

First Annual Energy Solutions Symposium

Afternoon Clinic Session
“In’s & Out’s of Performance Contracting”


March 12, 2009 1

Overview

- School district pressures
- What is performance contracting?
- Michigan’s enabling laws
- Structuring contracts
- Annual review and training

March 12, 2009 2

School District Pressure



A 1991 independent study of the Washington DC public schools by Maureen M. Berner concluded that standardized test scores of students in schools with buildings of poor physical condition were 11% lower than those in buildings with excellent physical conditions.

March 12, 2009 3

Building Conditions Related to School Performance

- Healthy and well-ventilated
- Thermally comfortable, visually well lighted, and acoustically conducive
- Commissioned to be energy efficient
- Water efficient
- Easy to maintain and operate
- A teaching tool

March 12, 2009 4

Benefits of Developing a High Performance School Plan

- Higher test scores
- Increased average daily attendance
- Reduced operating costs
- Increased teacher satisfaction and retention
- Reduced liability exposure
- Reduced environmental impacts
- More money for core mission

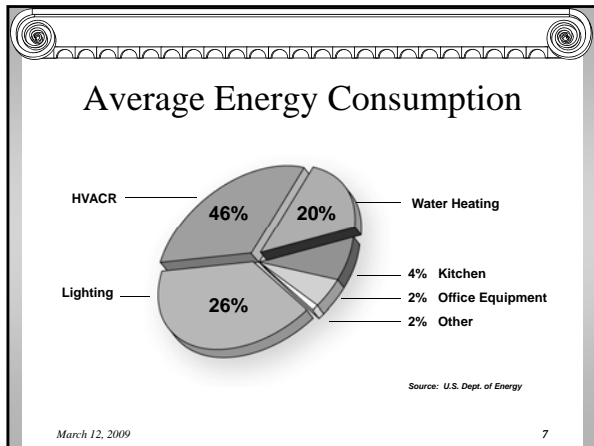
Source: EPA - 'Tools for Schools'

March 12, 2009 5

Today's Energy Climate

"The energy squeeze is not temporary..."
—Kiplinger Letter, Volume 82, #37

March 12, 2009 6



Traditional Construction Approaches Viable for Project?

- Do not need guarantee to undertake "energy project"
- Provides the check and balance not found in design-build

March 12, 2009 8

Standard Construction Requirements Applicable

- Must be competitively bid per MCL 380.1267
- Must receive performance and payment bonds if over \$50,000
- May need to pay prevailing wage, depending on funding
- Must satisfy state plan review through DLEG
- Licensed architect/engineer must prepare plans/specifications

March 12, 2009 9

Energy Bonds

- ✦ Not voted
- ✦ Not subject to 5% of SEV debt limit
- ✦ Cannot levy tax to pay debt service
- ✦ Cannot be issued for longer than useful life of project

March 12, 2009 10

Common Energy Conservation Measures

- ✦ Lighting systems upgrades
- ✦ DDC energy management systems
- ✦ Variable frequency drives
- ✦ Domestic hot water systems
- ✦ Unit ventilator replacements (IAQ & noise compliance)
- ✦ Boiler plant retrofits
- ✦ Addition of air conditioning systems

March 12, 2009 11

Michigan ESPC Laws

- ✦ On December 23, 2003, Governor Granholm signed ESPC Legislation (P.A. 255 & P.A. 254)
- ✦ Public Act 255 amends Public Act 451 (section 1274a of the Revised School Code) by comprehensively defining contractual agreements for “Energy Saving Performance Contracts”
- ✦ Public Act 254 amends Public Act 306 by allowing school districts to contract directly with the “Qualified Provider”

March 12, 2009 12

What can be Achieved by Performance Contracting?

- Remove inefficient energy consuming equipment
- Install new energy efficient equipment
- Option to finance the project with Guaranteed Energy Savings
- Financing does not need voter approval
- Competitive bidding through RFQ

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13

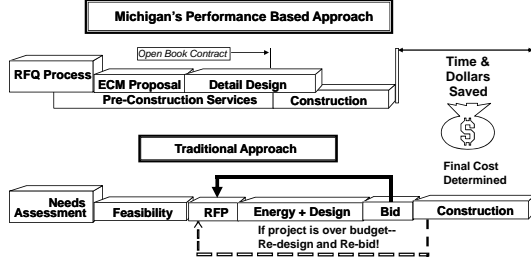
What does this mean for Michigan Public Schools?

- It removes the risk from a school district
- It ensures the quality, reliability, and validation of a project
- Funding is accomplished through the energy savings guarantee of the qualified provider
- Saves Michigan schools money and time

March 12, 2009

14

ESPC Project Delivery



Time and money is the difference!

March 12, 2009

15

What is a Qualified Provider?

- A business entity that is experienced in performing design, analysis, and installation of energy conservation improvements
- The ESCO must provide either a guarantee or a statement of performance.
- A qualified provider should be used when an energy saving agreement is intended

March 12, 2009

16

RFQ Concepts

- Broadly distribute RFQ
- Designate facility walk-through for bidders
- Detailed description of desired improvements
- Provision of engineering study
- Provide for guarantee as "add alternate"
- Bonding or financing to secure savings?
- Identify whether prevailing wage applies
- Avoid "sweetheart" arrangements

March 12, 2009

17

ESPC Proposal Criteria

A detailed description of the energy performance savings to be derived each year and for the contract duration.

- A description of the energy use savings and tasks to be performed
- The combined total net cost of all the energy conservation measures in the project
- The projects energy savings and operating cost savings
- The useful life of each ECM
- The simple payback period
- Certification that measurement and verification techniques, for determining savings, will comply with U.S. Dept. of Energy accepted protocols (IPMVP)

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18

Performance Contracting

Approach to Energy Conservation Measures identified in your facilities:
 Develop an Energy Taskforce

- Identify school district team members
- Engineering and design services
- Decide on project scope
- Hiring and directing subcontractors
- Equipment and supplies procurement
- Analysis of savings and performance

March 12, 2009 19

Eligible Energy Conservation Projects

May include, but are not limited to:

- Building envelope improvements
- Heating and cooling upgrades
- Lighting retrofits
- Installing/upgrading an energy management system
- Motor, pump, or fan replacements
- Domestic water use reductions
- Upgrading energy consuming equipment

March 12, 2009 20

Energy Saving Performance Contract


May include, but is not limited to:

- A detailed energy engineering study
- The design, installation, operation, and maintenance of one or more energy conservation measures
- Permits Michigan school districts to convert valuable energy dollars into infrastructure improvements
- A bond that guarantees energy cost savings

March 12, 2009 21

Open Book Pricing

- Fair overhead and profit charges
- Open book pricing:
 - GSA schedule
 - Administrative costs
- Non-vendor specific
- Can use local contractors
- Dollars stay in community



March 12, 2009 22

Advantages of Energy Saving Performance Contracts

- Savings may pay for the project cost
- More rapid implementation
- Improvement of temperature and lighting
- Updating of facilities to IAQ standards
- Reduced project management cost
- Better quality and reliability

March 12, 2009 23

Key Benefits

- Risk management belongs to the ESCO
- May save existing budget dollars
- Reduces mobilization and administrative costs
- On time and on budget
- Guarantees performance and savings
- Minimizes inflations impact...time is money

March 12, 2009 24

Disadvantages of Performance Contracting

- Potential conflict of interest in doing design-build
- Competitive bids must be taken, but are they meaningful?
- Energy savings formula key to project feasibility
 - District has limited expertise to critique
 - Created by same firm promising savings
- Are costs to get "guarantee" worth it?

March 12, 2009

25

Cures for Disadvantages

- Review underlying facts in savings formula for feasibility
- Use independent energy consultant to review
- Compare costs of guarantee to benefit
- Understand "cash flow"... is project cash flow neutral, positive, or potentially negative?
- Provide options for non-guaranteed project in RFQ

March 12, 2009

26

Guarantee Calculations Pitfalls

- Must have realistic usage assumptions
- Inflationary pressures may skew achievement of savings
- "Stipulated" savings never proven
- How are non-stipulated savings proven?
- Excess savings belong to energy company
- Guarantee is only as valuable as company providing it

March 12, 2009

27

How to Sustain Savings

- Training for successful outcomes
- Ongoing monitoring and verification
- Preventive maintenance tracking
- Best practices for building usage
- Administration, staff, and student support
- Community awareness and involvement

March 12, 2009 28

In Conclusion

- Energy program management leads to solid ECM choices
- Michigan law enables ESPC
- Good contracts require due diligence
- Sustainability requires an annual check-up

March 12, 2009 29

Resources

- Michigan School Business Officials
 - <http://www.msbo.org>
- Leadership in Energy and Environmental Design (LEED): U.S. Green Building Council
 - <http://www.usgbc.org>
- High Performance School Buildings
 - Collaborative for High Performance Schools <http://www.chps.net>
 - Renewable Energy Sources

March 12, 2009 30

ANY QUESTIONS???



March 12, 2009 31
