THANKS TO OUR EVENT SPONSORS:

Osborn Engineering
Oswald
THE BUILDING EDUCATION SERIES 2017:
THE OSWALD BUILDING, 1100 SUPERIOR
7:30 AM COFFEE AND REGISTRATION
8:00 – 10:00 AM PRESENTATION

JANUARY 26: PROJECT FINANCING OPTIONS
MARCH 16: RETROFITS FOR HISTORIC BUILDINGS
MAY 18: ALTERNATIVE TRANSPORTATION
JULY 20: VEGETATED ROOFS
SEPTEMBER 20: LIGHTING, DAYLIGHTING AND AUTOMATED CONTROLS
NOVEMBER 16: BUILDING SAFETY, SECURITY, EMERGENCY PROCEDURES AND DISASTER PREPAREDNESS
PROJECT FINANCING

OUR SPEAKERS:

ANDREW SMYSER, COSE
  • LOCAL OPPORTUNITIES AND INCENTIVES

BRIAN MC CARTER, SUSTAINABLE REAL ESTATE SOLUTIONS
  • C-PACE FINANCING

JAMIE FELTES, KEYBANK
  • KEYBANK FINANCING SOLUTIONS

CRAIG MILLER, DUFFY & DUFFY COST SEGREGATION EXPERTS
  • OPPORTUNITIES ASSOCIATED WITH ACCELERATING DEPRECIATION DEDUCTIONS AND DEFFERING TAXES

DAN MITCHELL, SIEMENS
  • OPPORTUNITIES ASSOCIATED WITH PERFORMANCE BASED PROGRAMS
Andrew Smyser is the Manager of Energy Services for the Council of Smaller Enterprises (COSE). He leads the Energy Assessment Program which provides Energy Audits to nonresidential buildings in Northeast Ohio. He also works with building owners to evaluate, implement, and fund energy efficiency and renewable energy projects. As a member of the Energy team at COSE, Andrew provides guidance and information regarding rates and best practices around energy usage for businesses and organizations. He is an administrator for the Efficiency rebate program through FirstEnergy and the PJM regional distribution grid.

Andrew has an MBA from Cleveland State University with a Specialization in Sustainable Business. He has a Bachelors of Science in Natural Resource Management from the Ohio State University, and was a zookeeper at the Cleveland Metroparks Zoo prior to joining COSE.
Building Education Series:

Project Financing

Andrew Smyser
Manager, Energy Services
COSE Energy History and Future

1999 Gas and Electric Aggregation
- The beginning of COSE Energy

2011 Grant from Dept. of Development
- Energy Audits
  - <10,000 sqft
  - Contracted with a turnkey provider
  - $3,000 towards improvements

2013 Dominion Energy Assessment Program
- ASHRAE Level 2 Audits
  - <25,000 sqft
  - ~950 buildings completed

2016 FirstEnergy Audit Program
- ASHRAE Level 2 Audits
  - 25–75,000 sqft
  - 800 audits over 8 years (2016-2024)
Adding the Pieces

Owner + Contractor + Rebates + Financing = Projects
Building Audits

Non-Residential Energy Assessments

950+ Buildings
9.4+ million Sqft

21% Identified Energy Reduction
What Did We Find

Identified Savings:
$3.7 million total annual savings
~$3800/building

Installed Costs:
$17.7 million
~$18,000/building

4.8 year payback
What did we learn

• Personality goes a long way!
• Energy efficiency is not a priority for most
• Right Project at the Right time
• Contractors
• Incentives Help
Incentives

FirstEnergy rebates
- FirstEnergy Customers
- KWH savings
- ~$0.05/kwh
- All types of Energy Efficiency Projects
- Requires Pre-approval (exceptions)

PJM rebates
- Anyone (includes FE, CPP and Muni(s))
- Demand Savings (KW)
- Significantly smaller rebates
- All types of Energy Efficiency Projects
- Requires Pre-approval (exceptions)
What did we learn

• Personality goes a long way!
• Energy efficiency is not a priority for most
• Right Project at the Right time
• Contractors
• Incentives Help

• Financing! So Many Options!
Power Purchase Agreements (PPA)
Performance Contracting (ESCO model)
Unlocking Cash Flow for Your Business

Do you want your business to grow while reducing expenses?

Whether it’s energy-efficient lighting, or a top-to-bottom overhaul, energy efficiency upgrades can help your business more than offset rising utility costs. Financing solutions exist that will help your company add money to the bottom line.

**TIME IS MONEY.** You’re wasting energy and money every day you wait to act on the savings identified in your report. Your investment will generate savings well beyond the term of the loan.

ENERGY SAVINGS OPPORTUNITIES BY CATEGORY

- **9%** Operational
- **5%** Water
- **25%** Envelope
- **31%** HVAC
- **18%** Lighting
- **8%** Other

POOR CASH FLOW IS ONE OF THE BIGGEST REASONS BUSINESSES FAIL

ENERGY EFFICIENCY IS THE SINGLE LARGEST WAY TO ELIMINATE WASTE, REDUCE EMISSIONS, AND SAVE MONEY

**DID YOU KNOW?**

- **20-30%** is the average energy savings from a whole building retrofit
- An average of **30%** of energy consumed in commercial buildings is wasted

ENERGY EFFICIENCY UPGRADE BENEFITS

- **BUILDING VALUE**
- **COMFORT**
- **CONDITIONS QUALITY** (example: lighting)
- **INCREASE CAPACITY**
- **REDUCE MAINTENANCE**
- **REINVEST DOLLARS SAVED**
- **PRODUCTIVITY**

COSE can help you choose the right energy project and financing solution that puts money back in your pocket.

Visit cose.org/energy or call (216) 595-2205 to speak with a COSE Energy Advisor to help you from A to Z.
UNLOCK CASH FLOW

0 Projects

1 Project

Multiple Projects for Maximum Benefit

Utilities Cost

Savings

Loan

Savings

Utilities Cost

DURING LOAN

AFTER LOAN REPAYMENT

DURING LOAN

AFTER LOAN REPAYMENT

GREATER CLEVELAND PARTNERSHIP
EE and RE Financing

Zero out of pocket
Cash flow Positive
Pay for the project with the savings

Coming Next: Finance Options in detail!
Questions?

W. Andrew Smyser
asmyser@gcppartnership.com
216-592-2432
Brian McCarter is CEO of Sustainable Real Estate Solutions, Inc. (SRS). SRS is an industry leader in administering commercial Property Assessed Clean Energy (C-PACE) programs nationwide. SRS clients include C-PACE programs in Connecticut, Colorado, Rhode Island and the San Francisco Bay Area.

To serve these markets SRS has developed a unique and scalable energy efficiency and renewable energy project scenario development, optimization and underwriting process which is built into its cloud-based platform.

This best practice for underwriting energy efficiency investments has facilitated over $100 million in C-PACE projects and has earned the confidence of key stakeholders nationwide.

Brian is a frequent speaker at building energy efficiency conferences across the country.

For more information, visit [www.PACEworx.com](http://www.PACEworx.com)
Overview of CPACE

Commercial Property Assessed Clean Energy

January 26, 2017
Today’s Presenter

- Brian McCarter

- CEO, Sustainable Real Estate Solutions

- Program Administrator for C-PACE programs nationwide

- and collaborating to bring the “Power of PACE” to C&I building owners & contractors in OH
SRS Experience – $100+ Million in C-PACE Projects Nationwide

- State of Connecticut
- State of Colorado
- State of Rhode Island
- San Francisco Bay Area
- County of Multnomah, OR
What is C-PACE?

New way to finance energy efficiency & renewables in C&I buildings:

- 100% financing (no out-of-pocket expense)
- Long term (up to 25 years)
- Lower energy costs
- Cash flow positive projects
- Combine with utility & tax incentives
- No personal guarantees
- Payment obligation automatic transfer upon sale (akin to sewer assessment)
What is C-PACE? (Cont.)

- C-PACE is designed as an “open source funding model”
  - No state / public funds are used to finance projects
  - Pre-qualified private Capital Providers fund eligible projects

- Program Administrator reviews pre-approved projects with pre-qualified capital providers to determine funding interest

- C-PACE requires owners to receive written consent of their mortgage holder (C-PACE lien is a priority lien akin to sewer assessment)
How C-PACE Works?

C-PACE is a voluntary tax assessment-based, private financing program

- Owners chose to install eligible EE and/or RE improvements
- Costs are spread over periods up to 25 years
- Repayment via a new charge ("Assessment") on the owner’s property tax bill
- Annual energy savings $$ > the annual payment; Creating cash flow positive projects
- The repayment obligation automatically transfers to the new owner upon sale
What’s Eligible?

- **Eligible Property Types (C&I)**
  - Office
  - Retail
  - Hotel
  - Industrial
  - Healthcare
  - Non-profit
  - Multifamily (5+ units)

- **Eligible Improvements (examples)**
  - Automated building controls
  - Boilers, chillers & furnaces
  - Building envelope (insulation, windows)
  - Combined heat & power (CHP)
  - High efficiency lighting
  - Hot water heating systems
  - HVAC upgrades & controls
  - Solar PV systems
  - Pumps, motors, drives
What Else is Eligible?

- Related expenses:
  - Engineering studies
  - Energy audits
  - Renewable Energy Feasibility Studies
  - Extended warranties of equipment to cover full financing term
  - Roof upgrades (if associated with roof-top solar systems or roof-top HVAC units)
  - Building structural reinforcement (to support roof-top installations)
  - Environmental clean-up (e.g. asbestos removal for new boiler installation)
  - Maintenance contracts (up to 5 years)
Paradigm Shift in Approach to EE / RE Projects

Old Way
Owner self-funded, short-term payback focused

New Way
3rd party, long-term financed, cash flow focused

...providing a “too good to be true” opportunity for the owner
**CT C-PACE Success Case Study**

**Closed Projects**
Funded projects are increasing every quarter as more building owners take action to reduce their energy costs and increase NOI.

$95.6M closed project financing

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>3</td>
<td>9</td>
<td>16</td>
<td>21</td>
</tr>
</tbody>
</table>

**All Sizes of Projects**
C-PACE can bring virtually any green energy project, small or large, from a vision to a reality.

$628K Average Size

$30K Smallest Size

$8.3M Largest Size

SRS
accelerating clean energy
“Power of PACE” Benefit to Building Owners

- Enables mid-sized (Class B & C) owners to meet upgrade needs

Who often lack:

- Capital budget for upfront costs  
  - PACE requires NO owner out-of-pocket expense  
  - (No Cash)

- Credit quality for traditional financing 
  - PACE underwriting based on building’s financial health  
  - (No Credit)

- Ability to increase operating expenses  
  - PACE can generate IMMEDIATE positive cash flow  
  - (No Balance Sheet Room)
“Power of PACE” Benefit to Contractors

“New Way” to provide your building owners with “too good to be true” proposals that:

- Require NO owner out-of-pocket expense
- Generate IMMEDIATE positive cash flow
- Meet capital intensive building modernization needs
- Overcome owner’s typical short-term payback & fix-at-failure approach
Jamie Feltes joined KeyBank in 2012 and currently serves as a specialist for KeyBank’s energy efficiency and renewables initiatives, called Key4Green. She works with local and national teams that help businesses achieve their goals through energy efficiency and renewable lending strategies. This is the process of optimizing your facilities equipment and building infrastructure to reduce energy consumption allowing an organization to realize real cash savings that can then be reallocated towards achieving business goals. Prior to joining KeyBank, Jamie worked for one of the top 10 national banks and was a business banking relationship manager.
Energy Efficiency and Renewables

Turn Your Commercial Property Green and Save on Energy

Presented by: Jamie Feltes, Business Banking Relationship Manager
Date: 12/17/2015
1. Key’s Commitment to Sustainability
2. Introduction
3. Solution Identification and Approach
4. Energy Efficient and Renewable Incentive Opportunities
5. Funding Opportunities
6. Lighting
7. HVAC
8. Solar
9. Solution Overview
Key is a recognized leader in helping clients achieve their energy-efficiency and renewable-energy goals, and our experts are armed with the resources, connections, and financing to design and implement unique solutions. Our support for a greener environment doesn’t stop there, because we’re hard at work building a culture of sustainability throughout Key.

- In 2014, we reduced our greenhouse gas emissions by **more than 8% over 2013 and more than 22% over our 2009 baseline.**
- In November of 2014, **we added our 23rd LEED®-certified facility, bringing our LEED-certified corporate square footage to 48%.** LEED – which stands for Leadership in Energy and Environmental Design – is a green building certification program of the U.S. Green Building Council that recognizes best-in-class building strategies and practices.
- An estimated **30% of our square footage had an ENERGY STAR® score of 75 or greater** by the end of 2014.
- As of December 31st, 2014, **our renewable energy portfolio investment was more than $2 billion.** This investment has the potential to power more than two million homes.
- In 2014, **over 71% of the waste from our operations was diverted from landfills.**
- Since 2009, **Key has reduced its paper usage by 60%** and has set a goal to reduce paper usage by an **additional 30% by 2020.**
- Our **online statements and bill pay services eliminate paper waste and the need to transport paper documents,** resulting in lower paper costs and waste.

At Key, we believe that investing in renewable energy and energy efficiency have tremendous potential for both our clients and our bank. We will continue to reduce our environmental footprint as we expand sustainability practices to reduce waste and energy use throughout our operations.

To learn more about our corporate responsibility and sustainability efforts at Key, visit: [www.key.com/crreport](http://www.key.com/crreport).
An increasing number of businesses throughout the country are implementing upgrades that improve efficiency, reduce waste and minimize the impact on the environment. Business owners know that lower energy use translates into improved profitability and cash flow, and investments in sustainability can add significant value to business assets.

A commercial property can typically reduce its energy bill **55-60%** by making building-wide enhancements.

In this presentation we show how to evaluate your facility, assist with incentives, coordinate with the installer(s), and provide leverage financing.

Source: 2014 ACEE Summer Study on Energy Efficiency in Buildings
1. Conduct comprehensive site survey of all operational systems – lighting, heating & cooling equipment, evaluation of building occupants’ reported level of comfort and articulated concerns.

2. Evaluate facility’s manner and means of usage.

3. Collect all relevant utility data.

4. Prepare comprehensive operational cost analysis of all internal and external cost centers.

5. Interview key personnel to identify organization’s energy-efficiency goals and objectives.

Grants and incentives are available to reduce your long-term capital costs and improve your yearly energy savings.

What you need to know to identify what incentives or grants are available:

- Asset type and scope of project
  - Multiple assets in a project should be broken out
- State, county and city where the asset will be located
- Utility companies servicing the facility

Resources:

- [www.dsireuse.org](http://www.dsireuse.org)
### Energy Efficiency and Renewables for Commercial Facilities

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Description</th>
<th>Benefit</th>
</tr>
</thead>
</table>
| Equipment Term Loan    | • Fixed or variable rates up to 7 years          | • 6- to 12-month draw period  
                        |                                                   | • Leverage incentives to pay down capital costs                      |
| Capital Lease          | • Fixed or variable rates up to 10 years         | • Progress payments to vendor  
                        |                                                   | • On balance sheet for borrower                                    |
| Operating Lease        | • Up to 10 years with a fixed balloon or fair market value | • Off balance sheet treatment to client (review with CPA)  
                        |                                                   | • Tax incentive pass-through (for profit companies)                 |
| Real Estate Loan       | • Terms up to 25 years                           | • Up to 25-year amortization  
                        |                                                   | • Construction financing  
                        |                                                   | • Combine with other building improvements                    |

All credit products are subject to credit approval.
**Lighting: Project Development**

<table>
<thead>
<tr>
<th>$</th>
<th>Total Project Cost:</th>
<th>$234,328</th>
</tr>
</thead>
</table>
| ⭕️ | Project Scope: | • Interior lighting retrofit with LED  
• Exterior lighting retrofit with LED and painting poles |
| ⚠️ | Client Challenges: | • Poor light quality in facility negatively affecting retail atmosphere and employee morale  
• Chronic need to replace bulbs and repair fixtures  
• Escalating electricity bills |
| ⚡️ | Solution: | • Turnkey LED retrofit for indoor and outdoor lighting, which provides minimum of 5 years’ useful life for each tube, virtually eliminates maintenance costs, provides extraordinary light quality and slashes energy consumption by up to 80% |
| ⚡️ | Energy Savings: | $44,486 |
Lighting: Incentives

Incentive Provided by Utility: $44,697

Reduced Capital Cost: $189,630

Process:
- Application submitted prior to work being completed
- Formal approval provided
- Project completed
- Utility or its assignee confirms work has been completed as presented
- Incentive paid directly to client
- Typical turnaround time to receive incentive payments is 45 days from inspection request
Lighting: Lending Solution

Facility:
- Draw to term equipment note
- 4-month draw note: $234,318
- 84-month equipment note: $189,630
- Fixed rate
- $36,720 annual debt payments

Annual Energy Savings: $44,486

Annual Debt Payments: $36,720

Annual Savings after Debt: $7,766
**Total Project Cost:** $475,000

**Project Scope:**
- Comprehensive retrofit of mechanical systems including an element of VRF
- Installation of building automation system

**Client Challenges:**
- Inconsistent temperatures throughout the facility
- Ongoing repair costs due to age of equipment: $35k per year
- System is stressed and not responding to building load
- Optimal facility temperature cannot be maintained
- Natural gas and electric costs are skyrocketing
- Chronic cycle of break/fix repairs
- No budget certainty

**Solution:**
- Install high-efficiency heating and cooling solution that incorporates redundancy and allows for partial load engagement
- Install fully integrated BAS/controls to maximize efficiency and optimize building comfort and performance
<table>
<thead>
<tr>
<th>Incentive Provided by Utility:</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Cost:</td>
<td>$475,000</td>
</tr>
<tr>
<td>Optimal Geothermal:</td>
<td></td>
</tr>
<tr>
<td>• Geothermal Systems. The credit is equal to 10% of expenditures, with no maximum credit limit stated.</td>
<td></td>
</tr>
<tr>
<td>• Eligible geothermal energy property includes geothermal heat pumps and equipment used to produce, distribute or use energy derived from a geothermal deposit.</td>
<td></td>
</tr>
<tr>
<td>• Geothermal property credit, with the exception of geothermal heat pumps, has no stated expiration date.</td>
<td></td>
</tr>
<tr>
<td>Energy Savings:</td>
<td>$37,100</td>
</tr>
<tr>
<td>Avoid Ongoing Maintenance:</td>
<td>$35,000</td>
</tr>
<tr>
<td>Total Annual Savings:</td>
<td>$72,100</td>
</tr>
</tbody>
</table>

Source: [www.energy.gov](http://www.energy.gov), U.S. Department of Energy
HVAC: Lending Solution

**Total Project Cost:** $475,000

**Incentive:** N/A

**Capital Cost:** $475,000

**Facility:**
- Draw to term equipment note
- 6-month draw note: $475,000
- 114-month equipment note: $475,000
- Fixed rate
- $60,648 annual debt payments

**Annual Energy & Maintenance Savings:** $72,100

**Annual Debt Payments:** $60,648

**Annual Savings after Debt:** $11,452
Solar: Project Development

Total Project Cost: $1,200,000

Project Scope:
• Rooftop solar

Client Challenges:
• First time assessing a solar system
• Space available
• Age of roof

Solution:
• Cost-reduction opportunities within the existing roof footprint
• Install rooftop solar with floating mounting system
• Repair and upgrade roof as needed

Energy Savings: $124,110

SREC Income: $34,983 (averaged for modeling purposes)

Total Annual Savings: $159,093
30% ITC Tax Credit: $360,000

Reduced Capital Cost: $840,000

- The credit is equal to 30% of expenditures, with no maximum credit. Eligible solar energy property includes equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat.
- A number of changes to this credit are scheduled to take effect for systems placed in service after December 31, 2016, including a decrease from 30% to 10%.

Source: [www.energy.gov](http://www.energy.gov), U.S. Department of Energy
Solar: Lending Solution

Total Project Cost: $1,200,000

30% ITC Tax Credit: $360,000

Reduced Capital Cost: $840,000

Facility:
- 10-year equipment lease with 15% FMV
- Progress payments to installer during installation period
- Fixed rate
- $130,248 annual debt payments

Annual Energy Savings & SREC Income: $159,093

Annual Debt Payments: $130,248

Annual Savings after Debt: $28,845
Solution Overview

Energy Savings Overview

Year 1-7: $48,063
- $11,452
- $28,845
- $7,766

Year 8: $84,783
- $11,452
- $28,845
- $44,486

Year 9: $84,783
- $11,452
- $28,845
- $44,486

Year 10: $84,783
- $11,452
- $28,845
- $44,486

Year 11: $275,679
- $159,093
- $72,100
- $44,486

Ongoing: $275,679
- $159,093
- $72,100
- $44,486
KeyBank is providing this brief overview for informational purposes only. Before entering into any financing arrangement, please consult your own financial, tax and legal advisors.

©2015 KeyCorp. KeyBank is Member FDIC. All credit products are subject to credit approval.150918-11130
Craig Miller is President at Duffy+Duffy Cost Segregation Services, Inc., with offices in Cleveland, Columbus, and Detroit. Mr. Miller is a CPA, a CGMA and a Certified Government Financial Manager (CGFM). Mr. Miller is a frequent speaker and author for Cost Segregation, the IRS Tangible Property Regulations, and the Energy Policy Act of 2005. Mr. Miller is the 2017 Chapter President of NAIOP, and serves on the NAIOP National Finance and Tax Subcommittee. His speaking engagements have included the National Business Institute (NBI), U.S. Green Building Council, NAIOP, the Michigan Association of CPAs, Ohio Society of CPAs, the Pennsylvania Institute of CPAs, and the Cleveland Metro Bar Association. He has published articles in CPA Trendlines, Properties Magazine, Builder’s Exchange Magazine, the Ohio Restaurant Association Magazine, and for the Ohio Dental Society.
ENGINEERED COST
SEGREGATION & EPAct 179D

Recognized as Top Niche Tax Saving Services for Business

Presented by Craig Miller, CPA, CGMA, CGFM
Duffy+Duffy Cost Segregation
Cleveland, OH
What is Cost Segregation?

- A Valuable Income Tax Deferral Tool for Building Owners and for Tenant-paid Improvements

- Accelerated Depreciation is an Income Tax Shield

- The Cost segregation study has become the most powerful tax tool for real estate (Accounting Today, May 2014)

- IRS Approved Since 1999

- Businesses have always known that a dollar in their hand today is worth more than the promise of a dollar tomorrow
What is Cost Segregation?
Results in Faster Tax Write-Offs
Uses Accelerated Depreciation as a Tax Shield
Results in Working Capital and Cash Flow Generation

A tax deferral tool that allows building owners to allocate building costs between real estate and personal property based on case law and IRS guidance.

A Cost Segregation Study is a detailed engineering analysis improvements using qualified engineers and estimators that identifies Section 1245 tangible personal property and Section 1250 land and conforms to IRS standards for quality.

Takes advantage of the timing of depreciation by classifying assets properly for tax purposes.
The Benefit to Building Owners

Tax Deferrals
Cash Flow Generation and Savings
Through the Time Value of Money

- Income taxes are reduced in the early years of a building’s life by using accelerated depreciation methods.

- Taxes are repaid later due to lower depreciation deductions but in tomorrow’s less-valuable dollars.

- Savings are measured by the **Net Present Value** of the cash flows from tax deferral and repayment.

- “Look-Back Study” Results in Large “Catch-up Tax Deductions.”
# How Much Building Cost Justifies Cost Segregation?

<table>
<thead>
<tr>
<th>Property Type</th>
<th>Segregation Range</th>
<th>Building-Only Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>20 to 50 %</td>
<td>300,000</td>
</tr>
<tr>
<td>Retail</td>
<td>20 to 40 %</td>
<td>350,000</td>
</tr>
<tr>
<td>Medical Office</td>
<td>20 to 40 %</td>
<td>350,000</td>
</tr>
<tr>
<td>Restaurants</td>
<td>20 to 35 %</td>
<td>400,000</td>
</tr>
<tr>
<td>Hotels</td>
<td>20 to 35 %</td>
<td>400,000</td>
</tr>
<tr>
<td>Apartments</td>
<td>15 to 35 %</td>
<td>400,000</td>
</tr>
<tr>
<td>Office</td>
<td>15 to 30 %</td>
<td>400,000</td>
</tr>
<tr>
<td>Distribution</td>
<td>15 to 30 %</td>
<td>450,000</td>
</tr>
<tr>
<td>Tenant Improvements</td>
<td>25 to 60%</td>
<td>200,000</td>
</tr>
</tbody>
</table>

Assumes a 6% discount rate and a minimum Benefit-to-Cost ratio of 4 to 1

Not minimum amounts
## Tax Impact

### Typical Study Results

<table>
<thead>
<tr>
<th>Type</th>
<th>1st Year Deferral</th>
<th>Peak Year Deferral</th>
<th>Overall NPV Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>$35,710</td>
<td>$130,984</td>
<td>$93,560</td>
</tr>
<tr>
<td>Retail</td>
<td>$144,204</td>
<td>$290,360</td>
<td>$207,400</td>
</tr>
<tr>
<td>Apartments</td>
<td>$38,450</td>
<td>$84,910</td>
<td>$60,650</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>$103,100</td>
<td>$298,528</td>
<td>$186,580</td>
</tr>
<tr>
<td>Medical</td>
<td>$20,504</td>
<td>$109,526</td>
<td>$72,687</td>
</tr>
<tr>
<td>Hotel</td>
<td>$88,575</td>
<td>$487,968</td>
<td>$304,980</td>
</tr>
<tr>
<td>Auto Dealer</td>
<td>$100,849</td>
<td>$135,245</td>
<td>$88,081</td>
</tr>
</tbody>
</table>
The Benefit to Building Owners

Income Tax Deferrals
Businesses Use *Free Cash Flow* for Many Business Uses:

- Business Expansion
- Working Capital
- Purchase Equipment
- Research & Development
- Energy Efficient Improvements/Building Automation Systems
- Renewable Energy Building Systems
- Hire/Retain Employees
- Pay Down Debt
Legal Framework

Hospital Corporation of America (HCA)-1997 established cost segregation allowing shorter lives for certain assets. Establishes link between Investment Tax Credit case law and rulings.

IRS acquiesces in 1999 and issues Legal Memorandum 199921045 agreeing to reclassification and stating that “the use of cost segregation studies must be specifically applied by the taxpayer.”

The IRS issues Cost Segregation Audit Techniques Guide in 2004 which assists examiners in the review and examination of cost segregation studies. Updates and specific industry bulletins issued since.
Examples of Eligible Costs
Tangible Personal Property
(Section 1245 Property)

- Decorative lighting
- Decorative millwork
- Interior bumpers & fencing
- Decorative wall covering
- Decorative flooring
- Portions of electrical
- Portions of plumbing
- Extra Structural support

- Cabinetry & countertops
- Signage
- Process related HVAC
- Removable Site Lighting
- Communication systems
- Security Systems
- Compressed air systems
- Shelving & racks
- Equipment pads
Examples of Eligible Costs
Land Improvements
(Section 1250 Property)

- Site preparation
- Driveways & Roads
- Sidewalks
- Flag poles
- Underground utilities
- Retaining walls
- Porticos (detached)

- Detention basins
- Fencing
- Landscaping
- Docks & wharves
- Exterior lighting
- Storm sewers
- Pavilions
Examples of Eligible Costs

Indirect Costs

• Building permits
• Architect fees
• Engineers fees
• Soil testing
• General conditions
• Builders overhead and profit

• Construction period interest (Sect. 263a)
• Section 754 adjustments
• Negative Basis Adjustments:
  o Gain on involuntary conversions
  o 1031 exchange gain
What is a Building?

A “building or other inherently permanent structure” is “not tangible personal property”

Reg Sec. 1.48-1(c)

Is it inherently permanent? (Fox Photo, Inc, (1990) TC Memo 1990-349


Is the structure closely related to the use of the property or “in the nature of machinery” (A.C. Monk & Co. v, United States, No. 78-126-CIV-4, 1981 U.S. Dist. LEXIS 17764)
Tests to Determine if an Asset is Tangible Personal Property

Tangible Personal Property does not include assets that are structural components of a building.

(Reg. Sect. 148-1(e)(2)

• Does an item within the building relate to the operation or maintenance of the building? (Scott Paper Co. v. Commissioner, 74 T.C. 137 (1980)

• Can the property be easily moved? (Whiteco Industries, Inc. v. Commissioner, 65 T.C. 664, 672-673 (1975)

• Does it play a structural role? (L.L. Bean, Inc. v. Commissioner, T.C. Memo. 1997-175, aff’ d. F.3d53 (1st. Cir. 1998)

• What is the justification for an item being installed? (Rev Rul 79-83)

• Does the asset serve a dual function? (Rev Rul 66-299)
## Typical Example

<table>
<thead>
<tr>
<th>Property</th>
<th>Class</th>
<th>Method</th>
<th>Before Segregation</th>
<th>After Segregation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>39 yrs.</td>
<td>Straight-line</td>
<td>$2,000,000</td>
<td>$1,400,000</td>
</tr>
<tr>
<td></td>
<td>15 yrs.</td>
<td>150% DB</td>
<td>-</td>
<td>350,000</td>
</tr>
<tr>
<td></td>
<td>5/7 yrs.</td>
<td>200% DB</td>
<td>-</td>
<td>250,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>$2,000,000</strong></td>
<td><strong>$2,000,000</strong></td>
</tr>
</tbody>
</table>

- **Depreciation accelerated - years 1-7**: $366,000
- **Additional cash flow generated - years 1-7**: $125,000
- **Present value of cash flow at 6% - project life**: $94,500
## Impact Over Building Life

### Discounted Cash Flow

<table>
<thead>
<tr>
<th>Year</th>
<th>Depr Before CSS</th>
<th>Depr After CSS</th>
<th>Change in Depr</th>
<th>Tax Deferrals</th>
<th>Discount Factor</th>
<th>NPV of Tax savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>27,778</td>
<td>97,659</td>
<td>69,881</td>
<td>27,952</td>
<td>1.0000</td>
<td>27,952</td>
</tr>
<tr>
<td>2017</td>
<td>51,282</td>
<td>160,372</td>
<td>109,090</td>
<td>43,636</td>
<td>0.9434</td>
<td>41,166</td>
</tr>
<tr>
<td>2018</td>
<td>51,282</td>
<td>120,554</td>
<td>69,272</td>
<td>27,709</td>
<td>0.8900</td>
<td>24,661</td>
</tr>
<tr>
<td>2019</td>
<td>51,282</td>
<td>114,067</td>
<td>62,785</td>
<td>25,114</td>
<td>0.8396</td>
<td>21,086</td>
</tr>
<tr>
<td>2020</td>
<td>51,282</td>
<td>87,449</td>
<td>36,167</td>
<td>14,467</td>
<td>0.7921</td>
<td>11,459</td>
</tr>
<tr>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
</tr>
<tr>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
<td>~</td>
</tr>
<tr>
<td>2045</td>
<td>51,282</td>
<td>35,897</td>
<td>(15,385)</td>
<td>(5,992)</td>
<td>0.1379</td>
<td>(826)</td>
</tr>
<tr>
<td>2046</td>
<td>51,282</td>
<td>35,897</td>
<td>(15,385)</td>
<td>(5,992)</td>
<td>0.1301</td>
<td>(780)</td>
</tr>
<tr>
<td>2047</td>
<td>51,282</td>
<td>35,897</td>
<td>(15,385)</td>
<td>(5,992)</td>
<td>0.1227</td>
<td>(735)</td>
</tr>
<tr>
<td>2048</td>
<td>51,282</td>
<td>35,897</td>
<td>(15,385)</td>
<td>(5,992)</td>
<td>0.1158</td>
<td>(694)</td>
</tr>
<tr>
<td>2049</td>
<td>51,282</td>
<td>35,897</td>
<td>(15,385)</td>
<td>(5,992)</td>
<td>0.1092</td>
<td>(654)</td>
</tr>
<tr>
<td></td>
<td>2,000,000</td>
<td>2,000,000</td>
<td></td>
<td></td>
<td></td>
<td>94,500</td>
</tr>
</tbody>
</table>
Tests to Determine if an Asset is Tangible Personal Property

Tangible Personal Property does not include assets that are structural components of a building.

(Reg. Sect. 148-1(e)(2)

- Does an item within the building relate to the operation or maintenance of the building? (Scott Paper Co. v. Commissioner, 74 T.C. 137 (1980)

- Can the property be easily moved? (Whiteco Industries, Inc. v. Commissioner, 65 T.C. 664, 672-673 (1975)

- Does it play a structural role? (L.L. Bean, Inc. v. Commissioner, T.C. Memo. 1997-175, affd. F.3d53 (1st. Cir. 1998)

- What is the justification for an item being installed? (Rev Rule 79-83)

- Does the asset serve a dual function? (Rev Rule 66-299)
Examples of Eligible Costs

Personal Property

- Solar/Wind/Geothermal/CHP
- Demountable Walls/Floors
- Decorative lighting
- Decorative millwork
- Voice/Data Cable Mgt.
- Wall/Floor coverings
- Portions of electrical
- Portions of plumbing
- Extra Structural support
- Communication systems

- Cabinetry & countertops
- Signage
- Process related HVAC
- Emergency lighting
- Security Systems
- Compressed air systems
- Shelving & racks
- Equipment pads
Examples of Eligible Costs
Land Improvements

- Site preparation
- Driveways & Roads
- Sidewalks
- Flag poles
- Underground utilities
- Storm sewers
- Retaining walls
- Porticos

- Detention basins
- Fencing
- Landscaping
- Docks & wharves
- Exterior lighting
- Utilities
- Storm sewers
- Pavilions
EPAct Sec. 179D Commercial Buildings Tax Deduction (CBTD)

- Energy Savings *and* Income Tax Savings
- Whole Building Method Up to $1.80 per SF deduct.
- Partial Building Systems – Up to $.60 per SF ded.
  - 1/3, 1/3, 1/3 For Lights, HVAC, Building Envelope
  - Certified to reduce use by 50%, Partial deduct if 10-20%
- Interim Lighting Rule/HVAC Rule
  - Sliding Scale $.30 to $.60 if reduce by 20-40%
  - See IRS Notice 2006-52, 2008-40, 2012-40 for Applicable Percentages (25%, 20%, 15%, 10%)
- Portions of Building – Warehouse separate rule
Energy Policy Act of 2005
Sec. 179D CBTD

- New/Existing Buildings of All Types
  - Interior lighting, HVAC/Hot Water, Envelope (1/3, 1/3, 1/3)
  - Apartments Must be 4 Stories and above
- Provides up to $1.80/SF income tax deduction (Sec. 179(d)) for owners reducing energy use by 50%
- Engineers/Contractors/Architects also qualify for government clients unable to use tax deduction.
Advanced Energy - 5 Yr Asset

- Congress: Geothermal, Wind, Solar, Biomass, CHP/CoGen, Etc. is 5 yr Personal Property = Faster Write-off

- Cost v. Benefit Analysis

- Some Available Grants to Finance
  - 25-50% Thru DOE, ARRA, States

- Energy Investment Tax Credit
  - 30% for Solar, Wind, 10% Geothermal
Government Incentives
Solar Rooftop PV Case Study

- After-Tax Payback can by As Short as 2.5 years!
- Rooftop 96Kw PV All-In Cost : $380,000
- 30% Solar Energy Investment Tax Credit
  - 30% x $380,000 = $114,000 Tax CREDIT
  - Reduces 1st Dollar cost to $266,000
- Plus 50% Bonus Depreciation for 2014
  - BonusTax Benefit Yr. 1 : $56,000 at 35%
- Plus 5 Yr MACRS Depreciation 200% DDB
- Plus SREC Income and Energy Savings
  - Energy Savings $8,000-$9,000 per Year
  - SREC Income $20,000-$25,000 per Year
Claiming the Energy Tax Credit

- IRS Form 3468 to Claim the Credit (ends 2016 unless extended or made permanent)
- Use to offset both regular tax and AMT
- Can Carry-back 1 year if exceeds T.I.
- $2M Geothermal, Combined Heat/Pwr
  - New Construction or Retrofit
  - Get 10% ($200,000) EIC – No Limit
  - Get 30% Tax Credit for Solar, Wind, 10% CHP, Biomass through 2020
Dan Mitchell is the City Infrastructure Director for Siemens Building Technologies covering the State of Ohio. He has provided innovative solutions to many customers over the past 15 years. Dan has developed turnkey solutions for Cities, Commercial properties, Industrial customers, and within the Higher Education market to make needed infrastructure improvements. Siemens can offer several different financial options to implement a comprehensive energy project. As a result, owners and facility managers can make needed improvements and reduce their operating costs while staying budget neutral.
Performance-Based Solutions
Your Challenges: Resources, Equipment, CyberSecurity

- **Resource Constraints**
  - Budget Constraints
  - Operating Budget Reductions
  - Staff Reductions

- **Aging Infrastructure**
  - Aging Equipment
  - Equipment Failures
  - Higher Energy and Repair Costs

- **Sustainability Goals / Mandates**
  - Unfunded Mandates to Reduce Energy & CO₂
  - LEED and Energy Star Certifications
  - Green Expectations
Guaranteed Performance-Based Solutions – Address Your Challenges

- Make facility & infrastructure improvements
- Reduce energy use and associated expenses
- Your energy savings finance your improvements
- Siemens guarantees savings
Understanding the Performance Contract Cash Flow

Existing Buildings

- Immediate Savings before Payments begin
- Demand Side Program Costs
- Implement Demand-Side Solutions & Services
- Implement Supply-Side Solutions & Services

Value Proposition

- Operational costs naturally escalate
- Demand-side solutions lower costs
- Supply-side solutions further lower costs
- The costs are always a fraction of the value added
- Some Savings are realized before payments are made

Years of Operation

Building Operational Costs

© Siemens Industry, Inc. 2017. All rights reserved.

Page 83
Understanding the Performance Contract Cash Flow

Existing Buildings

Value Proposition

- Without ongoing services, costs rise
- Savings persist through ongoing service
- Through Proven-Outcomes Services savings increase
- The costs are always a fraction of the value added

ADDED VALUE
Integrated Energy & Sustainability Approach

Years of Operation

One-time Project Fees
On-going Service Fees

SIEMENS

© Siemens Industry, Inc. 2017. All rights reserved.

Page 84
Our Proficiencies – Customer Value Cube

Meeting the Needs of Your City

Innovative Offerings Already Developed
- Compressed Natural Gas
- Energy Monitoring & Analysis

Current Innovative Offerings
- WWTP
- Water Meters
- Solar PPA
- Energy Supply Optimization
- Renewable Energy
- Green Buildings/LEED
- Traffic Signals/Street Lighting

Traditional Energy Management Offerings
- Energy Management Systems
- HVAC Improvements
- Lighting Retrofits

- Compressed Natural Gas
- Energy Monitoring & Analysis

Uncharted (Indispensable)
- Software Analytics
- Integrator of Manufacturers & Protocols
- Smart Grid/Micro grid
- Smart Parking Solutions
- Traffic Flow Improvement

Expanding (differentiated)

Core (commoditized)
Our Process – Road Map to Success

Building Performance and Sustainability Approach

Our experts structure a comprehensive plan tailored to meet your strategic and technical business goals

- Strategy & Planning
  - Understands your priorities
  - Develops strategic plans that meet your goals
  - Evaluates opportunities for improvement

- Evaluation & Assessment
  - Determines improvements that maximize impact
  - Finalizes the costs and savings
  - Assists with financing options

- Program Implementation
  - Implements turnkey design and delivery of improvement actions
  - Delivers on time, within budget, and with the quality you need

- Ongoing Services
  - Services to ensure savings persist over time

- Measurement & Reporting
  - Measures and tracks progress to provide ongoing transparency
Advantage™ Navigator
Tool to help you Plan, Evaluate, Implement, Service, and Measure

1. Connect:
Allow data to be extracted from systems, equipment and sensing devices

2. Collect:
Centralize data from multiple systems and sources

3. Analyze:
People and Technology use data to generate actionable information

4. Optimize:
People and Technology enhance systems and operations based on actionable information

4. Communicate:
"Report" transparent results to various users

© Siemens Industry, Inc. 2017. All rights reserved.
Questions?
What Steps Are You Taking?

Dan Mitchell
Infrastructure Business Development
Ohio

Mobile: (440)485-0207
E-mail: dan.mitchell@siemens.com