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**Evaluation of the Near-Term
Commercial Potential of
Technologies Being Developed by
the Office of Building Technologies**

Volume II - Survey Results

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March 1991

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Pacific Northwest Laboratory
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EVALUATION OF THE NEAR-TERM COMMERCIAL POTENTIAL
OF TECHNOLOGIES BEING DEVELOPED BY THE OFFICE OF
BUILDING TECHNOLOGIES

Volume II - Survey Results

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R. L. Eckert	

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Richland, Washington 99352

(a) Portland General Electric
Portland, Oregon.



FOREWORD

Evaluation of the Near-Term Commercial Potential of Technologies Being Developed by the Office of Building Technologies, Volume II, consists of the results from each Equipment and Practice Form completed by the program managers and principal investigators. Information collected from the Equipment and Practice Form include the following:

1. Name and description of the technology
2. Characterization of the technology (equipment/practice)
3. Energy characteristics (saves energy directly/indirectly or not at all)
4. When the technology will be ready for commercialization
5. Whether the technology will require commercialization assistance
6. Estimated payback period for the technology
7. Market sectors that would benefit from the technology
8. Who is most likely to buy the equipment or use the practice
9. Important commercialization barriers to overcome
10. Energy-related benefits of the technology to customers
11. Non-energy benefits of the technology to customers
12. Commercial/professional organization interest in the technology



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EQUIPMENT AND PRACTICE FORM

DIVISION: Building Equipment

PROGRAM: Advanced Heat Pumps/HVAC

KEY ACTIVITY: Thermally activated heat pumps

PROJECT: Absorption

NAME OF EQUIPMENT OR PRACTICE: Absorption fluids

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing fluids for use in the advanced cycle absorption heat pump.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

N/A Part of heat pump.

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

- Renters or tenants
- Energy utilities
- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- X Other

Part of heat pump

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- X Other

Part of heat pump

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- X Other

Part of heat pump

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Ronald J. Fiskum

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Advanced Heat Pumps/HVAC

KEY ACTIVITY: Thermally Activated Heat Pump

PROJECT: Absorption Heat Pump Advanced Concepts

NAME OF EQUIPMENT OR PRACTICE: Advanced Concept Absorption Heat Pump

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing a residential size advanced cycle generator, absorber, and heat exchange. An ammonia/water working fluid is used to enhance the heat transfer and corrosion control at operating temperatures.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saves energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New

Multi-family:

Manufactured home: New

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

Water Heating

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- Multi-family homeowners
- Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers

- Renters or tenants
- X Energy utilities
- Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- X Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- X Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Gas Utilities

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Ronald J. Fiskum

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Combustion Systems

KEY ACTIVITY: Technology and Consumer Products

PROJECT: Combustion and Thermal Distribution

NAME OF EQUIPMENT OR PRACTICE: Advanced Condensing Heat Exchangers

DESCRIPTION OF EQUIPMENT OR PRACTICE:

The purpose for this project is to develop advanced materials and designs which alleviate technical barriers affecting full energy recovery in condensing heat exchangers.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saves energy directly - Savings over state-of-the-art technology: 32%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- Energy utilities

- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Equipment manufacturers

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

D. Lim

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Advanced Refrigeration

KEY ACTIVITY: Advanced Refrigeration

PROJECT: Advanced Insulation

NAME OF EQUIPMENT OR PRACTICE: Advanced Insulation

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing a new appliance insulation of R-20 per inch. This can be achieved using evacuated panels. Current research involves developing panels that can preserve the vacuum over the life of an appliance.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saves energy directly - Savings over state-of-the-art technology: 65%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

Refrigerators, freezers, water heaters

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

X Single-family homeowners

X Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants
Energy utilities
Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
 - Lack of understanding about equipment/practice
 - Large number of decision makers involved
 - Environmental concerns
 - Conflicts with existing building codes
 - Legal & regulatory difficulties
 - Unavailability of financing
 - X High perceived risk because new/different
 - High first cost for technology
 - Reliability concerns about technology
 - X Other
- Lack of a feasible mfr process

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

AHAM

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Terry Statt

(202) 588-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Lighting Research

KEY ACTIVITY: Lighting Equipment Research

PROJECT: Building Applications

NAME OF EQUIPMENT OR PRACTICE: Advanced Lighting Controls

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project develops advanced lighting control systems to adjust indoor lighting conditions to the level of lighting offered from daylight.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saves energy directly - Savings over state-of-the-art technology: 25%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- X Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- X Other

Little incentive to use

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- X Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

John D. Ryan

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Lighting Research

KEY ACTIVITY: Lighting Equipment Research

PROJECT: Light Sources

NAME OF EQUIPMENT OR PRACTICE: Advanced Phosphor Materials

DESCRIPTION OF EQUIPMENT OR PRACTICE:

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Saves energy directly - Savings over state-of-the-art technology: 30%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers

Government officials and regulators

Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology
Other

ENERGY RELATED BENEFITS:

X Reduces energy bills
Reduces usage of a scarce fuel
X Reduces peak energy loads
Creates a backup fuel capability
Other

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

GTE

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

John D. Ryan

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Advanced Heat Pumps/HVAC

KEY ACTIVITY: TAHP

PROJECT: Advanced Heat Pump/HVAC

NAME OF EQUIPMENT OR PRACTICE: Ceramic Fluid Pumps

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is focusing on the development of a solution pump for long life operation. This pump is for the absorption heat pump. Both a ceramic gear and shaft are being developed to address problems of wear.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:
Single family: New
Multi-family: New
Manufactured home: New
Commercial Buildings:
Less than 10,000 sq.ft.: New
10,000-100,000 sq.ft.: New
Greater than 100,000 sq.ft.: New
Communities: New
Other:

Could apply to all segments of absorption

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners
Multi-family homeowners
Commercial building owners or managers
Public or government building managers
Non-profit building managers
Builders, contractors or installers
Architects or engineers
Renters or tenants

- Energy utilities
- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
 - Lack of understanding about equipment/practice
 - Large number of decision makers involved
 - Environmental concerns
 - Conflicts with existing building codes
 - Legal & regulatory difficulties
 - Unavailability of financing
 - High perceived risk because new/different
 - High first cost for technology
 - Reliability concerns about technology
 - X Other
- N/A Part of Heat Pump

ENERGY RELATED BENEFITS:

- Reduces energy bills
 - Reduces usage of a scarce fuel
 - Reduces peak energy loads
 - Creates a backup fuel capability
 - X Other
- N/A

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
 Ronald J. Fiskum

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Combustion & Thermal Distribution

KEY ACTIVITY: Technology and Consumer Products

PROJECT: Combustion and Thermal Distribution

NAME OF EQUIPMENT OR PRACTICE: Commercial and Residential Zoning

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project develops strategies for reduced energy use through zoning by use of advanced radiant and convective zoning practices.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment & Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saves energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- X Renters or tenants
- X Energy utilities
- X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- X Conflicts with existing building codes
- X Legal & regulatory difficulties
- X Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- X Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Manufacturers, A&E

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

D. Lim

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Combustion & Thermal Distribution

KEY ACTIVITY: Technology and Consumer Products

PROJECT: Combustion and Thermal Distribution

NAME OF EQUIPMENT OR PRACTICE: Conservation measures through forced-air distribution

DESCRIPTION OF EQUIPMENT OR PRACTICE:

(B.1) Forced-Air Model

(B.2) Improvements in Standard Practices

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment & Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saves energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- X Energy utilities

- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- X Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Manufacturers of forced-air heating equipment.

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

D. Lim

(202) 586-9136

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Advanced Heat Pumps/HVAC

KEY ACTIVITY: TAHP

PROJECT: Novel Cycles

NAME OF EQUIPMENT OR PRACTICE: Desiccant/Hybrid Cooling Systems

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project focuses on finding an efficient method of improving the cooling performance of engine driven heat pumps by using engine waste heat to regenerate desiccant systems.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saves energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

N/A too early in analytical stage

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities
Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology

X Other
N/A

ENERGY RELATED BENEFITS:

Reduces energy bills
Reduces usage of a scarce fuel
Reduces peak energy loads
Creates a backup fuel capability

X Other
N/A

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product

X Other
N/A

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Ronald J. Fiskum

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Combustion Systems

KEY ACTIVITY: Technology and Consumer Products

PROJECT: Combustion and Thermal Distribution

NAME OF EQUIPMENT OR PRACTICE: Direct Vent Technology

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing direct vent technology for high efficiency oil systems.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?

Equipment & Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saves energy directly - Savings over state-of-the-art technology: 20%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- Energy utilities
- X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- X Conflicts with existing building codes
- X Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- X Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Oil Heat Industry, Manufacturers, Equipment Contractors

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

D. Lim

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Lighting Research

KEY ACTIVITY: Lighting Equipment Research

PROJECT: Building Applications

NAME OF EQUIPMENT OR PRACTICE: Dynamic Lighting Design

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity aims at combining all known energy efficient lighting technologies and their technical performance characteristics in a systems analysis approach leading to guidelines and principles for energy efficient and effective geometries

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 20%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities
Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
 - X Lack of understanding about equipment/practice
 - X Large number of decision makers involved
 - Environmental concerns
 - Conflicts with existing building codes
 - Legal & regulatory difficulties
 - Unavailability of financing
 - X High perceived risk because new/different
 - High first cost for technology
 - Reliability concerns about technology
 - X Other
- Little incentive to use

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- X Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

EPRI, Dubin Bloome, Ross & Baruzzini

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

John D. Ryan

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Advanced Heat Pumps/HVAC

KEY ACTIVITY: TAHP

PROJECT: Novel Cycles

NAME OF EQUIPMENT OR PRACTICE: Ejector Coupled HP Cycle

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project investigates the possibility of using ejectors in the heat pump refrigeration circuit. These ejectors will be used in parallel to a refrigeration compressor.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saves energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other: New

Too early in development stage.

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

- Energy utilities
- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- X Other

N/A

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- X Other

N/A

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- X Other

N/A

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Ronald J. Fiskum

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Lighting Research

KEY ACTIVITY: Lighting Equipment Research

PROJECT: Light Sources

NAME OF EQUIPMENT OR PRACTICE: Electrodeless High Intensity Discharge Light

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is attempting to develop a low wattage, electrodeless HID lamp. Electrodeless HID lamps permit the use of new light producing compounds in the discharge that were not possible before because they react with tungsten filament.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities
Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

John D. Ryan

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Advanced Heat Pumps/HVAC

KEY ACTIVITY: TAHP

PROJECT: I.C. Engine Tech.

NAME OF EQUIPMENT OR PRACTICE: Fifteen Ton Braun Linear Engine HP.

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing a linear I.C. Engine driving a linear refrigeration compressor for commercial applications.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family: New

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.: New

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- X Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- X Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Gas Utilities

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Ronald J. Fiskum

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Combustion Systems

KEY ACTIVITY: Technology and Consumer Products

PROJECT: Combustion and Thermal Distribution

NAME OF EQUIPMENT OR PRACTICE: Fuel-Oil Atomization/Combustion

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing an advanced technology atomization process for fuel-oil burners.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 25%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- Architects or engineers
- Renters or tenants
- Energy utilities

- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- X Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- X Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- X Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Burner manufacturers

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

D. Lim

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Advanced Heat Pumps/HVAC

KEY ACTIVITY: TAHP

PROJECT: I.C. Engine Tech.

NAME OF EQUIPMENT OR PRACTICE: Hermetic Compressor Seals

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing a bellows seal for the I.C. Engine heat pump.
It seals the refrigerant gas from the engine oil.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other: New

Part of Heat Pump System

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

X Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology

X Other
N/A

ENERGY RELATED BENEFITS:

Reduces energy bills
Reduces usage of a scarce fuel
Reduces peak energy loads
Creates a backup fuel capability

X Other
N/A

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product

X Other
N/A

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Ronald J. Fiskum

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Combustion Systems

KEY ACTIVITY: Technology and Consumer Products

PROJECT: Combustion and Thermal Distribution

NAME OF EQUIPMENT OR PRACTICE: In Vitro Diagnostics

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project involves development of in vitro measurements of residential heating/cooling equipment performance.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment & Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family: Retrofit/Replacement

Multi-family: Retrofit/Replacement

Manufactured home: Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: Retrofit/Replacement

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- Non-profit building managers
- Builders, contractors or installers
- Architects or engineers
- Renters or tenants
- X Energy utilities
- Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- X Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Manufacturers of Forced Air Heating Equipment

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

D. Lim

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Lighting Research

KEY ACTIVITY: Lighting Equipment Research

PROJECT: Light Sources

NAME OF EQUIPMENT OR PRACTICE: Incandescent Replacement by H.I.D.

DESCRIPTION OF EQUIPMENT OR PRACTICE:

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 75%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

X Single-family homeowners

X Multi-family homeowners

X Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers

Government officials and regulators

Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

John D. Ryan

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Lighting Research

KEY ACTIVITY: Lighting Equipment Research

PROJECT: Light Sources

NAME OF EQUIPMENT OR PRACTICE: Isotopically Enriched Fluorescent

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project studies the improved energy efficiency in fluorescent lamp performance that occurs by either allocation of the isotopic composition of natural mercury by enrichment with mercury(196) or by providing the lamp with dc axial magnetic fields.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 7%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities
Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology

X Other

Startup of Separation Business

ENERGY RELATED BENEFITS:

X Reduces energy bills
Reduces usage of a scarce fuel
X Reduces peak energy loads
Creates a backup fuel capability
Other

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

John D. Ryan

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Combustion Systems

KEY ACTIVITY: Technology and Consumer Products

PROJECT: Combustion and Thermal Distribution

NAME OF EQUIPMENT OR PRACTICE: Low-Firing Rate Oil Burner Technology

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing burners and oil-fired equipment capable of firing between 0.1-0.5 GPH.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 25%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- Energy utilities
- X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- X Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- X Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Burner Manufacturers

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

D. Lim

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Advanced Refrigeration

KEY ACTIVITY: Advanced Refrigeration

PROJECT: Systems NARMS

NAME OF EQUIPMENT OR PRACTICE: Nonazeotropic Refrigerant Mixtures

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is studying the use of nonazeotropic refrigerant mixtures to improve the system performance of current refrigeration equipment.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: More than 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 6 to 10 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New

Multi-family: New

Manufactured home: New

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.: New

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

X Single-family homeowners

X Multi-family homeowners

X Commercial building owners or managers

Public or government building managers

Non-profit building managers

X Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

AHAM

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Terry Statt

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Advanced Refrigeration

KEY ACTIVITY: Advanced Refrigeration

PROJECT: GCHP

NAME OF EQUIPMENT OR PRACTICE: Optimized Ground Coupled Heat Pump

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project conducted research to optimize the performance of ground coupled heat pumps at the lowest possible cost.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 30%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New

Multi-family: New

Manufactured home: New

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.: New

Greater than 100,000 sq.ft.: New

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- Public or government building managers
- Non-profit building managers
- X Builders, contractors or installers
- Architects or engineers
- Renters or tenants
- Energy utilities
- Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- X High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- X Greater visual comfort
- X Reduced noise/sound levels
- X Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

NWWA, NRECA

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Terry Statt

(202) 588-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Combustion Systems

KEY ACTIVITY: Technology and Consumer Products

PROJECT: Combustion and Thermal Distribution

NAME OF EQUIPMENT OR PRACTICE: Performance Control Strategies

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project develops performance control methods to maintain efficiency of oil heating systems.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 20%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- Architects or engineers
- Renters or tenants
- Energy utilities
- X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Equipment Manufacturers

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

D. Lim

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Combustion Systems

KEY ACTIVITY: Technology and Consumer Products

PROJECT: Combustion and Thermal Distribution

NAME OF EQUIPMENT OR PRACTICE: Solid Fuel Appliance Measurement Methods

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is attempting to identify low-cost methods for measurement of the efficiency of solid fuel appliances.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment & Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- Energy utilities
- X Industrial manufacturers

- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- X Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- X Other

Quantifies Energy Savings

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

EPA, Equipment Industry, Commercial Testing Laboratories.

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

D. Lim

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Advanced Heat Pumps/HVAC

KEY ACTIVITY: Thermally Activated Heat Pumps

PROJECT: Stirling Engine Tech.

NAME OF EQUIPMENT OR PRACTICE: Stirling/Rank. DIA. Coupled HP.

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This program is focused on a means of coupling a free piston sterling engine to a refrigeration compressor for residential heat pump applications.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family: New

Multi-family:

Manufactured home: New

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- Multi-family homeowners
- Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- X Energy utilities

Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- X Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- X Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Gas Utilities

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Ronald J. Fiskum

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Lighting Research

KEY ACTIVITY: Lighting Equipment Research

PROJECT: Light Sources

NAME OF EQUIPMENT OR PRACTICE: Surface Wave Fluorescent

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This program is attempting to develop an extremely efficient fluorescent light. This electrodeless lamp would benefit from the combination of reduced losses associated with radiation entrapment and absence of losses caused by elimination of

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 35%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities
Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- Conflicts with existing building codes
- X Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

John D. Ryan

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Advanced Refrigeration

KEY ACTIVITY: Advanced Refrigeration

PROJECT: Capacity Modulation

NAME OF EQUIPMENT OR PRACTICE: Variable-Speed Compressors & Fans

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is assessing variable speed compressors that show promise in reducing energy consumption in refrigeration systems. Work focuses on the use of inverter-driven or permanent magnet electronically/commutated motors to drive the compressor and fan.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 35%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 6 to 10 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family:

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- Multi-family homeowners
- X Commercial building owners or managers
- Public or government building managers
- Non-profit building managers
- X Builders, contractors or installers
- Architects or engineers
- Renters or tenants

Energy utilities
Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- X High first cost for technology
- Reliability concerns about technology
- X Other

Manufacturers don't perceive market strong enough to support mass production.

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

EPRI, ASHRAE, ARI

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Terry Statt

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Equipment

PROGRAM: Combustion Systems

KEY ACTIVITY: Technology and Consumer Products

PROJECT: Combustion and Thermal Distribution

NAME OF EQUIPMENT OR PRACTICE: Wood Combustion Systems

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project focuses on identifying improved processes for efficient and less polluting combustion of wood.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- Public or government building managers
- Non-profit building managers
- Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- Energy utilities
- X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- X Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- X Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Equipment Manufacturers

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

D. Lim

(202) 586-9130

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: District Heating and Cooling

KEY ACTIVITY: District Heating and Cooling

PROJECT: Absorption Chiller

NAME OF EQUIPMENT OR PRACTICE: Absorption Chiller

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Recent research directed at the development of ice slurry district cooling concepts has indicated that existing absorption chillers are not suitable for ice slurry production. Ethylene glycol-water absorption chillers are suitable for making ice slurry.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 25%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.: New

Greater than 100,000 sq.ft.: New

Communities: New

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

Architects or engineers

Renters or tenants

- Energy utilities
- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Kodak Company

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Prakash B. Kunjeer

(202) 586-9470

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: District Heating and Cooling

KEY ACTIVITY: District Heating and Cooling

PROJECT: Acoustic Leak Detection System

NAME OF EQUIPMENT OR PRACTICE: Acoustic Leak Detection System

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Fluid leakage is the major source of energy loss in a DHC system. This system will detect, locate and size leaks in underground piping systems.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

Non-profit building managers

X Builders, contractors or installers

Architects or engineers

Renters or tenants

X Energy utilities

X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Con Edison Company

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Prakash B. Kunjeer

(202) 586-9470

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Multifamily Housing

PROJECT: Advanced Duct Sealing Techniques

NAME OF EQUIPMENT OR PRACTICE: Advanced Duct Sealing Techniques

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This involves procedures to seal existing ducts so that infiltration/exfiltration in air handling systems is reduced.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 5%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: Retrofit/Replacement

Multi-family: Retrofit/Replacement

Manufactured home: Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: Retrofit/Replacement

10,000-100,000 sq.ft.: Retrofit/Replacement

Greater than 100,000 sq.ft.: Retrofit/Replacement

Communities: Retrofit/Replacement

Other: Retrofit/Replacement

Institutions-Schools, Hospitals, etc.

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- Architects or engineers
- X Renters or tenants
- X Energy utilities

- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology

- X Other

Effective/inexpensive techniques are yet to be developed

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- X Other

Increases Effective Life of HVAC Equipment

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone

(202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman

(202) 586-9192

DIVISION: Building Services

PROGRAM: District Heating and Cooling

KEY ACTIVITY: District Heating and Cooling

PROJECT: Advanced Rankine Cycle Heat Pump

NAME OF EQUIPMENT OR PRACTICE: Advanced Rankine Cycle Heat Pump

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Relative to conventional systems, advanced rankine cycle heat pumps can overcome the large temperature lifts that are required in dhc systems at higher coefficients of performance.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 20%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family: Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

Industrial manufacturers

- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Prakash B. Kunjeer

(202) 586-9470

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: Least-Cost Utility Planning

KEY ACTIVITY: Least-Cost Utility Planning

PROJECT: Utility Analytical Tools

NAME OF EQUIPMENT OR PRACTICE: Analytical Tools

DESCRIPTION OF EQUIPMENT OR PRACTICE:

To evaluate and develop analytical tools including models and data that will help plan and implement least cost utility planning.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other: New & Retrofit/Replacement

Industries

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

- X Industrial manufacturers
- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
 - Reduces usage of a scarce fuel
 - X Reduces peak energy loads
 - Creates a backup fuel capability
 - X Other
- Reduces energy consumption

NON-ENERGY BENEFITS:

- Healthier indoor air environment
 - Greater thermal comfort
 - Greater visual comfort
 - Reduced noise/sound levels
 - Enhanced building attractiveness
 - Eases building operation & maintenance
 - Improves system reliability
 - Reduced first cost for product
 - X Other
- Reduce CO₂ input into the atmosphere

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

EPRI CO₂ input into the atmosphere

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

George S. James

(202) 586-9472

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: District Heating and Cooling

KEY ACTIVITY: District Heating and Cooling

PROJECT: Advanced Thermal Meters

NAME OF EQUIPMENT OR PRACTICE: BTU Meter

DESCRIPTION OF EQUIPMENT OR PRACTICE:

The lack of simple, inexpensive and reliable btu meters has been a concern of operators and users of dhc. This is a low cost and accurate meter to measure the energy flow delivered to consumers.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- X Energy utilities

- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Babcock and Wilcox

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Prakash B. Kunjeer

(202) 586-9470

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Commercial Buildings

PROJECT: Commercial Building Retrofit Procedures

NAME OF EQUIPMENT OR PRACTICE: Commercial Building Retrofit Procedures

DESCRIPTION OF EQUIPMENT OR PRACTICE:

A method to select the best energy conservation measure or series of measures to adopt for a specific commercial building in any climatic zone.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 25%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: Retrofit/Replacement

10,000-100,000 sq.ft.: Retrofit/Replacement

Greater than 100,000 sq.ft.: Retrofit/Replacement

Communities: Retrofit/Replacement

Other: Retrofit/Replacement

Institutions: Hospitals, Universities, etc.

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants

- Energy utilities
- Industrial manufacturers
- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
 - Lack of understanding about equipment/practice
 - Large number of decision makers involved
 - Environmental concerns
 - Conflicts with existing building codes
 - Legal & regulatory difficulties
 - Unavailability of financing
 - X High perceived risk because new/different
 - High first cost for technology
 - Reliability concerns about technology
 - X Other
- Procedure has not yet been developed/evaluated

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone (202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman (202) 586-9192

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Commercial Buildings

PROJECT: Shop Doctor Applications

NAME OF EQUIPMENT OR PRACTICE: Core Commercial Daylighting

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity develops a simple method that small business owners can use to optimize lighting in their (usually rented) facilities. The method will account for the existing fixtures and assure for compatibility and efficiency.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 10%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family: Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: Retrofit/Replacement

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology

X Other

Techniques do not exist at present.

ENERGY RELATED BENEFITS:

X Reduces energy bills
Reduces usage of a scarce fuel
X Reduces peak energy loads
Creates a backup fuel capability
Other

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
X Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone

(202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman

(202) 586-9192

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Single Family Buildings

PROJECT: Diagnostic Protocols and Analysis Methods

NAME OF EQUIPMENT OR PRACTICE: Diagnostic Protocols and Analysis Methods

DESCRIPTION OF EQUIPMENT OR PRACTICE:

A collection method that yields a well defined series of data points that describe a building's energy use. With proper analysis of these data points, the system receives the proper and most cost effective energy conservation improvements.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: Retrofit/Replacement

Multi-family: Retrofit/Replacement

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: Retrofit/Replacement

10,000-100,000 sq.ft.: Retrofit/Replacement

Greater than 100,000 sq.ft.: Retrofit/Replacement

Communities: Retrofit/Replacement

Other: Retrofit/Replacement

Institutions-Schools, Hospitals, etc.

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

X Single-family homeowners

X Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

Builders, contractors or installers

Architects or engineers

- Renters or tenants
- X Energy utilities
- Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- X Legal & regulatory difficulties
- X Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- X Other

Low priority on energy efficiency

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- X Other

Provides capital to invest in better opportunities.

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone

(202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman

(202) 586-9192

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Multifamily Buildings

PROJECT: Diagnostic Tools

NAME OF EQUIPMENT OR PRACTICE: Diagnostic Tool Development

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity invents, develops and/or tests devices that can be used to measure phenomena that affect building energy use (such as infiltration, temperature, etc.)

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable.

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: Retrofit/Replacement

Multi-family: Retrofit/Replacement

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: Retrofit/Replacement

10,000-100,000 sq.ft.: Retrofit/Replacement

Greater than 100,000 sq.ft.: Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

X Multi-family homeowners

Commercial building owners or managers

X Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology

X Other

Inexpensive and reliable devices do not exist yet.

ENERGY RELATED BENEFITS:

Reduces energy bills
Reduces usage of a scarce fuel
Reduces peak energy loads
Creates a backup fuel capability

X Other

Can provide empirical evidence of efficiency improvement post-retrofit

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone

(202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman

(202) 586-9192

DIVISION: Building Services

PROGRAM: District Heating and Cooling

KEY ACTIVITY: District Heating and Cooling

PROJECT: Minewater Heat Recovery

NAME OF EQUIPMENT OR PRACTICE: Down-Hole Heat Exchanger

DESCRIPTION OF EQUIPMENT OR PRACTICE:

A bundle down-hole heat exchanger is used to extract thermal energy from underground sources - such as minewater - where pumping is not feasible. This underground water resource can then be used in conjunction with DHC.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 10%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: More than 10 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

- X Energy utilities
- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Prakash B. Kunjeer

(202) 586-9470

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Commercial Buildings

PROJECT: Energy Tracking System

NAME OF EQUIPMENT OR PRACTICE: Energy Tracking System

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing a methodology and inexpensive measurement devices to collect energy use information on all aspects of a commercial building's energy patterns.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings: Less than 10,000 sq.ft.: Retrofit/Replacement

10,000-100,000 sq.ft.: Retrofit/Replacement

Greater than 100,000 sq.ft.: Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

Industrial manufacturers

Government officials and regulators
 Other
Large energy service comp. (E.S.Cos that include comm. bldg. in their clientele).

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology
 Other
Equipment methodology is not yet completely developed

ENERGY RELATED BENEFITS:

Reduces energy bills
Reduces usage of a scarce fuel
Reduces peak energy loads
Creates a backup fuel capability
Other

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
 Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone (202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman (202) 586-9192

DIVISION: Building Services

PROGRAM: District Heating and Cooling

KEY ACTIVITY: District Heating and Cooling

PROJECT: Friction Reduction Additives

NAME OF EQUIPMENT OR PRACTICE: Friction Reduction Additives

DESCRIPTION OF EQUIPMENT OR PRACTICE:

The cost of pumping in DHC systems is an important operating expense. Friction reduction additives are being developed to enhance the flow in circulating water heating systems.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

Non-profit building managers

X Builders, contractors or installers

Architects or engineers

Renters or tenants

X Energy utilities

- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- X Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Prakash B. Kunjeer

(202) 586-9470

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: District Heating and Cooling

KEY ACTIVITY: District Heating and Cooling

PROJECT: Open Cycle Heat Pump

NAME OF EQUIPMENT OR PRACTICE: Heat Pump (Quasi open cycle)

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Technology is required in dhc systems that allow the utilization of large quantities of low-grade heat. Quasi open cycle heat pumps are an alternative to traditional closed cycle heat pumps that use chlorinate fluorocarbons as a working fluid.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 20%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

- X Energy utilities
- Industrial manufacturers
- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Prakash B. Kunjeer

(202) 586-9470

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: District Heating and Cooling

KEY ACTIVITY: District Heating and Cooling

PROJECT: Ice Slurry Evaporator

NAME OF EQUIPMENT OR PRACTICE: Ice Slurry Evaporator

DESCRIPTION OF EQUIPMENT OR PRACTICE:

A key problem with existing vapor-compression chiller evaporator designs is difficulty encountered in removal of ice from the evaporator wall. New evaporators are being designed to produce ice slurries more efficiently.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own.

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

Non-profit building managers

X Builders, contractors or installers

Architects or engineers

Renters or tenants

- Energy utilities
- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Prakash B. Kunjeer

(202) 586-9470

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: Least-Cost Utility Planning

KEY ACTIVITY: Least-Cost Utility Planning

PROJECT: Integrated Utility Planning Processes

NAME OF EQUIPMENT OR PRACTICE: Integrated Utility Planning Processes

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity develops planning processes and approaches that support the inclusion of demand-side options in the preparation of utility energy resource plans and programs.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM DBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

X Energy utilities

Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- X Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
 - Reduces usage of a scarce fuel
 - X Reduces peak energy loads
 - Creates a backup fuel capability
 - X Other
- Reduces Energy Consumption

NON-ENERGY BENEFITS:

- Healthier indoor air environment
 - Greater thermal comfort
 - Greater visual comfort
 - Reduced noise/sound levels
 - Enhanced building attractiveness
 - Eases building operation & maintenance
 - Improves system reliability
 - Reduced first cost for product
 - X Other
- Reduced CO₂ Input into the atmosphere

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?
NARUC, EPRI

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
George S. James

(202) 586-9472

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Single Family Housing

PROJECT: Mobile Home Retrofit

NAME OF EQUIPMENT OR PRACTICE: Mobile Home Retrofit Procedures

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity develops an easy to use, building specific method of selecting the most cost effective energy conservation measure or series of measures to be adopted by mobile home owners.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 20%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home: Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- Multi-family homeowners
- Commercial building owners or managers
- Public or government building managers
- Non-profit building managers
- X Builders, contractors or installers
- Architects or engineers
- Renters or tenants
- Energy utilities

- Industrial manufacturers
- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology

- X Other

Procedure has not been developed for certain climatic zones

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone

(202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman

(202) 586-9192

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Multifamily Buildings

PROJECT: Multifamily Audit Handbook

NAME OF EQUIPMENT OR PRACTICE: Multifamily Audit Handbook

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This handbook develops an easy to use method of selecting the most cost effective conservation measure(s) to adopt to improve energy efficiency in multifamily buildings in a variety of climatic conditions.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 15%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family: Retrofit/Replacement

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

X Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- X Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- X Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone

(202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman

(202) 586-9192

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Multifamily Buildings

PROJECT: Multifamily Retrofit Procedures

NAME OF EQUIPMENT OR PRACTICE: Multifamily Retrofit Procedures

DESCRIPTION OF EQUIPMENT OR PRACTICE:

These are procedures developed to allow the best retrofit measure(s) to be selected and adopted, for specific buildings, in specific climatic zones by multifamily building owners or operators.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 30%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:
Single family:
Multi-family: Retrofit/Replacement
Manufactured home:
Commercial Buildings:
Less than 10,000 sq.ft.:
10,000-100,000 sq.ft.:
Greater than 100,000 sq.ft.:
Communities:
Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners
X Multi-family homeowners
Commercial building owners or managers
X Public or government building managers
Non-profit building managers
Builders, contractors or installers
Architects or engineers
Renters or tenants
X Energy utilities

- Industrial manufacturers
- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- X Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- X Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone

(202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman

(202) 586-9192

DIVISION: Building Services

PROGRAM: District Heating and Cooling

KEY ACTIVITY: District Heating and Cooling

PROJECT: Non-Metallic Piping

NAME OF EQUIPMENT OR PRACTICE: Non-Metallic Piping System

DESCRIPTION OF EQUIPMENT OR PRACTICE:

The high cost of building and maintaining a thermal distribution system has limited the use of DHC in the U.S. Thermoplastic materials suitable for operating at temperatures above 250°F. Offers a cost effective alternative to steel.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 6 to 10 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

- X Energy utilities
- Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Prakash B. Kunjeer

(202) 586-9470

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Commercial Buildings

PROJECT: Operating and Maintenance Procedures

NAME OF EQUIPMENT OR PRACTICE: Operating and Maintenance Procedures

DESCRIPTION OF EQUIPMENT OR PRACTICE:

New procedures developed to save energy by improved operation and maintenance of commercial buildings.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE: Saves energy directly -
Savings over state-of-the-art technology: 15%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: Retrofit/Replacement

10,000-100,000 sq.ft.: Retrofit/Replacement

Greater than 100,000 sq.ft.: Retrofit/Replacement

Communities: Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone

(202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman

(202) 586-9192

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Multi Family Buildings

PROJECT: Federally Assisted Housing

NAME OF EQUIPMENT OR PRACTICE: Public Housing Retrofit Procedures

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity develops a method to select the most cost effective energy conservation measure or measures to be adopted by public housing administrations in various climatic zones.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family: Retrofit/Replacement

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

X Multi-family homeowners

Commercial building owners or managers

X Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

- Industrial manufacturers
- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- X Large number of decision makers involved
- Environmental concerns
- X Conflicts with existing building codes
- Legal & regulatory difficulties
- X Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- X Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone

(202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman

(202) 586-9192

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Single Family Buildings

PROJECT: Radiant Barrier Climatic Guide

NAME OF EQUIPMENT OR PRACTICE: Radiant Barrier Climatic Guide

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing a method to determine the applicability and benefits of radiant barriers in various climatic zones.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 10%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- Public or government building managers
- Non-profit building managers
- Builders, contractors or installers
- Architects or engineers
- Renters or tenants
- Energy utilities
- Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone

(202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman

(202) 586-9192

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Single Family Buildings

PROJECT: Radiant Barrier Modeling

NAME OF EQUIPMENT OR PRACTICE: Radiant Barrier Modeling

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project developed a computer model that can accurately predict air flow through any attic, accounting for any roof pitch and is usable in every climatic zone.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:
Single family: Retrofit/Replacement
Multi-family: Retrofit/Replacement
Manufactured home:
Commercial Buildings:
Less than 10,000 sq.ft.:
10,000-100,000 sq.ft.:
Greater than 100,000 sq.ft.:
Communities:
Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners
Multi-family homeowners
Commercial building owners or managers
Public or government building managers
Non-profit building managers
Builders, contractors or installers
X Architects or engineers
Renters or tenants
Energy utilities

- Industrial manufacturers
- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone

(202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman

(202) 586-9192

DIVISION: Building Services

PROGRAM: Existing Building Research

KEY ACTIVITY: Single Family Buildings

PROJECT: Shared Savings

NAME OF EQUIPMENT OR PRACTICE: Shared Savings

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Shared savings involve installation of more efficient hardware, improved operation/maintenance practices or a combination of the above by a third party. Third parties are compensated with a portion of the savings that show up in the utility bill.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 15%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: Retrofit/Replacement

Multi-family: Retrofit/Replacement

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: Retrofit/Replacement

10,000-100,000 sq.ft.: Retrofit/Replacement

Greater than 100,000 sq.ft.: Retrofit/Replacement

Communities: Retrofit/Replacement

Other: Retrofit/Replacement

Institutions-Schools, Hospitals, etc.

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- Builders, contractors or installers
- Architects or engineers

- Renters or tenants
- X Energy utilities
- Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- X Legal & regulatory difficulties
- X Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- X Other

Low Priority on Energy Efficiency

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- X Other

Provides capital to invest in better opportunities

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jonathan M. Stone (202) 586-9471

ADDITIONAL CONTACT PERSON:

Ernest C. Freeman (202) 586-9192

DIVISION: Building Services

PROGRAM: Least-Cost Utility Planning

KEY ACTIVITY: Least-Cost Utility Planning

PROJECT: Strategies for Emerging Issues

NAME OF EQUIPMENT OR PRACTICE: Strategies for Emerging Issues

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Approaches to demand-side planning that deal with issues such as competitive bidding, data uncertainty, and reflection of newly emerging environmental effects.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other: New & Retrofit/Replacement

Industries

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

- X Energy utilities
Industrial manufacturers
- X Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- X Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
- X Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology
Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
Reduces usage of a scarce fuel
- X Reduces peak energy loads
Creates a backup fuel capability
- X Other

Reduces Energy Consumption

NON-ENERGY BENEFITS:

- Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
- X Other

Reduced CO₂ input into the atmosphere

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?
NARUC, EPRI

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
George S. James

(202) 586-9472

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: Least-Cost Utility Planning

KEY ACTIVITY: Least-Cost Utility Planning

PROJECT: Technology Assessment and Market Penetration

NAME OF EQUIPMENT OR PRACTICE: Technology Assessment and Market Penetration

DESCRIPTION OF EQUIPMENT OR PRACTICE:

To provide an assessment of the cost, performance, and market potential of demand-side technologies as a cost-effective resource for utility planning.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other: New & Retrofit/Replacement

Industries

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

- X Energy utilities
 - Industrial manufacturers
 - Government officials and regulators
 - Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- X Large number of decision makers involved
 - Environmental concerns
 - Conflicts with existing building codes
- X Legal & regulatory difficulties
 - Unavailability of financing
 - High perceived risk because new/different
 - High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
 - Reduces usage of a scarce fuel
 - X Reduces peak energy loads
 - Creates a backup fuel capability
 - X Other
- Reduces energy consumption

NON-ENERGY BENEFITS:

- Healthier indoor air environment
 - Greater thermal comfort
 - Greater visual comfort
 - Reduced noise/sound levels
 - Enhanced building attractiveness
 - Eases building operation & maintenance
 - Improves system reliability
 - Reduced first cost for product
 - X Other
- Reduced CO₂ input into the atmosphere

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?
NARUC, EPRI

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
George S. James

(202) 586-9472

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: Community Energy Systems

KEY ACTIVITY: Community Energy Systems Integration

PROJECT: Neighborhood Heat Islands

NAME OF EQUIPMENT OR PRACTICE: Urban Heat Islands

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Summer urban heat islands can be reduced by such practices as increasing tree canopy and by changing reflectance of roofs and paving surfaces.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment & Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 40%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- Non-profit building managers
- Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- X Energy utilities
- Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- X Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- X Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- X Other

Mundane, simple, lacks appeal of complex

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- X Other

Environment: CO₂ Emissions reduced

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- X Other

Cooler summer air temps in urban areas; aesthetics of city

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Landscape architects, city planners

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Linda de LaCroix

(202) 586-1851

ADDITIONAL CONTACT PERSON:

DIVISION: Building Services

PROGRAM: District Heating and Cooling

KEY ACTIVITY: District Heating and Cooling

PROJECT: Vacuum Steam Radiators

NAME OF EQUIPMENT OR PRACTICE: Vacuum Steam Radiators

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Large numbers of potential dhc users currently rely on older steam radiators for heat distribution. This activity studies the feasibility of continued utilization of existing steam radiators rather than retrofitting users with new hot water radiators.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE: Saves energy directly -
Savings over state-of-the-art technology: 25%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:
Single family:
Multi-family:
Manufactured home:
Commercial Buildings:
Less than 10,000 sq.ft.: New
10,000-100,000 sq.ft.: New
Greater than 100,000 sq.ft.: New
Communities: New
Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners
X Multi-family homeowners
X Commercial building owners or managers
X Public or government building managers
Non-profit building managers
X Builders, contractors or installers
Architects or engineers
Renters or tenants

- Energy utilities
- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Prakash B. Kunjeer

(202) 586-9470

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Performance Characterization

NAME OF EQUIPMENT OR PRACTICE: Acoustic Testing of Attic Insulation

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity involves in situ measurement of depth and density of attic insulation.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers

X Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology
Other

ENERGY RELATED BENEFITS:

Reduces energy bills
Reduces usage of a scarce fuel
Reduces peak energy loads
Creates a backup fuel capability

X Other

More insulation per dollar

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN
EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Fenestration and Daylighting

KEY ACTIVITY: Building Subsystems Research

PROJECT: Fenestration and Daylighting

NAME OF EQUIPMENT OR PRACTICE: Advanced Design Tools

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project develops advanced computer design tools which address the trade-off between heating, cooling, daylighting and lighting, hvac sizing, etc. To yield design parameters for window systems. AI technology is used in this project.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.: New

Greater than 100,000 sq.ft.: New

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities
Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology
Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- X Other

Increase utilization of energy efficient designs

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- X Greater visual comfort
- X Reduced noise/sound levels
- X Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Steve Selkowitz

(415) 486-5064

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Fenestration and Daylighting

KEY ACTIVITY: Building Subsystems Research

PROJECT: Fenestration and Daylighting

NAME OF EQUIPMENT OR PRACTICE: Advanced Durable Low-E Coatings

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project develops durable high transmissivity, low-emissivity window coatings (either hard low-E coatings or a protective diamond-like coating to protect very high performance soft coating).

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- Architects or engineers
- Renters or tenants
- Energy utilities

Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology

X Other

Scaling up process from lab to production scale

ENERGY RELATED BENEFITS:

X Reduces energy bills
X Reduces usage of a scarce fuel
X Reduces peak energy loads
Creates a backup fuel capability
Other

NON-ENERGY BENEFITS:

Healthier indoor air environment
X Greater thermal comfort
X Greater visual comfort
Reduced noise/sound levels
X Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

UNDER REVIEW; CONFIDENTIAL

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

S. J. Taylor

(202) 586-9214

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: IAQ, Infiltration & Ventilation

KEY ACTIVITY: Building Subsystems

PROJECT: Indoor Air Quality, Infiltration and Ventilation

NAME OF EQUIPMENT OR PRACTICE: Advanced Leakage Techniques

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing a pulse technique where leakage characteristics of buildings are determined using acoustical measurements.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- X Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
 - Reduces usage of a scarce fuel
 - Reduces peak energy loads
 - Creates a backup fuel capability
 - X Other
- Would allow for increased accuracy of energy liability

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
John M. Talbott

(202) 586-9446

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: IAQ, Infiltration & Ventilation

KEY ACTIVITY: Building Subsystems

PROJECT: Indoor Air Quality, Infiltration and Ventilation

NAME OF EQUIPMENT OR PRACTICE: Advanced Residential Ventilation Systems

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing a controlled ventilation system, which is integrated with residential heating, water heating and space cooling. This will optimize the use of available energy in ventilation flows.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly.

Savings over state-of-the-art technology: 10%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

X Single-family homeowners

X Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities
Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
 - Reduces usage of a scarce fuel
 - Reduces peak energy loads
 - Creates a backup fuel capability
 - X Other
- Improve indoor air quality

NON-ENERGY BENEFITS: X

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?
DEC CORP.

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
John M. Talbott

(202) 586-9446

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Performance Characterization

NAME OF EQUIPMENT OR PRACTICE: Aerated Autoclaved Concrete

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity evaluates the thermal and other characteristics of light weight autoclaved concrete.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 50%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New

Multi-family: New

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.: New

Greater than 100,000 sq.ft.: New

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

X Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- X Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems Research

PROJECT: Walls and Foundations Research

NAME OF EQUIPMENT OR PRACTICE: Alternative CFC-Based Insulations in Wall and Foundation Systems

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Reports on impacts of CFC restrictions on foundation insulation levels.
Alternatives to CFC blown extruded polystyrene will be evaluated.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:
Single family: New
Multi-family: New
Manufactured home: New
Commercial Buildings:
Less than 10,000 sq.ft.:
10,000-100,000 sq.ft.:
Greater than 100,000 sq.ft.:
Communities:
Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners
Multi-family homeowners
Commercial building owners or managers
Public or government building managers
Non-profit building managers
X Builders, contractors or installers
X Architects or engineers
Renters or tenants
Energy utilities

- X Industrial manufacturers
- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product

- X Other

Healthier outdoor environment

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Jeff Christian

(615) 574-5207

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Standards and Guidelines

KEY ACTIVITY:

PROJECT: Commercial Standards

NAME OF EQUIPMENT OR PRACTICE: Commercial Standards

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Energy conservation standards for new commercial and multi-family highrise buildings. These standards are mandatory for all new federal construction of this category, and voluntary for all others. Criteria is set for four compliance paths.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family: New & Retrofit/Replacement

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants

- X Energy utilities
Industrial manufacturers
- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- X Large number of decision makers involved
- Environmental concerns
- X Conflicts with existing building codes
- X Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- X Greater visual comfort
- Reduced noise/sound levels
- X Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

ASHRAE, ACEC, IES, AIA, BOMA, AT&T, IBM, CIGMA

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Steve Walder

(202) 586-9444

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems Research

PROJECT: Walls and Foundations Research

NAME OF EQUIPMENT OR PRACTICE: Composite/Pre-Built Wall Systems

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Provides design information on innovative wall systems pre-built for delivery to a site or for inclusion into manufactured housing. These systems will integrate novel insulation techniques with attributes such as acoustics, and infiltration.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment & Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE:

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities
Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology
Other

ENERGY RELATED BENEFITS:

X Reduces energy bills
Reduces usage of a scarce fuel
Reduces peak energy loads
Creates a backup fuel capability
Other

NON-ENERGY BENEFITS:

Healthier indoor air environment
X Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
X Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

S. J. Taylor

(202) 586-9214

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Performance Characterization

NAME OF EQUIPMENT OR PRACTICE: Corrosiveness of Insulation

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity studies how the corrosivity of insulation materials is affected by humidity and moisture.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Ooes not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOO: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.: New

Greater than 100,000 sq.ft.: New

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers

- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability

- X Other

Reduces deterioration of building structures

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- X Enhanced building attractiveness
- X Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Systems Integration

KEY ACTIVITY:

PROJECT: Performance Simulation

NAME OF EQUIPMENT OR PRACTICE: Energy Kernel System

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity is developing the next generation building energy performance simulation program.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New

Multi-family: New

Manufactured home: New

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.: New

Greater than 100,000 sq.ft.: New

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

X Industrial manufacturers

- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- X High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- X Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Richard Furlong

(202) 586-9446

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems

PROJECT: Roof Research and Building Diagnostics

NAME OF EQUIPMENT OR PRACTICE: Field Thermal Performance Methodology

DESCRIPTION OF EQUIPMENT OR PRACTICE:

A methodology for determining the thermal performance of roofs in the field. The methodology is based on observation, review of design drawings, a non-destructive moisture survey and field cuts.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- X Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- X Other

Alerts about actual thermal performance in the field.

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Sam Tagore

(202) 586-9210

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Performance Characterization

NAME OF EQUIPMENT OR PRACTICE: Foam Aging and R-Value Prediction

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity is establishing a database and model to predict aging characteristics of foam insulation.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE:

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

X Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

X Energy utilities

Industrial manufacturers

- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems Research

PROJECT: Walls and Foundations

NAME OF EQUIPMENT OR PRACTICE: Foundation Design Tools Including Hand Books

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Handbooks and design tools, focused on either the architect/engineer or builder audience, which provide state-of-the-art information on energy efficient foundation designs.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:
Single family: New
Multi-family: New
Manufactured home: New
Commercial Buildings:
Less than 10,000 sq.ft.:
10,000-100,000 sq.ft.:
Greater than 100,000 sq.ft.:
Communities:
Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- X Multi-family homeowners
- Commercial building owners or managers
- Public or government building managers
- Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- X Energy utilities

- Industrial manufacturers
- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
 - X Greater thermal comfort
 - Greater visual comfort
 - Reduced noise/sound levels
 - Enhanced building attractiveness
 - X Eases building operation & maintenance
 - Improves system reliability
 - Reduced first cost for product
 - X Other
- Reduces moisture/condensation

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?
UN. OF MN; OTHERS

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
S. J. Taylor

(202) 586-9214

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Fenestration and Daylighting

KEY ACTIVITY: Building Subsystems Research

PROJECT: Fenestration and Daylighting

NAME OF EQUIPMENT OR PRACTICE: High-R Windows

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project develops very high-R (over R-10) window subsystems with high transmissivity, low emissivity, which will perform over architectural life times.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family:

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- Multi-family homeowners
- Commercial building owners or managers
- Public or government building managers
- Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- Energy utilities
- Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology

X Other

Needs further research

ENERGY RELATED BENEFITS:

X Reduces energy bills
X Reduces usage of a scarce fuel
Reduces peak energy loads
Creates a backup fuel capability
Other

NON-ENERGY BENEFITS:

Healthier indoor air environment
X Greater thermal comfort
X Greater visual comfort
X Reduced noise/sound levels
X Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Several major companies and utilities are funding project

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

S. J. Taylor

(202) 586-9214

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Advanced Commercial Buildings

KEY ACTIVITY: Subsystems Interactions

PROJECT: Advanced Commercial Buildings

NAME OF EQUIPMENT OR PRACTICE: HVAC/Lighting Interactions

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity uses recently updated regression factors, computer programs, and experimental data on the thermal and lighting effects of the interaction between lighting fixtures, lamps, and the HVAC system. From this, improved interface designs and more optimally integrated lighting fixtures and HVAC terminals will be developed.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saves energy directly - Savings over state-of-the-art technology: 5%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants
Energy utilities
Industrial manufacturers
Government officials and regulators
 Other
HVAC and lighting fixture and lamp manufacturers

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
 Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
 High perceived risk because new/different
High first cost for technology
Reliability concerns about technology
 Other
Existing amortized product lines

ENERGY RELATED BENEFITS:

Reduces energy bills
Reduces usage of a scarce fuel
 Reduces peak energy loads
Creates a backup fuel capability
Other

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
 Other
Reduces use of coal generated electricity and hence environmental impact

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Mark Bailey

(202) 586-9424

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Performance Characterization

NAME OF EQUIPMENT OR PRACTICE: Imbedded Heat Flux Transducers

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity is developing a heat flux transducer that can be used for in situ heat flow measurement.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:
Single family: New
Multi-family: New
Manufactured home: New
Commercial Buildings:
Less than 10,000 sq.ft.: New
10,000-100,000 sq.ft.: New
Greater than 100,000 sq.ft.: New
Communities:
Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners
Multi-family homeowners
Commercial building owners or managers
Public or government building managers
Non-profit building managers
Builders, contractors or installers
Architects or engineers
Renters or tenants
Energy utilities
Industrial manufacturers

Government officials and regulators
 Other
Researchers

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
 - Reduces usage of a scarce fuel
 - Reduces peak energy loads
 - Creates a backup fuel capability
 - Other
- Increases understanding of heat flow in buildings

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems

PROJECT: Roof Research and Building Diagnostics

NAME OF EQUIPMENT OR PRACTICE: Large-Scale Climate Simulator (LSCS)

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This is a climate chamber in which roofs can be tested for thermal performance and service life under various simulated and accelerated indoor/outdoor environmental conditions. This is a DOE facility available to private sector and non-DOE groups.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 6 to 10 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

- X Energy utilities
- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- X Unavailability of financing
- High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- X Other

Saves energy or extends service life of roofs by solving a problem or recommending a practice.

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

ASHRAE, Holometrics Co., Weyerhaeuser Co., Univ. of HI, Koppers Co., SPRI

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Sam Tagore

(202) 586-9210

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Performance Characterization

NAME OF EQUIPMENT OR PRACTICE: Loose Fill Attic Insulation Settling

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity measures the changes in loose fill attic insulation with time.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers

- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Systems Integration

KEY ACTIVITY:

PROJECT: Performance Simulation

NAME OF EQUIPMENT OR PRACTICE: Maintenance and Upgrading of DOE-2

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity develops new or enhanced capabilities for the doe-2 program. Problems with DOE-2 are solved. Also, maintenance, publishing, and distribution of documentation for DOE-2 is conducted through this activity.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

X Public or government building managers

Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

- X Energy utilities
 - Industrial manufacturers
 - X Government officials and regulators
 - X Other
- Researchers

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability

X Other

Provides capability to simulate thermal performance of buildings.

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- X Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Richard Furlong

(202) 586-9446

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Advanced Materials Technology

NAME OF EQUIPMENT OR PRACTICE: Manufactured Housing Insulation

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Study to identify the insulation technology needs of manufactured housing industry.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 10%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home: New

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- X High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- X Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: IAQ, Infiltration & Ventilation

KEY ACTIVITY: Building Subsystems

PROJECT: Indoor Air Quality, Infiltration and Ventilation

NAME OF EQUIPMENT OR PRACTICE: Mathematical Modeling of Indoor Air Quality

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing an indoor air quality model, which as a tool, will allow the research community to analyze how the building affects air movement.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers
Government officials and regulators
 Other
Public and private research on indoor air quality and energy conservation

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
 Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology
 Other
Very small number of possible users

ENERGY RELATED BENEFITS:

Reduces energy bills
Reduces usage of a scarce fuel
Reduces peak energy loads
Creates a backup fuel capability
 Other
Improved ventilation design.

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

John M. Talbott

(202) 586-9446

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems Research

PROJECT: Walls and Foundations Research

NAME OF EQUIPMENT OR PRACTICE: Moisture Guidelines for Residences

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Development of construction practices and novel materials that provide effective moisture control in building wall systems.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- Multi-family homeowners
- Commercial building owners or managers
- Public or government building managers
- Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- X Energy utilities
- X Industrial manufacturers

- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- X Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

NAHB, etc.

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

S. J. Taylor

(202) 586-9214

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Performance Characterization

NAME OF EQUIPMENT OR PRACTICE: Moisture Impacts on Materials

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity is developing a database and the capability to predict effects of moisture on building materials.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE:

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

X Single-family homeowners

X Multi-family homeowners

Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers

- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- X Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems

PROJECT: Roof Research and Building Diagnostics

NAME OF EQUIPMENT OR PRACTICE: Moisture Measurement Methodology

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Development of reliable practices for measuring moisture concentration in roof systems.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability

X Other

Indirectly saves energy by alerting to loss of roof thermal performance.

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Sam Tagore

(202) 586-9210

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: IAQ, Infiltration & Ventilation

KEY ACTIVITY: Building Subsystems

PROJECT: Indoor Air Quality, Infiltration and Ventilation

NAME OF EQUIPMENT OR PRACTICE: Multi Zonal Infiltration and Ventilation Measurement

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project has developed equipment to measure air movement into and between various zones (rooms) of a building.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers
Government officials and regulators
 Other
Public and private research in indoor air quality and energy conservation

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology
 Other
Extremely small number of potential users

ENERGY RELATED BENEFITS:

Reduces energy bills
Reduces usage of a scarce fuel
Reduces peak energy loads
Creates a backup fuel capability
 Other
Optimized ventilation designs

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
John M. Talbott

(202) 586-9446

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems

PROJECT: Roof Research and Building Diagnostics

NAME OF EQUIPMENT OR PRACTICE: Non-Intrusive Moisture Probe

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Moisture is the primary cause of building envelope system failure. This probe can be taken into the field to provides a reliable measure of the moisture content of roof systems without roof penetration.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

- X Multi-family homeowners
- X Commercial building owners or managers
- X Public or government building managers
- X Non-profit building managers
- X Builders, contractors or installers
- X Architects or engineers
- Renters or tenants
- X Energy utilities

- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- X Unavailability of financing
- High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability

- X Other

Alerts to loss of thermal performance and roof life, and indirectly saves energy.

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Sam Tagore

(202) 586-9210

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: IAQ, Infiltration & Ventilation

KEY ACTIVITY: Building Subsystems

PROJECT: Indoor Air Quality, Infiltration and Ventilation

NAME OF EQUIPMENT OR PRACTICE: Passive Sampler of Volatile Organic Compounds (VOCs)

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project has included the development, testing, and evaluation of passive samplers to measure time-averaged indoor air pollutant concentration. VOCs have been identified as playing a role in the "sick building syndrome".

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 3 to 5 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants
Energy utilities
Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
 - Reduces usage of a scarce fuel
 - Reduces peak energy loads
 - Creates a backup fuel capability
 - X Other
- May lead to optimized ventilation in buildings

NON-ENERGY BENEFITS:

- X Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

John M. Talbott

(202) 586-9446

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: IAQ, Infiltration & Ventilation

KEY ACTIVITY: Building Subsystems

PROJECT: Indoor Air Quality, Infiltration and Ventilation

NAME OF EQUIPMENT OR PRACTICE: Perfluorocarbon Tracer System

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This equipment represents a passive measurement technique designed to obtain reasonable estimates of infiltration/ventilation in buildings using perfluorocarbon tracer gases.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

X Public or government building managers

Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers
Government officials and regulators
 Other
Public and private research on indoor air quality and energy conservation

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
 - Reduces usage of a scarce fuel
 - Reduces peak energy loads
 - Creates a backup fuel capability
 - Other
- Optimized ventilation

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

John M. Talbott

(202) 586-9446

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Advanced Materials Technology

NAME OF EQUIPMENT OR PRACTICE: Powder-Filled Evacuated Insulation Panels

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity studies the low thermal conductivity achieved by evacuated panels filled with powder materials.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 40%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 6 to 10 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home: New

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.: New

Greater than 100,000 sq.ft.: New

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

Public or government building managers

Non-profit building managers

X Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems

PROJECT: Roof Research and Building Diagnostics

NAME OF EQUIPMENT OR PRACTICE: PROPOR

DESCRIPTION OF EQUIPMENT OR PRACTICE:

A computer code for determining the thermal conductivities and specific heat. Computed directly from field measurements of temperature and heat flow.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Sam Tagore

(202) 586-9210

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Performance Characterization

NAME OF EQUIPMENT OR PRACTICE: Radiant Barrier Systems

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity is developing a database on performance characteristics of radiant heat barrier systems.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 10%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 6 to 10 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities: Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- Multi-family homeowners
- Commercial building owners or managers
- Public or government building managers
- Non-profit building managers
- Builders, contractors or installers
- Architects or engineers
- Renters or tenants
- Energy utilities
- Industrial manufacturers
- Government officials and regulators

Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Performance Characterization

NAME OF EQUIPMENT OR PRACTICE: Radiative Heat Transfer

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity is developing and validating models describing radiative heat transfer in building materials.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE:

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.: New

Greater than 100,000 sq.ft.: New

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology
Other

ENERGY RELATED BENEFITS:

Reduces energy bills
Reduces usage of a scarce fuel
Reduces peak energy loads
Creates a backup fuel capability

Other

Saves energy indirectly through better design

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product

Other

Increases our understanding of heat transfer

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems

PROJECT: Roof Research and Building Diagnostics

NAME OF EQUIPMENT OR PRACTICE: Roof Research Center-A National User Facility
DESCRIPTION OF EQUIPMENT OR PRACTICE:

A collection of measurement and analysis capabilities available to the industry for solution of roof problems - including both thermal performance and durability problems.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

X Industrial manufacturers

- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- X Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability

- X Other

Indirectly saves energy or extends roof life by solving a problem or recommending a practice.

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Weyerhaeuser Co., Kippers Co., W. R. Grace Co., Univ. of HI

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Sam Tagore

(202) 586-9210

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems

PROJECT: Roof Research and Building Diagnostics

NAME OF EQUIPMENT OR PRACTICE: Roof Surface Treatment Guidelines

DESCRIPTION OF EQUIPMENT OR PRACTICE:

A manual for roof consultants, designers and contractors that provides specific information on the roof thermal performance impact of changes in surface reflectance and surface mass.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

X Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- X Greater visual comfort
- Reduced noise/sound levels
- X Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Sam Tagore

(202) 586-9210

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems

PROJECT: Roof Research and Building Diagnostics

NAME OF EQUIPMENT OR PRACTICE: Roof Thermal Research Apparatus (RTRA)

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This is an outdoor facility for testing thermal and moisture properties of real roof reactions under field conditions. The apparatus has four independent, fully instrumented test stations.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- X Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability

- X Other

Helps to save energy by solving a problem or recommending and practice

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

W. R. Grace Co., Koppers Co., Dynatech Scientific

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Sam Tagore

(202) 586-9210

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: IAQ, Infiltration & Ventilation

KEY ACTIVITY: Building Subsystems

PROJECT: Indoor Air Quality, Infiltration and Ventilation

NAME OF EQUIPMENT OR PRACTICE: Sick Building Syndrome Protocol

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This project is developing a protocol designed to accurately assess buildings receiving air quality complaints which minimize disruption to the building occupants.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE: Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability

Other

Optimal ventilation

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

John M. Talbott

(202) 586-9446

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems

PROJECT: Roof Research and Building Diagnostics

NAME OF EQUIPMENT OR PRACTICE: Simplified Thermal Analysis of Roofs (STAR)

DESCRIPTION OF EQUIPMENT OR PRACTICE:

The roofing industry needs accessible computer models to analyze and optimize product performance for energy performance. Star is a user friendly PC-based computer code for thermal analysis of one-dimensional roof heat flow problems.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

- X Energy utilities
- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- Reduces energy bills
- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability

- X Other

Determines actual thermal performance and temp. Conditions of composite roofs in the field.

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- X Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Sam Tagore

(202) 586-9210

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Advanced Commercial Buildings

KEY ACTIVITY: Subsystems Interactions

PROJECT: Advanced Commercial Buildings

NAME OF EQUIPMENT OR PRACTICE: Small Office Building Handbook

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Guidelines on energy saving strategies for the design of small office buildings (50,000 sq. Ft. Or less).

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saves energy directly - Savings over state-of-the-art technology: 30%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers
Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- X Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology

X Other

High cost of retraining designers and lack of fees to compensate for training;
lack of right info.

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- X Other

Controls significant variable on rental property and an edge on the
noninformed competition.

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- X Greater visual comfort
- Reduced noise/sound levels
- X Enhanced building attractiveness
- X Eases building operation & maintenance
- Improves system reliability
- X Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN
EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Van Nostrand Reinhold Company and several schools

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Mark Bailey

(202) 586-9424

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Advanced Material Technology

NAME OF EQUIPMENT OR PRACTICE: Substitute Foaming Agents for Insulation

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity is developing foaming agents containing little or no ozone depletion materials.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 25%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 6 to 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

X Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing

- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- X Other

Indeterminate status of CFC restrictions

ENERGY RELATED BENEFITS:

- X Reduces energy bills
 - Reduces usage of a scarce fuel
 - Reduces peak energy loads
 - Creates a backup fuel capability
- X Other

Provides effective insulation if CFCs are banned

NON-ENERGY BENEFITS:

Healthier indoor air environment
Greater thermal comfort
Greater visual comfort
Reduced noise/sound levels
Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product

- X Other

Healthier and more comfortable outdoor environment

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

Manufacturers of CFC-Foamed Insulation

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Fenestration and Daylighting

KEY ACTIVITY: Building Subsystems Research

PROJECT: Fenestration and Daylighting

NAME OF EQUIPMENT OR PRACTICE: SUPERLITE

DESCRIPTION OF EQUIPMENT OR PRACTICE:

SUPERLITE is a daylighting performance computer tool--predicts interior light levels for different glazing and architectural design options.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 0 to 2 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities: New & Retrofit/Replacement

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

X Energy utilities

Industrial manufacturers

Government officials and regulators

X Other
Lighting designs

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
 - Greater thermal comfort
 - X Greater visual comfort
 - Reduced noise/sound levels
 - X Enhanced building attractiveness
 - Eases building operation & maintenance
 - Improves system reliability
 - Reduced first cost for product
 - X Other
- Improved worker productivity

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?
Architects, etc.

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Steve Selkowitz

(415) 486-5064

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Advanced Materials Technology

NAME OF EQUIPMENT OR PRACTICE: Switchable E Materials

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity studies the energy impacts of materials with switchable emissivity (E) characteristics.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 20%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE:

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN?

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family: New & Retrofit/Replacement

Multi-family: New & Retrofit/Replacement

Manufactured home: New & Retrofit/Replacement

Commercial Buildings: Less than 10,000 sq.ft.: New & Retrofit/Replacement

10,000-100,000 sq.ft.: New & Retrofit/Replacement

Greater than 100,000 sq.ft.: New & Retrofit/Replacement

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

Architects or engineers

Renters or tenants

Energy utilities

Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- X Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- X Greater thermal comfort
- X Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Robert Oliver

(202) 586-9446

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems Research

PROJECT: Walls and Foundations Research

NAME OF EQUIPMENT OR PRACTICE: Thermal Bridges Design Catalog

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This catalog provides design information on multi-dimensional heat transfer problems in buildings, this information will help architects avoid condensation points as well as save energy.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Indirectly saves energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: 1 to 2 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 3 to 5 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:
 Single family:
 Multi-family:
 Manufactured home:
Commercial Buildings:
 Less than 10,000 sq.ft.: New
 10,000-100,000 sq.ft.: New
 Greater than 100,000 sq.ft.: New
Communities:
 Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners
Multi-family homeowners
Commercial building owners or managers
Public or government building managers
Non-profit building managers
Builders, contractors or installers
X Architects or engineers
Renters or tenants
Energy utilities

- Industrial manufacturers
- X Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- X Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
 - Greater thermal comfort
 - Greater visual comfort
 - Reduced noise/sound levels
 - Enhanced building attractiveness
 - Eases building operation & maintenance
 - Improves system reliability
 - Reduced first cost for product
 - X Other
- Reduces moisture damage

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?
ASHRAE

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
S. J. Taylor

(202) 586-9214

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Walls, Roofs, and Foundations

KEY ACTIVITY: Building Subsystems

PROJECT: Roof Research and Building Diagnostics

NAME OF EQUIPMENT OR PRACTICE: Thermal Conductivity Measurements over Range of Environmental Temps.

DESCRIPTION OF EQUIPMENT OR PRACTICE:

Development of a technique for determining the temperature dependence of the thermal conductivities of roof insulations over the full range of temperature exposure.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:
Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE:

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD:

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

Commercial building owners or managers

Public or government building managers

Non-profit building managers

Builders, contractors or installers

X Architects or engineers

Renters or tenants

- Energy utilities
- X Industrial manufacturers
- Government officials and regulators
- Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- High perceived risk because new/different
- High first cost for technology
- Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS: Reduces energy bills

- Reduces usage of a scarce fuel
- Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- X Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

Sam Tagore

(202) 586-9210

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Building Materials

KEY ACTIVITY:

PROJECT: Advanced Materials Technology

NAME OF EQUIPMENT OR PRACTICE: Variable R Materials

DESCRIPTION OF EQUIPMENT OR PRACTICE:

This activity studies the energy impacts of variable R value materials.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Equipment

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Saved energy directly - Savings over state-of-the-art technology: 10%

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: More than 10 Years

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN? Will require OBT assistance

SIMPLE PAYBACK PERIOD: 6 to 10 Years

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family: New

Multi-family: New

Manufactured home: New

Commercial Buildings:

Less than 10,000 sq.ft.: New

10,000-100,000 sq.ft.: New

Greater than 100,000 sq.ft.: New

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

- X Single-family homeowners
- Multi-family homeowners
- X Commercial building owners or managers
- Public or government building managers
- Non-profit building managers
- X Builders, contractors or installers
- Architects or engineers
- Renters or tenants
- Energy utilities
- Industrial manufacturers
- Government officials and regulators

Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

- Lack of awareness about equipment/practice
- X Lack of understanding about equipment/practice
- Large number of decision makers involved
- Environmental concerns
- Conflicts with existing building codes
- Legal & regulatory difficulties
- Unavailability of financing
- X High perceived risk because new/different
- X High first cost for technology
- X Reliability concerns about technology
- Other

ENERGY RELATED BENEFITS:

- X Reduces energy bills
- Reduces usage of a scarce fuel
- X Reduces peak energy loads
- Creates a backup fuel capability
- Other

NON-ENERGY BENEFITS:

- Healthier indoor air environment
- Greater thermal comfort
- Greater visual comfort
- Reduced noise/sound levels
- Enhanced building attractiveness
- Eases building operation & maintenance
- Improves system reliability
- Reduced first cost for product
- Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? No

IF YES, WHO ARE THEY?

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:
Peter Scofield

(202) 586-9193

ADDITIONAL CONTACT PERSON:

DIVISION: Building Systems

PROGRAM: Fenestration and Daylighting

KEY ACTIVITY: Building Subsystems Research

PROJECT: Fenestration and Daylighting

NAME OF EQUIPMENT OR PRACTICE: Window 3.1 Computer Program

DESCRIPTION OF EQUIPMENT OR PRACTICE:

The window 3.1 computer program is a P.C. program which predicts the thermal performance of windows.

WOULD YOU CHARACTERIZE THIS TECHNOLOGY AS PRIMARILY AN EQUIPMENT OR PRACTICE?
Practice

ENERGY CHARACTERISTICS OF THIS EQUIPMENT OR PRACTICE:

Does not save energy

WHEN THIS TECHNOLOGY WILL BE READY TO COMMERCIALIZE: Is Ready Now

WILL THIS EQUIPMENT OR PRACTICE REQUIRE COMMERCIALIZATION ASSISTANCE FROM OBT
OR WILL IT SUCCEED ON ITS OWN? Will succeed on its own

SIMPLE PAYBACK PERIOD: Not Applicable

MARKET SECTORS MOST LIKELY TO BENEFIT FROM THE USE OF THIS EQUIPMENT OR
PRACTICE:

Residential Buildings:

Single family:

Multi-family:

Manufactured home:

Commercial Buildings:

Less than 10,000 sq.ft.:

10,000-100,000 sq.ft.:

Greater than 100,000 sq.ft.:

Communities:

Other:

WHO IS MOST LIKELY TO BUY THE PRODUCT OR USE THE PRACTICE?

Single-family homeowners

Multi-family homeowners

X Commercial building owners or managers

X Public or government building managers

X Non-profit building managers

X Builders, contractors or installers

X Architects or engineers

Renters or tenants

Energy utilities

X Industrial manufacturers

Government officials and regulators
Other

WHAT DO YOU THINK ARE THE IMPORTANT COMMERCIALIZATION BARRIERS TO OVERCOME?

Lack of awareness about equipment/practice
Lack of understanding about equipment/practice
Large number of decision makers involved
Environmental concerns
Conflicts with existing building codes
Legal & regulatory difficulties
Unavailability of financing
High perceived risk because new/different
High first cost for technology
Reliability concerns about technology
Other

ENERGY RELATED BENEFITS:

Reduces energy bills
Reduces usage of a scarce fuel
Reduces peak energy loads
Creates a backup fuel capability
 Other
Design and selection of energy efficient windows

NON-ENERGY BENEFITS:

Healthier indoor air environment
 Greater thermal comfort
 Greater visual comfort
Reduced noise/sound levels
 Enhanced building attractiveness
Eases building operation & maintenance
Improves system reliability
Reduced first cost for product
Other

HAVE ANY COMMERCIAL OR PROFESSIONAL ORGANIZATIONS INDICATED AN INTEREST IN EITHER LICENSING OR USING THIS EQUIPMENT OR PRACTICE? Yes

IF YES, WHO ARE THEY?

The window industry, ASHRAE, and others are already using 2.0 and will use 3.1

NAME AND TELEPHONE NUMBER OF PERSON COMPLETING FORM:

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