in CO2:*

**4,467,267 pounds per year**

*Annual CO2 Reduction Represents:*

**Removing 298 Cars from the road, or  
Planting 609 acres of trees, or  
Powering 434 Homes**

## Monitoring & verification report details

- Quantum provided one-year monitoring and verification as well as ongoing communication with facility maintenance staff.

## Outcome:

- Gas savings exceeds the projections by 16%.
- Utility bill savings exceeds projections by %153%.

## Analysis:

- Energy conservation measures are functioning as designed.
- Gas utility rates increased significantly during this project period (2003 - 2006).

For more information: email [GAEnergyTeam@ga.wa.gov](mailto:GAEnergyTeam@ga.wa.gov)  
Visit our web site at <http://www.ga.wa.gov/EAS/epc/espc.htm>