

# Energy Efficiency Market Transformation Opportunities for Texas

September 13, 2007

## Comprehensive Design Support for High Performance New Construction

**JAY PILLIOD**, Director of Business Energy Services  
Vermont Energy Investment Corporation

Jay is the Director of Business Energy Services for the Vermont Energy Investment Corporation (VEIC) a non-profit consulting firm based in Burlington, Vermont. VEIC provides energy program planning, evaluation, and implementation services to utility, government, and business clients across the US and Canada. The largest of these contracts is *Efficiency Vermont*, the first statewide energy efficiency utility established in 2000. Jay has a BS in Architectural Engineering from the University of Colorado and over 12 years experience implementing energy efficiency programs. Prior to joining VEIC, he was Program Manager of the Commercial Energy Codes Program for the State of Colorado.



A Workshop Sponsored by

**Public Citizen**

with

Texas Energy Efficiency Partnership

&

**Electric Utility Marketing  
Managers of Texas**

Austin, TX



# Comprehensive Design Support for High Performance New Construction

Jay Pilliod  
Director of Business Energy Services  
Vermont Energy Investment Corporation

## New Construction Market Goals

- Achieve High Performance as standard building practice across Vermont's Commercial New Construction and Major Renovation Market

*(currently HP = minimum 20% beyond ASHRAE 90.1–2004)*

- 21,000 MWhs (3 year goal, 2006-2008)
- 4,000 Summer Peak kW
- 2,000 Winter Peak kW
- \$21.2M Total Resource Benefits (TRB)

# Market Strategy Approach

- What are the key market barriers?
- Where are the key points in the design and construction process where these barriers exist?
- What resources (technical, informational, financial) are needed to address these barriers?
- How can we partner with market players (firms, manufacturers), associations (ASHRAE, AIA), and other organizations (NBI, CEE) to develop and implement these resources?



# Market Barriers to Achieving High-Performance Buildings

- Lack of Information and Time
- Lack of Market Value
- Risk Aversion
- Lack of Capital/Competition for Resources
- Limitations of Standard Design and Construction Practice and Process
- Tendency Towards Business as Usual!

# Comprehensive Technical Assistance Customized to the Project Scope

- Energy goal setting
- Integrated design facilitation
- Efficiency measure recommendations
- Multi-phase plan and spec review
- Energy and cost savings analysis
- Packaging design and owner incentive offers
- Site inspection (coordination with commissioning)
- Monitoring building performance

# Financial Assistance Customized to the Particular Needs of the Project

- Incentives for building system upgrades beyond code (prescriptive or custom)
- Custom design incentives
- Support for energy consultant
- Energy modeling support
- Commissioning support
- Creative financing options

# Informational Strategies

- Office-by-office outreach (lunch sessions)
- Provide manuals and publications (HP Design Guide, AB Core Performance Guide)
- Technical seminars
- Conferences / Design Competitions
- Partner with local chapters of ASHRAE, AIA, etc.



# Marketing Support Strategies

- Case studies to showcase excellent projects and recognize design/construction teams' work
- Press releases and articles for local papers to support PR for owners and teams
- Tours and events in partnership with local professional organizations (such as ASHRAE, AIA)
- PR announcements of design competition winners

# Strategies for Projects with Advanced Energy Performance Goals and Design Team Experience

**Incentives for:** Advanced design, documentation, commissioning, energy modeling, latest technologies

**Technical assistance:** Minimum

**Tools and resources:** Specialized expert consultants, special testing equipment

**Marketing support:** Recognition, design competitions, case studies, events, tours



# Strategies for Projects with Moderate Performance Goals and Experience

**Incentives for:** Custom and prescriptive measures; creative financing assistance

**Technical assistance:** Goal setting, evaluation and savings calculation, product research, measure recommendations

**Tools and resources:** *High Performance Design Guide*, *AB Core Performance Guide*, etc.

**Marketing support:** Case studies, targeted client presentations



# Strategies for Smaller Projects with Minimum Performance Goals

**Incentives:** Prescriptive incentives applicable to multiple projects

**Technical assistance:** Provide flexible level of assistance appropriate for scope

**Tools and resources:** Standard designs and specifications, product information

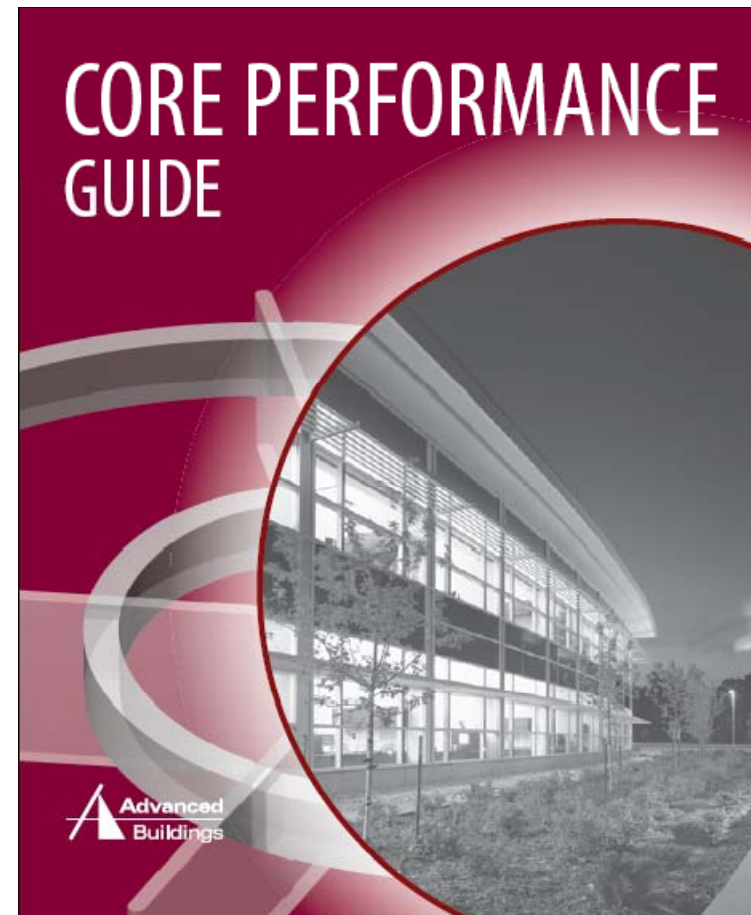
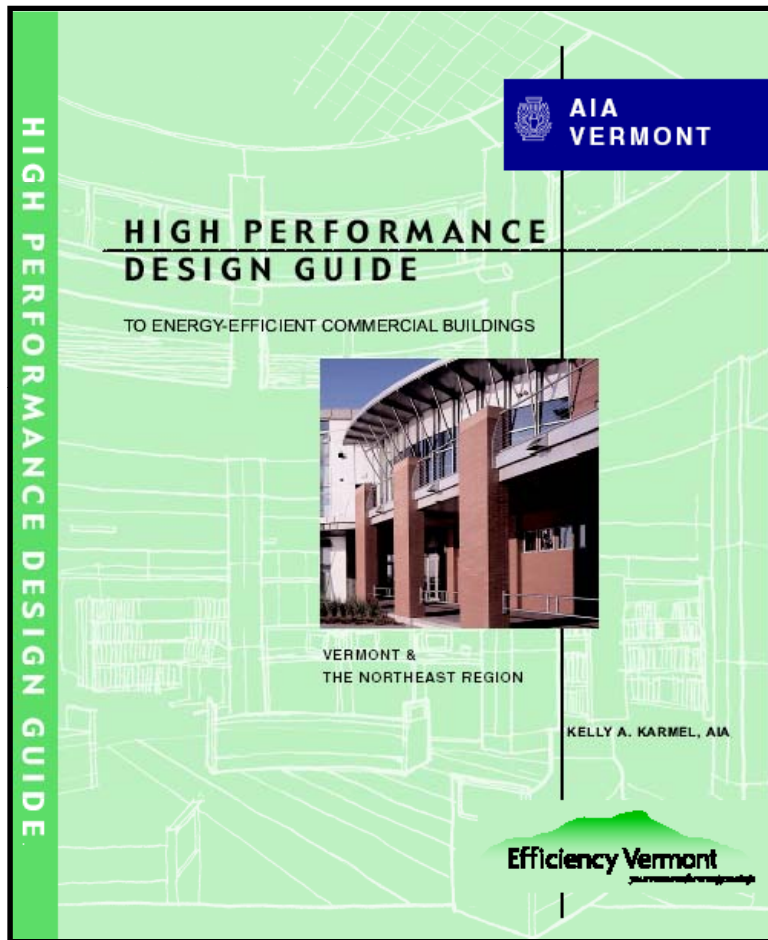
**Marketing support:** Cooperative advertising and PR in local magazines and newspapers

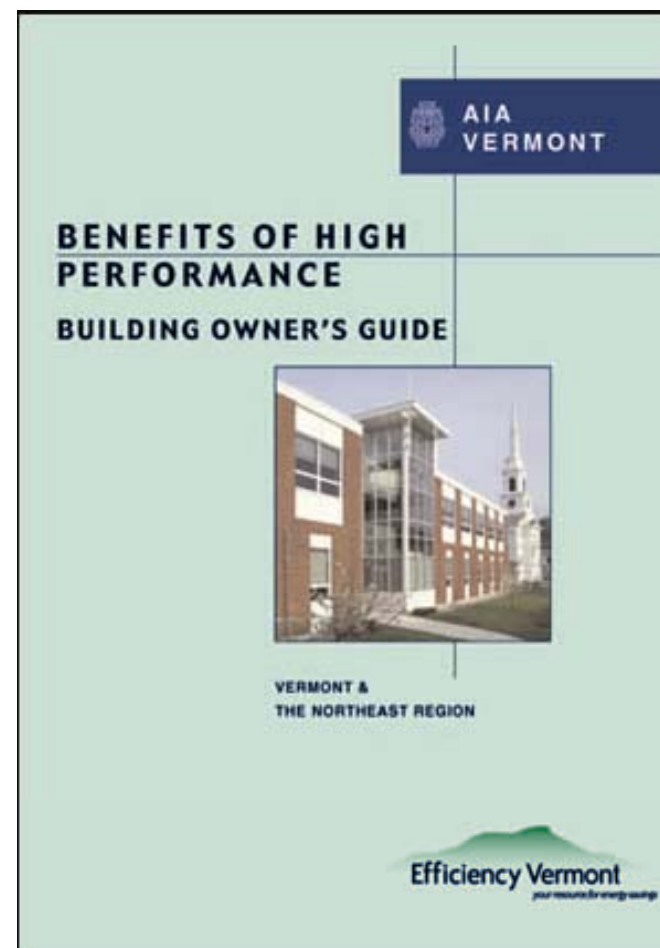
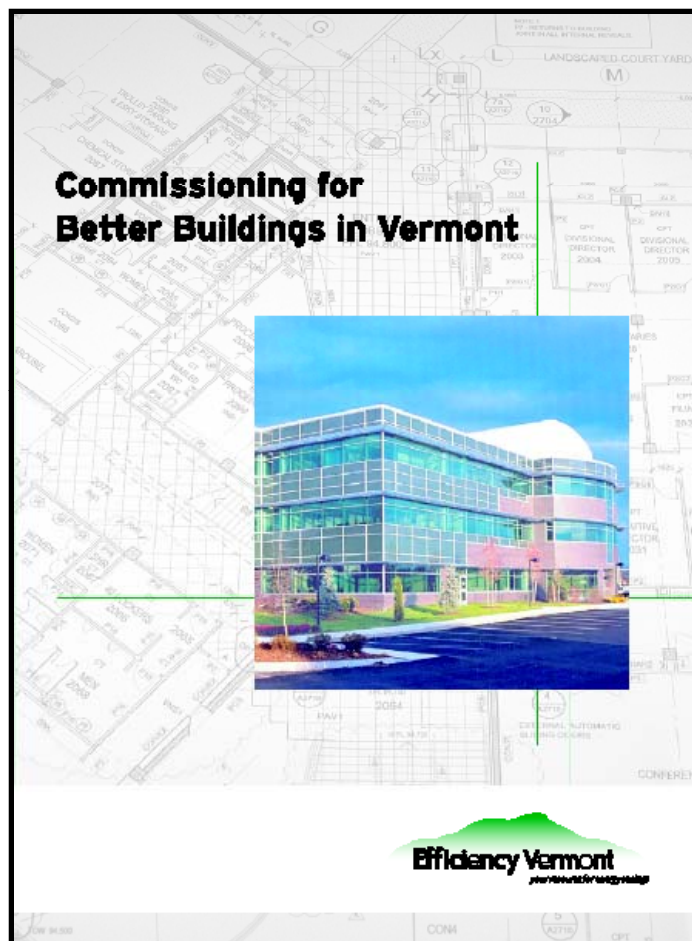




## Key Lessons Learned:

- Develop long-term relationships with design and construction teams by delivering resources they value
- Encourage comprehensive and integrated high-performance design when possible but tailor to scope, goals, and size of project
- Leverage partnerships when possible
- Market success stories







# Annual “Better Buildings by Design” Conference





# Annual Design Competition Recognizing Best Buildings of the Year





*Thank you!*