



An Energy-Efficiency Workshop and Exposition

Orlando, Florida

Federal Sites & Third-Party Partners

Cogeneration & Refrigeration Plant Modernization

Presented by:
U.S. General Services Administration
Heating Operation & Transmission District



Federal Sites & Third-Party Partners



U.S. General Services Administration



Washington Gas



Smithsonian Institution



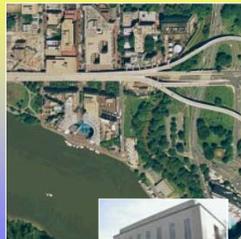
GSA Heating Operation & Transmission District Energy Services Since 1933



GSA Heating Operation & Transmission District Serving the Nation's Capital



GSA Heating Operation & Transmission District Serving the Nation's Capital



GSA Heating Operation & Transmission District 21st Century District Energy Services

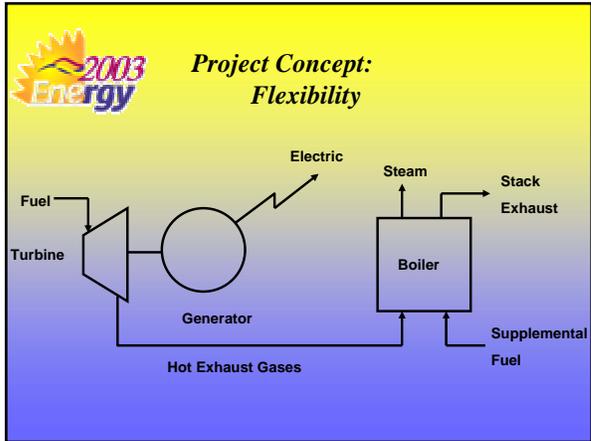


2003 Energy GSA Heating Operation & Transmission District
Cogeneration & Refrigeration Plant Modernization

2003 Energy **Outline of Presentation**

Concept Financing Design
Permitting Construction & Operation

2003 Energy **Project Concept: Flexibility**



2003 Energy **Project Concept: Flexibility**

GSA U.S. General Services Administration National Capital Region
Chilled Water Distribution System
GSA Cogeneration and Chiller Plant Expansion Project

2003 Energy **Project Concept: Flexibility**



**Project Concept:
Flexibility**

- Two 5MW gas turbines & gas compressors
- Re-engineered an existing boiler into a waste-heat boiler
- 17,000 tons of cooling equipment including two steam-driven chillers
- New cooling towers & auxiliary equipment
- Automated plant control system
- New electrical switch gear
- 1 mile of underground distribution piping serving 8 Smithsonian buildings



**Project Concept:
Flexibility**



**Project Financing:
Getting a Guarantee**

	ESPC	Utility Contracts
Authorization	EPAct 42 USC 8287 10 CFR 436	EPAct, 42 USC 8256 10 USC 2865 48 CFR 41; 48 CFR 16
Guaranteed Performance	Guaranteed performance required	Guaranteed performance not required, but negotiable
Term	25 year maximum	10 year maximum
Measurement & Verification	M & V and annual energy audit required	M & V and annual energy audit negotiable
Operation & Maintenance	O & M typically included	O & M negotiable
Contracting Time & Resources Requirement	Time and resource intense process	Reduced time & resources needed for selection process (close scrutiny of terms and technical issues required)

www.eren.doe.gov/femp/financing/finance_option.html



**Project Financing:
Getting a Guarantee**



Guaranteed Savings vs. Government-Operations



**Project Financing:
Getting a Guarantee**



*Guaranteed
Performance
= Guaranteed
Savings*



Project Design:





**Project Design:
Design/Build or Build/Design**



**Project Design:
Design/Build or Build/Design**



**Project Design:
Design/Build or Build/Design**



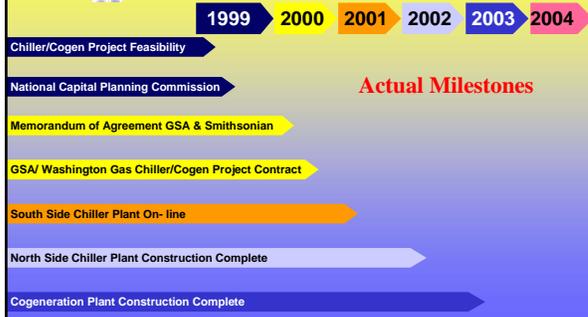
**Project Design:
Design/Build or Build/Design**



**Project Permitting:
Watch your Schedule**



Project Design:





**Project Permitting:
Watch your Schedule**



**Project Permitting:
Watch your Schedule**



**Construction & Operation:
Group Synergy**



Conclusion



Concept



Financing



Design



Permitting



Construction & Operation



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Thank You

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