State of Arkansas

Strategies for Energy Program Reporting and Management

THE CADMUS GROUP, INC.

Economic Development Commission
ENERGY OFFICE
### Key Concepts – Part 1

**Energy Efficiency Reporting**

<table>
<thead>
<tr>
<th>Topics</th>
<th>Learning Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part 1</strong></td>
<td></td>
</tr>
<tr>
<td>• Reporting requirements</td>
<td>• Understand the State of Arkansas reporting requirements for energy efficiency</td>
</tr>
<tr>
<td>• Focus on <strong>data</strong></td>
<td>• Create custom reports in ENERGY STAR’s Portfolio Manager for annual reporting</td>
</tr>
<tr>
<td>– Creating reports and views with Portfolio Manager</td>
<td>• Be able to import data from Portfolio Manager into the reporting template</td>
</tr>
<tr>
<td>– Reporting to meet Act 1494 Data Call</td>
<td></td>
</tr>
<tr>
<td>Part 2</td>
<td>Topics</td>
</tr>
<tr>
<td>--------</td>
<td>--------</td>
</tr>
</tbody>
</table>
| Focus on **actions** | • The role of the Energy Team  
• Categories of action  
• Strategy examples to incorporate into the Strategic Energy Plan  
• Identifying Strategic Energy Plan updates | • Understand roles, capabilities, and potential contributions  
• List the four categories of ongoing actions  
• Identify areas of improvement for Strategic Energy Plans  
• Understand how to report updates to the Strategic Energy Plan in the reporting template |
Overview
State Requirements

- Advance Arkansas energy efficiency programs, Lead by Example
- Protect financial & environmental resources
- Comply with Act 1494 of 2009
  - Reduce water, electricity, and natural gas use
    - 20% by 2014
    - 30% by 2017
Overview
State Reporting Requirements

Two types of information required:

- Report **data** (energy use / performance)
- Report **actions** taken towards energy efficiency (StEP narrative modifications)
Data Overview
Portfolio Manager

The Two Major Inputs:

- **Space Attributes**
  - Gross floor area, number of workers on main shift, number of PC’s, etc.

- **Actual Energy Use**
  - Taken from energy utility bills
### Space Attributes

**Add Office Space: General Office Space**

Please provide values for each required attribute below. Values for optional attributes can also be provided, but they will not be used to generate an Energy Performance Rating. If the value you are providing is a **temporary value**, select the "For Temporary Use?" checkbox. Once the actual value is known, deselect this checkbox and provide the actual value. Facilities with temporary values may still apply for the ENERGY STAR.

If you wish for Portfolio Manager to provide **default values**, select the "Use Default Checkbox" for that attribute. Facilities that use default values cannot apply for the ENERGY STAR.

**REQUIRED**

**Space Name:** General Office Space

<table>
<thead>
<tr>
<th>Space Attribute</th>
<th>Space Attribute Value (Temporary values should only be used if an Actual value is not currently known)</th>
<th>Use Default Value</th>
<th>Units</th>
<th>Effective Date (when this Attribute Value was first true) (MM/DD/YYYY)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Gross Floor Area</em></td>
<td></td>
<td>N/A</td>
<td>Sq. Ft.</td>
<td>01/01/1957</td>
</tr>
<tr>
<td><em>Weekly operating hours</em></td>
<td></td>
<td></td>
<td>Hours</td>
<td>01/01/1957</td>
</tr>
<tr>
<td><em>Workers on Main Shift</em></td>
<td></td>
<td></td>
<td>No Units</td>
<td>01/01/1957</td>
</tr>
<tr>
<td><em>Number of PCs</em></td>
<td></td>
<td></td>
<td>No Units</td>
<td>01/01/1957</td>
</tr>
<tr>
<td><em>Percent air-conditioned</em></td>
<td></td>
<td></td>
<td>No Units</td>
<td>01/01/1957</td>
</tr>
<tr>
<td><em>Percent heated</em></td>
<td></td>
<td></td>
<td>No Units</td>
<td>01/01/1957</td>
</tr>
</tbody>
</table>
## Actual Energy Use

Meter Data

<table>
<thead>
<tr>
<th>Add Energy Use:</th>
<th>Start Date (MM/DD/YYYY)</th>
<th>End Date (MM/DD/YYYY)</th>
<th>Energy Use (kWh (thousand Watt-hours))</th>
<th>Cost - US Dollars (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>01/01/2010</td>
<td>31/31/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>02/01/2010</td>
<td>02/29/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>03/01/2010</td>
<td>33/31/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>04/01/2010</td>
<td>04/30/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>05/01/2010</td>
<td>05/31/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>06/01/2010</td>
<td>06/30/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>07/01/2010</td>
<td>07/31/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>08/01/2010</td>
<td>08/31/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>09/01/2010</td>
<td>09/30/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>10/01/2010</td>
<td>10/31/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>11/01/2010</td>
<td>11/30/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>12/01/2010</td>
<td>12/31/2010</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>01/01/2011</td>
<td>01/31/2011</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>02/01/2011</td>
<td>02/29/2011</td>
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<td>04/30/2011</td>
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<td>$</td>
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</table>
Part 1: Energy Efficiency Data Reporting
Energy Efficiency Reporting

What is the measure of success?

- What needs to be reported?
- What metric will be used?
- Where do you get the data?
- What reporting format is required?
- When are reports due?
Energy Efficiency Reporting

What needs to be reported?

- Energy consumption data
  - For 07/01/2007 through 06/30/2011
  - At the individual building level, where possible

- Data will be reported using the Act 1494 and StEP Reporting Template
  - Baseline: 07/01/2007-06/30/2008
  - 2009: 07/01/2008-06/30/2009
  - 2010: 07/01/2009-06/30/2010
  - 2011: 07/02/2010-06/30/2011

- To be reported each year through 2017 following these date ranges

Source: U.S. EPA ENERGY STAR
Energy Efficiency Reporting

What metrics will be used?

Two Key Metrics

1. **Total Annual Energy** (kBtu)

2. **Annual EUI** (kBtu/square foot)

Source: U.S. EPA ENERGY STAR
Energy Efficiency Reporting
What metrics will be used?

What is a kBtu?
What is a kBtu?

One thousand Btu’s

FYI:
MMBtu = one million Btu’s, or 1,000 kBtu
What is a kBtu?

Electricity (kWh) \[0.293 \text{ kWh} = 1 \text{ kBtu}\]
Natural gas (therm) \[0.01 \text{ therm} = 1 \text{ kBtu}\]
Fuel oil (gallons) \[0.00668 \text{ gals} = 1 \text{ kBtu}\]
LPG (gallons) \[0.01047 \text{ gals} = 1 \text{ kBtu}\]

Portfolio Manager automatically converts energy units to kBtu.

Source: U.S. EPA ENERGY STAR
Energy Efficiency Reporting

What metrics will be used?

What is a kBtu?

Electricity (kWh)  \[0.293 \text{ kWh} = 1 \text{ kBtu}\]

A 60-Watt incandescent light bulb turned on for almost 5 hours uses 1 kBtu of energy.

Source: U.S. EPA ENERGY STAR
Energy Efficiency Reporting

What metrics will be used?

What is a kBtu?

Electricity (kWh) ➔ 0.293 kWh = 1 kBtu

20 fluorescent light fixtures in a typical conference room turned on for 12 minutes uses 1 kBtu of energy.

(based on T-8s and electronic ballasts in a 950 sqft room)

Source: U.S. EPA ENERGY STAR
What is a kBtu?

Electricity (kWh)  0.293 kWh = 1 kBtu

A desk top computer turned on for about 2 hours uses 1 kBtu of energy.

(based on 150 kW power demand)
What is a kBtu?

The total amount of energy used in a facility for one year is measured in kBtu.
What is EUI?

**EUI – Energy Use Intensity**

1. The total amount of energy used in a facility for one year is measured in kBtu.
2. Divide that by total gross floor area to get the annual kBtu/sf.
Energy Efficiency Reporting
What metrics will be used?

Exercise #1
An agency had three buildings in the base year (2008). Calculate the energy use intensity (EUI) for each building.

2008

<table>
<thead>
<tr>
<th>Building</th>
<th>Floor Area</th>
<th>Annual Energy Use (kBtu)</th>
<th>EUI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office A</td>
<td>50,000 SF</td>
<td>7,500,000</td>
<td></td>
</tr>
<tr>
<td>Office B</td>
<td>75,000 SF</td>
<td>10,800,000</td>
<td></td>
</tr>
<tr>
<td>Office C</td>
<td>100,000 SF</td>
<td>13,300,000</td>
<td></td>
</tr>
</tbody>
</table>
Energy Efficiency Reporting

*What metrics will be used?*

**Exercise #1**
An agency had three buildings in the base year (2008). Calculate the energy use intensity (EUI) for each building.

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<th>EUI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office A</td>
<td>50,000 SF</td>
<td>7,500,000</td>
<td>150 kBtu/SF</td>
</tr>
<tr>
<td>Office B</td>
<td>75,000 SF</td>
<td>10,800,000</td>
<td>144 kBtu/SF</td>
</tr>
<tr>
<td>Office C</td>
<td>100,000 SF</td>
<td>13,300,000</td>
<td>133 kBtu/SF</td>
</tr>
</tbody>
</table>
Energy Efficiency Reporting
What metrics will be used?

Exercise #2
In 2009 the agency completed a wing addition to Office Building A. Calculate the energy use intensity (EUI) for each building.

2009

<table>
<thead>
<tr>
<th>Building</th>
<th>Floor Area</th>
<th>Annual Energy Use (kBtu)</th>
<th>EUI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office A</td>
<td>70,000 SF</td>
<td>10,100,000</td>
<td></td>
</tr>
<tr>
<td>Office B</td>
<td>75,000 SF</td>
<td>10,800,000</td>
<td></td>
</tr>
<tr>
<td>Office C</td>
<td>100,000 SF</td>
<td>13,300,000</td>
<td></td>
</tr>
</tbody>
</table>

Source: U.S. EPA ENERGY STAR
Energy Efficiency Reporting

What metrics will be used?

Exercise #2

In 2009 the agency completed a wing addition to Office Building A. Calculate the energy use intensity (EUI) for each building.

2009

<table>
<thead>
<tr>
<th>Building</th>
<th>Floor Area</th>
<th>Annual Energy Use (kBtu)</th>
<th>EUI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office A</td>
<td>70,000 SF</td>
<td>10,100,000</td>
<td>144</td>
</tr>
<tr>
<td>Office B</td>
<td>75,000 SF</td>
<td>10,800,000</td>
<td>144</td>
</tr>
<tr>
<td>Office C</td>
<td>100,000 SF</td>
<td>13,300,000</td>
<td>133</td>
</tr>
</tbody>
</table>

Source: U.S. EPA ENERGY STAR
Energy Efficiency Reporting

What metrics will be used?

Exercise #3
Report the % change for the Agency roll up in 2009 from the base year in total energy use and EUI.
## Energy Efficiency Reporting

*What metrics will be used?*

### Exercise #3

<table>
<thead>
<tr>
<th>Building</th>
<th>Floor Area (SF)</th>
<th>Annual Energy Use (kBtu)</th>
<th>EUI (kBtu/SF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office A</td>
<td>50,000</td>
<td>7,500,000</td>
<td>150</td>
</tr>
<tr>
<td>Office B</td>
<td>75,000</td>
<td>10,800,000</td>
<td>144</td>
</tr>
<tr>
<td>Office C</td>
<td>100,000</td>
<td>13,300,000</td>
<td>133</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td><strong>225,000</strong></td>
<td><strong>31,600,000</strong></td>
<td><strong>140.4</strong></td>
</tr>
</tbody>
</table>

### Agency Roll Up

<table>
<thead>
<tr>
<th>Building</th>
<th>Floor Area (SF)</th>
<th>Annual Energy Use (kBtu)</th>
<th>EUI (kBtu/SF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office A</td>
<td>70,000</td>
<td>10,100,000</td>
<td>144</td>
</tr>
<tr>
<td>Office B</td>
<td>75,000</td>
<td>10,800,000</td>
<td>144</td>
</tr>
<tr>
<td>Office C</td>
<td>100,000</td>
<td>13,300,000</td>
<td>133</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td><strong>245,000</strong></td>
<td><strong>34,200,000</strong></td>
<td><strong>139.6</strong></td>
</tr>
</tbody>
</table>

Source: U.S. EPA ENERGY STAR
Energy Efficiency Reporting

*What metrics will be used?*

**Exercise #3**

Report the % change in 2009 from the base year in total energy use and EUI.

% Change in annual energy use (kBtu):

\[34,200,000 - 31,600,000 = 2,600,000 \text{ or } +8.2\%\]

% Change in EUI (kBtu/SF):

\[139.6 - 140.4 = -0.8 \text{ or } -0.6\%\]
Energy Efficiency Data Reporting

*Where do you get the data?*

**Your Portfolio Manager Account**

**Required** Reporting Information:
- Building ID
- Facility Name
- Facility Type
- Rating
- Baseline Energy Period Ending Date
- Period Ending Date
- Total Floor Space (SF)

Source: U.S. EPA ENERGY STAR
Energy Efficiency Reporting

Where do you get the data?

Your Portfolio Manager Account

**Required** Reporting Information (Continued):

- Annual Energy cost ($)
- Baseline Site Energy Intensity (kBtu/SF)
- Current Site Energy Intensity (kBtu/SF)
- Baseline Total Site Energy Use (kBtu)
- Current Total Site Energy Use (kBtu)
- Change from Baseline: Energy Use (kBtu)
- Weather Normalized Site EUI (kBtu/SF)

Source: U.S. EPA ENERGY STAR
Download the Act 1494/StEP Reporting Template

Before beginning the process of reporting, you will need a copy of the Act 1494 Reporting Template.

- Please visit [www.dropbox.com](http://www.dropbox.com)
- Click **Log In** in the upper right corner
  - Username: [arkansas@cadmusgroup.com](mailto:arkansas@cadmusgroup.com)
  - Password: act1494
- Click on the **Unit 3** folder
- Download these key documents for your reference
  - Act 1494 Reporting Template
  - Strategies for Energy Program Reporting and Management PowerPoint slides (this presentation)
  - Training Workbook (which includes the ordering of information you need from your Portfolio Manager account)
Creating Reports in Portfolio Manager
Process for Creating Views in Portfolio Manager

- Views are highly customizable
- Add up to seven columns per view
- No limit to the number of views created

1. Click “Create View”
2. Select number of facilities to include
3. Choose data columns
Generate Reports and Graphs

Objective: Set up a report in Portfolio Manager using templates

Process: For a pre-defined report, *three simple steps*

1. Start on the My Portfolio page
2. Click on “Generate Reports and Graphs”, upper right
3. Choose a predefined report template
4. Define search criteria and click Refresh
Portfolio Manager Predefined Reports

- Eight pre-defined report templates
- Pre-defined report “themes” include such topics as environmental, financial, or building rating performance – and more
- Filter by reporting period, facilities and groups, location, and facility type
- Tabular and graphical display outputs
- Export data in a variety of formats
  - MS Excel, XML, CSV, or PDF
Generate a Custom Report in Portfolio Manager

Assessing Percent Energy Reduction to Meet Act 1494 Requirements

Objective: Set up a custom report in Portfolio Manager using the required data headings.

Summary of the Process:

1. Start on the My Portfolio page
2. Click on “Generate Reports and Graphs”, upper right
3. Choose the report template, “Custom Reports Home” from the drop-down
4. Choose Create a New Custom Report Template
5. Define Metrics for Custom Report
6. Generate Report

Source: U.S. EPA ENERGY STAR
Generate a Custom Report in Portfolio Manager

Assessing Percent Energy Reduction to Meet Act 1494 Requirements

You are about to create a Custom Report to meet Act 1494 requirements. When you have created and named this Custom Report, this template will always appear in your list of templates available to you through Portfolio Manager. You will only need to create the template once, and you can use it as long as you need to report your annual percent energy reduction to meet Act 1494 requirements.

Source: U.S. EPA ENERGY STAR
Live Demonstration in Portfolio Manager

www.energystar.gov/benchmark
Generate a Custom Report

From the **My Portfolio** page, click on “Generate Reports and Graphs” located on the right-hand side of the page.
“Generate a Report” starting page

Home > My Portfolio > Generate a Report

Portfolio Manager Reports

Generate reports and graphs using data from your Portfolio Manager account

Select a REPORT TEMPLATE to get started

Quick Reference Guide
From the “Generate a Report” page, click on the drop-down menu to select a Report Template.
From the “Custom Reports” page, choose an already-generated Custom Report OR click “Create a new Custom Report Template”
Create a Custom Report Template

Use custom templates to create your own reports in Portfolio Manager. Use the directional buttons below or simply "click and drag" to select the type of data you want to include.

Template Name:

Created By: N/A Last Updated By: N/A

- Select from Available Metrics
  - Building Information
  - Comparisons to Energy and Water Baselines
  - Data Center Metrics
  - ENERGY STAR Application Information
  - Financial Indicators
  - GHG Emissions
  - Period Ending Dates
  - Rating
  - Renewable Energy
  - Site Energy
  - Source Energy
  - Space Attributes (Time Weighted)

- My Custom Template
  - Building ID (Required)
  - Facility Name (Required)
  - Period Ending Date (Required)
  - Rating (Required)
Create a Custom Report Template

Use custom templates to create your own reports in Portfolio Manager. Use the directional buttons below or simply click and drag to select the type of data you want to include in your report.

Template Name:

Custom Template Report 1

Created By: N/A Last Updated By: N/A
View list of available metrics
Create a Custom Report Template

Use custom templates to create your own reports in Portfolio Manager. Use the directional buttons below or simply "click and drag" to select the type of data you want to include in this report and the order you want them displayed.

Template Name: Act 1494 Report

Created By: N/A Last Updated By: N/A

Select from Available Metrics
- Building Information
- Comparisons to Energy and Water Baselines
- Data Center Metrics
- ENERGY STAR Application Information
- Financial Indicators
- GHG Emissions
- Period Ending Dates
- Rating
- Renewable Energy
- Site Energy
- Source Energy
- Space Attributes (Time Weighted)
- Water
- Water Utilities and Wastewater Treatment Facilities

- Last Modified Date
- Metering Configuration
- Notes
- Power Plant
- Service and Product Provider
- Shared By
- State
- Total Floor Space (Sq. Ft.)
- Unique Building Identifier
- Zip Code
- Comparisons to Energy and Water Baselines
- Data Center Metrics
- ENERGY STAR Application Information
- Financial Indicators
- GHG Emissions
- Period Ending Dates
- Baseline Energy Period Ending Date
- Baseline Water Period Ending Date
- Current Energy Period Ending Date
- Current Water Period Ending Date
- Rating
- Renewable Energy
- Site Energy
Once your chosen metrics are in the right-hand column, you can drag these to arrange them in the order shown above. The correct order is important, because then it is a simple process to copy and paste the data into the Act 1494 Reporting Template.
Create a Custom Report Template

Use custom templates to create your own reports in Portfolio Manager. Use the directional buttons below or simply “click and drag” to select the type of data you want to include in this report and the order you want them displayed.

Template Name:  

Created By: N/A Last Updated By: N/A

View list of available metrics

SAVE
Custom Reports

Work with custom reports you've already built, or build new templates to generate reports through Portfolio Manager.

Create a new Custom Report Template

<table>
<thead>
<tr>
<th>Template Name</th>
<th>Last Updated</th>
<th>Created By</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Act 1494 Report</td>
<td>03/03/2011</td>
<td>Philip Zapfel</td>
<td>Select an Action...</td>
</tr>
</tbody>
</table>
Custom Reports

Work with custom reports you've already built, or build new templates to generate reports through Portfolio Manager.

Create a new Custom Report Template

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- Generate a Report
- Share Report Template
- Request Data From Others
- View Properties
- Delete
- Edit
Act 1494 Report Properties

Use custom templates to create your own reports through Portfolio Manager.

<table>
<thead>
<tr>
<th>Metrics Included in Report Template</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building ID (Required)</td>
</tr>
<tr>
<td>Facility Name (Required)</td>
</tr>
<tr>
<td>Period Ending Date (Required)</td>
</tr>
<tr>
<td>Rating (Required)</td>
</tr>
<tr>
<td>Baseline Energy Period Ending Date</td>
</tr>
<tr>
<td>Current Energy Period Ending Date</td>
</tr>
<tr>
<td>Total Floor Space (Sq. Ft.)</td>
</tr>
<tr>
<td>Annual Energy Cost (US Dollars ($))</td>
</tr>
<tr>
<td>Baseline Site Energy Intensity (kBtu/Sq. Ft.)</td>
</tr>
<tr>
<td>Current Site Energy Intensity (kBtu/Sq. Ft.)</td>
</tr>
<tr>
<td>Baseline Total Site Energy Use (kBtu)</td>
</tr>
<tr>
<td>Current Total Source Energy Use (kBtu)</td>
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<tr>
<td>Change from Baseline: Energy Use (kBtu)</td>
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Action

- Generate a Report
- Share Report Template
- Request Data From Others
- View Properties
- Delete
- Edit
Determine search parameters

View and organize tabular data

Export data
Select the reporting period

Select facilities and groups

Select the location

Choose a facility type or types
Generate a Custom Report: Reporting Period

From the Filters Menu on the left side of the page, under the first filter, Reporting Period, click on one of the 3 radio buttons to choose the desired report timeframe:

**Single Period**: Use the drop down menus to select a month and year as the 12-month period ending date for your report.

**Comparative**: Use the drop down menus to select two 12-month periods to compare (select a month and year for each period).

**Range**: Use the drop down menus to select a beginning period and an ending period (select a month and year for each period). Your report will show data for all months in between.

For Act 1494 reporting, we will be entering each year using the Single Period time frame.
Generate a Custom Report: Reporting Period

**Baseline year**, July, 2007-June, 2008: enter June 2008 as the date for the Single Period

**2009**, July, 2008-June, 2009: enter June 2009 as the date for the Single Period

**2010**, July, 2009-June, 2010: enter June 2010 as the date for the Single Period

Generate a Custom Report: Facilities and Groups

- Type in the name of a single facility, or click “Select Facilities or Groups” to bring up a new window with a scroll box containing your groups.

- Click “Save” when finished selecting facilities to include.

For Act 1494 reporting, you will likely select your entire Agency portfolio – but if you have test buildings or duplicate entries, please exclude these.
Generate a Custom Report: Location

- Click on the state or states you wish to include in the report, or click “Select specific Cities or Zip Codes” to bring up a new window with a scroll box containing locations.

- Click “Save” when finished selecting facilities to include.
Generate a Custom Report: Facility Type

- Choose the facility type or types you want to include in the report
- Use the control button to select more than one
- Most Agencies will include all facility types in Act 1494 reporting
- This function is especially helpful for Agencies that wish to compare building performance by type of facility
Generate a Custom Report: Data Table

- Select between tabular data and graph views
- Organize data by clicking on the arrow next to each header
- Sort data, choose columns, group by fields, or show in groups
## Generate a Custom Report: Data Table

![Image of report with data table]

**Act 1494 Report**  
July 2007/June 2008

- **View Data Table**  
- **View Graph**

**Export Data** by clicking the Excel download format.

<table>
<thead>
<tr>
<th>Building ID</th>
<th>Facility Name</th>
<th>Period Ending</th>
<th>Rating</th>
<th>Change from Baseline</th>
<th>Baseline Rating</th>
<th>Current Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>2400910</td>
<td>Sample Office...</td>
<td>02/28/2010</td>
<td>65</td>
<td>-217,660.0</td>
<td>N/A</td>
<td>63</td>
</tr>
<tr>
<td>2400910</td>
<td>Sample Office...</td>
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<td>-435,320.0</td>
<td>N/A</td>
<td>63</td>
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<td>Sample Office...</td>
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<tr>
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<td>-652,980.0</td>
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<td>N/A</td>
<td>63</td>
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<tr>
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<td>Sample Office...</td>
<td>06/30/2009</td>
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<td>0.0</td>
<td>N/A</td>
<td>63</td>
</tr>
<tr>
<td>2400910</td>
<td>Sample Office...</td>
<td>07/31/2009</td>
<td>62</td>
<td>0.0</td>
<td>N/A</td>
<td>63</td>
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<tr>
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<td>Sample Office...</td>
<td>08/31/2009</td>
<td>62</td>
<td>0.0</td>
<td>N/A</td>
<td>63</td>
</tr>
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<tr>
<td>2400910</td>
<td>Sample Office...</td>
<td>10/31/2009</td>
<td>62</td>
<td>0.0</td>
<td>N/A</td>
<td>63</td>
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<tr>
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<td>Sample Office...</td>
<td>11/30/2009</td>
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<td>0.0</td>
<td>N/A</td>
<td>63</td>
</tr>
<tr>
<td>2400910</td>
<td>Sample Office...</td>
<td>12/31/2009</td>
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<td>63</td>
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<tr>
<td>2435066</td>
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<td>01/31/2010</td>
<td>67</td>
<td>-712,980.0</td>
<td>N/A</td>
<td>61</td>
</tr>
</tbody>
</table>
Live Demonstration of Act 1494 Reporting Template
Energy Efficiency Reporting

What reporting format is required?

Act 1494 Compliance Reporting Template For Agencies

- Open the Act 1494 Reporting Template
- Scroll along the tabs along the bottom of the Template
- Complete “Cover” tab in the report template with Agency information

For detailed information regarding Act 1494 reporting requirements please contact: Ed Ellis?
Energy Efficiency Reporting
What reporting format is required?

Act 1494 Compliance Report Template For Agencies

| Building ID | Facility Name | Facility Type | Rating | Baseline Energy Period Ending Date | Period Ending Date | Total Floor Space (Sq. Ft.) | Annual Energy Cost (US Dollars ($) | Baseline Site Energy Intensity (kBtu/Sq. Ft.) | Current Site Energy Intensity (kBtu/Sq. Ft.) | Baseline Total Site Energy Use (kBtu) | Current Total Site Energy Use (kBtu) | Change from Baseline: Energy Use (kBtu) | Weather Normalized Site EUI (kBtu/Sq. Ft.) | Baseline Weather Normalized Total Site Energy Use (kBtu) | Current Weather Normalized Total Site Energy Use (kBtu) | Change from Baseline: Weather Normalized Site Energy Use (kBtu) |
|-------------|---------------|---------------|--------|-----------------------------------|-------------------|----------------------------|-------------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|             |               |               |        |                                   |                   |                           |                                     |                                    |                                  |                                  |                                  |                                    |                                  |                                    |                                  |                                    |

Go to your exported Excel report containing one year’s data.
For that year, copy the data for all columns and rows (do NOT copy the header rows).
Paste this in Cell A6 in the tab for the designated year.
Energy Efficiency Reporting
What reporting format is required?

Act 1494 Compliance Report Template For Agencies

- Generate and download an Act 1494 report in Portfolio Manager for each year.
- Copy the Excel report and paste into the tab for the corresponding year.
- Verify that all data is correct.
Quality Assurance

Verifying your data

- Confirm all buildings are accounted for in each year
- Verify energy consumption information

Potential Issues:
- Errors in the data: NA, #VALUE, 0, missing buildings

Potential Causes:
- Gaps or overlaps in energy data
- Incomplete energy data
- Incorrect baseline periods
- Campus not set up with meter house

Still encountering account issues?
- Please contact arkansas@cadmusgroup.com with your questions. Subject “Account Assistance” with your agency name.
Account Managers

Verifying your data

- Please contact your Account Manager for assistance with benchmarking and correcting errors found in energy consumption information

- Who is my Account Manager?
  - Please refer to the spreadsheet on following slides
  - Contact NAME@cadmusgroup.com
  - Or, if not listed, contact arkansas@cadmusgroup.com with the subject line “Account Assistance ‘Agency Name’”
# Account Managers

## Verifying your data

<table>
<thead>
<tr>
<th>Name</th>
<th>Email ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher Faulkner</td>
<td>AR0516_AETN</td>
</tr>
<tr>
<td>Christopher Faulkner</td>
<td>AR0590_CAREER_EDUCATION_DEPT_OF</td>
</tr>
<tr>
<td>Christopher Faulkner</td>
<td>AR0900_PARKS_AND_TOURISM_DEPT_OF</td>
</tr>
<tr>
<td>Christopher Faulkner</td>
<td>AR0975_MIL_DEPT_AR_NAT_GUARD</td>
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<tr>
<td>Christopher Faulkner</td>
<td>Real Estate Commission, Arkansas</td>
</tr>
<tr>
<td>Christopher Faulkner</td>
<td>University of Arkansas at Pine Bluff</td>
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<td>Christopher Faulkner</td>
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<td>AR0687_Ozarka</td>
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<td>Christopher Faulkner</td>
<td>GEOLOGICALSURVEY</td>
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<td>Christopher Faulkner</td>
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</tr>
<tr>
<td>Christopher Faulkner</td>
<td>School for the Blind, Arkansas</td>
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<tr>
<td>Christopher Faulkner</td>
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</tr>
<tr>
<td>Christopher Faulkner</td>
<td>Southern Arkansas University</td>
</tr>
<tr>
<td>Daniel Paschall</td>
<td>AR Department of Aeronautics</td>
</tr>
<tr>
<td>Daniel Paschall</td>
<td>AR0236_Engineers_and_Professional_Surveyors</td>
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<td>Daniel Paschall</td>
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<tr>
<td>Daniel Paschall</td>
<td>Arkansas Northeastern College</td>
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<tr>
<td>Daniel Paschall</td>
<td>Game and Fish Commission</td>
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<tr>
<td>Daniel Paschall</td>
<td>Henderson State University</td>
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<tr>
<td>Daniel Paschall</td>
<td>Ouachita Technical College</td>
</tr>
<tr>
<td>Daniel Paschall</td>
<td>Southeast Arkansas College</td>
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</tbody>
</table>
# Account Managers

## Verifying your data

<table>
<thead>
<tr>
<th>Name</th>
<th>Department/Agency Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher.McKinley</td>
<td>AR0485_COMM_CORRECTION_DEPT_OF</td>
</tr>
<tr>
<td>Christopher.McKinley</td>
<td>AR0500_EDUCATION_DEPARTMENT_OF</td>
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<td>Christopher.McKinley</td>
<td>AR0645_HEALTH_DEPARTMENT_OF</td>
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<td>Christopher.McKinley</td>
<td>AR0710_HUMAN_SERVICES_DEPT_OF</td>
</tr>
<tr>
<td>Christopher.McKinley</td>
<td>AR0810_WORKFORCE_SERV_DEPT_OF</td>
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<td>Christopher.McKinley</td>
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<td>Christopher.Faulkner</td>
<td>AR0165_University of Central Arkansas</td>
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<td>Christopher.Faulkner</td>
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<tr>
<td>Christopher.Faulkner</td>
<td>National Park Community College</td>
</tr>
<tr>
<td>Christopher.Faulkner</td>
<td>North Arkansas College</td>
</tr>
<tr>
<td>Christopher.Faulkner</td>
<td>AR0960_STATE_POLICE</td>
</tr>
</tbody>
</table>
Energy Efficiency Reporting
What reporting format is required?

Act 1494 Compliance Report Template For Agencies

Once all data has been entered and checked, review progress with the following reporting tabs, populated based on the data you entered for each year’s performance (you should NOT enter data here):

- Rollup Report Energy
- Year Over Year Energy
- Rollup Report EUI
- Year Over Year EUI

DO provide Agency comments or explanatory notes in the Rollup Reports notes box.
Portfolio Manager

When are reports due?

Act 1494 Data Call reporting deadline is October 31 of each year.

For October 31, 2011, the reporting template must be completed for:

- Baseline
- 2009
- 2010
- 2011

Source: U.S. EPA ENERGY STAR
Optional: Using Portfolio Manager to Create Views at the Building Level
Creating Views at the Single Building Level

- A view is a set of columns that display various data in a table
- Portfolio Manager allows users to customize views by selecting up to seven columns
- Users can also select the number of facilities that can display on the My Portfolio page
- There are over 70 different data columns that can be selected

Source: U.S. EPA ENERGY STAR
Why Create Views at the Single Building Level?

- To know which of your buildings are high-performing
- To illustrate how your actions at the building level are leading to energy-efficient performance
- For your own purposes, to track and understand as a prelude to retrofits
- As prelude to the building audit or commissioning process
- If your building is sub-metered, to understand the performance of separately metered spaces

Source: U.S. EPA ENERGY STAR
Part 2: Strategic Energy Plan Strategies
### Key Concepts – Part 2
#### Strategic Energy Plan Strategies

<table>
<thead>
<tr>
<th>Topics</th>
<th>Learning Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part 2</td>
<td></td>
</tr>
<tr>
<td>• The Energy Team</td>
<td>• Understand roles, capabilities, and potential contributions</td>
</tr>
<tr>
<td>• Categories of action</td>
<td>• List the four categories of ongoing actions</td>
</tr>
<tr>
<td>• Strategy examples to incorporate into the Strategic Energy Plan</td>
<td>• Identify areas of improvement for Strategic Energy Plans</td>
</tr>
<tr>
<td>• Identifying Strategic Energy Plan updates</td>
<td>• Understand how to report updates to the Strategic Energy Plan in the reporting template</td>
</tr>
</tbody>
</table>
Strategic Energy Plan Strategies

The Energy Team

The Energy Team should be tailored to the needs of the agency.

- Is the agency located in one building or throughout several buildings?
- What level of building ownership does the agency have (owner/occupier or tenant)?
- What is the nature of the building system controls (manual occupant control or central system)?
Strategic Energy Plan Strategies

Key Questions and Objectives for the Energy Team

**Question:** Who’s got control of the switches?

**Objective:** Control switches so that systems run only when they have to.

**Question:** How can systems use less energy when they do have to run?

**Objective:** Reduce power requirements as much as possible for systems that are running.
# Strategic Energy Plan Strategies

## An Interdisciplinary Energy Team

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
</table>
| The building’s senior agency operations supervisor (e.g. deputy director, assistant chief, assistant department head, etc.) | 1. Policy guidance – comfort and IAQ parameters identified and conveyed to technical building operators  
2. Supervision and monitoring – agency or department staff (occupant) responsibilities  
3. Capital projects programming                     |
| Building operator/maintainer                     | 1. Technical expertise – knowledge of major building systems (HVAC, lighting, etc.)  
2. Systems controller – equipment runtime  
3. Maintenance scheduler – PM and repairs          |
# Strategic Energy Plan Strategies

## The Energy Team

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial manager</td>
<td>1. Energy cost management – access to utility bills, maintenance and repair costs</td>
</tr>
<tr>
<td></td>
<td>2. Programming and budgeting for energy costs – utilities, maintenance, minor repairs, capital improvements</td>
</tr>
<tr>
<td>Energy manager</td>
<td>1. Strategic Energy Plan – development and updates</td>
</tr>
<tr>
<td></td>
<td>2. Project management – oversee and monitor assessment, planning, and execution of energy efficiency strategies</td>
</tr>
</tbody>
</table>
## Strategic Energy Plan Strategies

### The Energy Team

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
</table>
| Administrative assistant        | 1. Portfolio Manager – manage monthly input/updates  
                                    2. Provide reports to Energy Team members as needed                                                                                                  |
| Occupant representative          | Staff level input – feedback on practicality of occupant control measures, desired settings, and effectiveness of participatory programs                  |
### Strategic Energy Plan Strategies

**The Energy Team**

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
</table>
| Special operations representatives (food service operations, security, risk management, safety and health, environmental health, etc.) | 1. Focused input – feedback on practicality of occupant control measures, desired settings, and effectiveness of participatory programs related to the area of specialty  
2. Compliance review – assessment and recommendations from compliance-oriented offices that may affect energy efficiency strategies. |
| Building Services representative               | 1. Awareness of after-hours operations  
2. Occupant control after business hours                                                       |
Strategic Energy Plan Strategies

The Energy Team

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology representative</td>
<td>1. Expertise on use and operation of data centers, computers, and patch management.</td>
</tr>
<tr>
<td>Public Affairs Office representative</td>
<td>1. Awareness of public interest and trends</td>
</tr>
<tr>
<td></td>
<td>2. Expertise on agency communications methods, public interface, and media resources.</td>
</tr>
</tbody>
</table>
Strategic Energy Plan Strategies

Categories of Action

The types of strategies that can be incorporated into strategic energy plans typically fall into four categories.

1. Assessment & monitoring
2. Communications, awareness, & training
3. Operations & maintenance
4. Retrofit projects
Strategic Energy Plan Strategies
Assessment & Monitoring

- Benchmarking
- Load profiling
- Data logging
- Evaluating major end use through monitoring at the systems level (using data loggers, submeters, or building automation systems)
Strategic Energy Plan Strategies
Assessment & Monitoring - Benchmarking

- Compare buildings of similar space types (kBtu/SF)
- Assess ENERGY STAR Score (if eligible)

Prioritize efforts by identifying under-performing buildings.
Strategic Energy Plan Strategies
Assessment & Monitoring – Load Profiling 7-Day
Strategic Energy Plan Strategies
Assessment & Monitoring – Load Profiling 24-Hour
Strategic Energy Plan Strategies
Assessment & Monitoring – Load Profiling Questions

1. Why is so much power needed at night?
2. Why is equipment starting so early in the morning?
3. Are there any loads that can be shifted off-peak?
4. Can anything be turned off sooner at the end of the day?
Strategic Energy Plan Strategies
Assessment & Monitoring – Data Loggers

Data Logger with Software
Strategic Energy Plan Strategies
Assessment & Monitoring – Data Loggers

What can be measured?

- Lighting – on/off, and intensity level
- Temperature – inside and outside
- Relative Humidity
- Current in an electric circuit
- Motor – on/off

Data loggers are easy to use and can be programmed from your computer. Data collected can be downloaded from the data logger to a program on your computer for analysis.
Strategic Energy Plan Strategies
Assessment & Monitoring – Major End Use

Energy Use Breakdown

- Lighting: 30.7%
- Space Heating: 22.0%
- Space Cooling: 19.0%
- Refrigeration: 12.9%
- Ventilation: 5.4%
- Water Heating: 3.8%
- Electronics: 2.7%
- Computers: 1.5%
- Other: 1.9%
# Strategic Energy Plan Strategies

## Assessment & Monitoring – Major End Use (Example)

<table>
<thead>
<tr>
<th>End Use</th>
<th>Estimated Annual Energy Use*</th>
<th>Estimated Annual Energy Cost*</th>
<th>Target Savings (20% Reduction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting (35.5%)</td>
<td>4,086,606 kBtu</td>
<td>$62,000</td>
<td>$12,400</td>
</tr>
<tr>
<td>Heating (21.7%)</td>
<td>2,496,567 kBtu</td>
<td>$38,000</td>
<td>$7,600</td>
</tr>
<tr>
<td>Cooling (16.8%)</td>
<td>1,935,000 kBtu</td>
<td>$30,000</td>
<td>$6,000</td>
</tr>
<tr>
<td>Ventilation (13%)</td>
<td>1,496,504 kBtu</td>
<td>$23,000</td>
<td>$4,600</td>
</tr>
<tr>
<td>Other (13%)</td>
<td>1,496,504 kBtu</td>
<td>$23,000</td>
<td>$4,600</td>
</tr>
</tbody>
</table>
Strategic Energy Plan Strategies

Communication, Awareness, and Training

- Communication plan
- Awareness campaigns
- Technical training
Strategic Energy Plan Strategies

Communications Plan

Get the word out!

- Does your agency have a goal or objective to achieve?
- What degree of involvement is needed by staff?
- Have you identified specific strategies for occupants?
- Do you have a way of notifying supervisors and staff of progress and accomplishments?
- Are there any special campaigns that the agency will be participating in?
- Are there people or organizations you want to recognize (awards, commendations, appreciation, etc.)?
Strategic Energy Plan Strategies

Awareness Campaigns

Reasons why energy is wasted
1. People aren’t aware of the need.
2. People just don’t know – what to do, how to do it, or when to do it.
3. Some required actions are inconvenient to do.
4. People sometimes forget to do them.
5. People are not aware of the significance of their actions.

An effective awareness campaign addresses these “community-based social marketing” issues.
Strategic Energy Plan Strategies

Awareness Campaigns

- Effective when much of the energy load is controlled by occupants (light switches, manual thermostats, doors and windows, blinds, equipment use, computers, etc.)
- Helps to remind people to take needed action at the time it needs to be taken.
- Educates people on what to do and how to do it.
- Helps to encourage them to take action by educating them on the significance of their actions – why it makes a difference.
- Incorporates processes that make it more convenient to do the less convenient actions.
Strategic Energy Plan Strategies

Technical Training

- Use of ENERGY STAR Portfolio Manager
- ENERGY STAR tools and resources
- Building performance benchmarking
- Energy auditing procedures, concepts, and techniques
- Energy monitoring and measurement techniques
- Building energy use systems – how they work
- Utility bill analysis
- Life Cycle Cost Analysis
- Energy Performance Contracting concepts
- Specialized staff training (based on building characteristics)
Strategic Energy Plan Strategies

*Operations & Maintenance*

These strategies affect the efficient operations of the following major systems:

- Lighting
- Heating
- Cooling
- Ventilation
- Other
Strategic Energy Plan Strategies

Operations & Maintenance - Lighting

- Provide lighting schedule checklist and assign responsibility for control.
- Evaluate potential for daylight harvesting.
- Evaluate potential for task lighting in lieu of overhead.
- Conduct a lighting survey to determine how lights are used.
- Install programmable time clocks for outside lighting.
- Evaluate potential for occupancy-sensor controlled lighting.
- Estimate the financial benefits of a lighting retrofit project.
Strategic Energy Plan Strategies

Operations & Maintenance - Heating

- Keep outside doors and windows closed.
- Keep window blinds closed during unoccupied periods (when daylighting is not needed).
- Set back temperature settings when unoccupied.
- Turn system off when unoccupied (when frost season is ended).
- Evaluate system settings (start/stop, temperature, etc.)
- Conduct steam trap survey and repair as needed.
Strategic Energy Plan Strategies

Operations & Maintenance - Cooling

- Keep outside doors and windows closed.
- Keep window blinds closed during unoccupied periods when daylighting is not needed.
- Set back temperature setting when unoccupied.
- Turn system off when unoccupied when risk of high humidity level is not a concern.
- Evaluate system settings (start and stop times, temperature settings, etc.)
- Assess conditions for simultaneous heating and cooling (is system designed for terminal reheat?).
- Conduct physical condition survey of all HVAC equipment.
Strategic Energy Plan Strategies

Operations & Maintenance - Ventilation

- Ensure return air registers are not blocked.
- Keep outside doors and windows closed.
- Check for exhaust fans that are left running when not needed.
- Repair weather stripping on doors and windows.
- Conduct a duct leak survey.
- Check condition of all outside air dampers for proper functionality.
- Evaluate building automation system controls to assess optimal settings.
Strategic Energy Plan Strategies

Operations & Maintenance – Other

- Turn off office appliances when not needed.
- Place computers on ENERGY STAR mode.
- Use power strips for all electronic equipment to avoid phantom loads.
- Procure ENERGY STAR qualified equipment.
- Reduce need for high energy consuming portable appliances (space heaters, mini-refrigerators, coffee-makers, etc.).
- Use patch-management software for after hours software and security updates.
- Assess vending machines for turning off overnight.
Strategic Energy Plan Strategies
Operations & Maintenance – Other (continued)

- Eliminate unnecessary lighting in vending machines.
- Conduct a water heater control survey to determine when water heaters are needed and how then can be better controlled.
- Establish a Building Operating Plan that documents optimum temperature settings, run times, setbacks for unoccupied periods (work days and non-work days).
Strategic Energy Plan Strategies

Retrofit Projects

- Popular projects
- Project bundling
- Energy Performance Contracting
Strategic Energy Plan Strategies

Retrofit Projects – Popular Projects

- Programmable time clocks for outside lighting
- Occupancy sensor-based control for lighting in common areas.
- Lighting retrofits for more efficient lighting – bulbs and ballasts
- Water-side economizer for boiler water (if applicable)
- Steam trap survey and replacements as needed
- Boiler retrofit for modular condensing boiler system
- Survey potential for heat pump system to replace aging cooling and heating systems
Motor survey to determine opportunities for high efficiency motor retrofits

Programmable thermostats (where applicable)

Air-side economizer (where applicable)

Variable frequency drives (where appropriate)

Direct Digital Control (DDC) system installation

Demand Control Ventilation (DCV) system (where appropriate)

Higher efficiency upgrades for aging equipment with improved control technology
Many projects are evaluated based on their simple pay back:
- 5 or less years: excellent
- 5 to 10 years: good
- 10 to 20: may be still be approved depending on statutes

Some measures payback quicker than others.

Bundling a long payback item (such as a boiler replacement – 12 year pay back) in the same project with a short payback item (lighting replacement – 6 year pay back) can result in a more comprehensive building improvement with an overall pay back under 10 years.
Strategic Energy Plan Strategies

Retrofit Projects – Energy Performance Contracting

- Offers a comprehensive turn-key option for building renewal
- Includes investment-grade audit, project management, design, procure, install, commissioning (if specified), and servicing (if specified)
- Includes measurement and verification plan – proof of savings agreed to prior to project start
- Allows involvement of financial institution for project funding based on amount of utility cost savings
Strategic Energy Plan Strategies

Annual Updates to Plan

Instructions

For each building, where physical/tangible changes have been made:

- List the new measures undertaken during the calendar year
- Include start dates and projected end dates of the project and a summary of the results.
- Following are some categories of changes to reference: building control systems, lighting retrofits, HVAC retrofit projects, materials choice, and so on.
- If no physical/tangible changes have been made to the building in question, simply leave the entry blank.
Live Demonstration of StEP Update
Strategic Energy Plan Strategies

Annual Updates to Plan

Agency Example

2009 StEP Report by Building

Instructions: For each building, where changes have been made, list the new measures undertaken during the calendar year. Include the start date and projected end date of the project and a summary of the results. Please list tangible building changes, upgrades, and retrofits.

<table>
<thead>
<tr>
<th>Building ID</th>
<th>Building Name</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1405841</td>
<td>AR099_999-04- Park One Office Center</td>
<td>LED Exit signs installed</td>
</tr>
<tr>
<td>1367953</td>
<td>AR099_999-05- AR ABC Office</td>
<td></td>
</tr>
<tr>
<td>1222925</td>
<td>AR099_999-06-AR Admin</td>
<td></td>
</tr>
<tr>
<td>1223034</td>
<td>AR099_999-07- AR Agency Building 3</td>
<td>Installation of occupancy sensors</td>
</tr>
<tr>
<td>1326308</td>
<td>Test Facility</td>
<td></td>
</tr>
<tr>
<td>1225030</td>
<td>AR099_999-04-AR Hospital 4</td>
<td>Operational settings adjustments</td>
</tr>
</tbody>
</table>
Strategic Energy Plan Strategies

Annual Updates to Plan

Agency Example

2010 StEP Report by Building

Instructions: For each building, where changes have been made, list the new measures undertaken during the calendar year. Include the start date and projected end date of the project and a summary of the results. Please list tangible building changes, upgrades, and retrofits.

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<td>AR099_999:04- Park One Office Center</td>
<td></td>
</tr>
<tr>
<td>1367953</td>
<td>AR099_999:05- AR ABC Office</td>
<td>T8 lamps replaced T12 lamps</td>
</tr>
<tr>
<td>1222925</td>
<td>AR099_999:06-AR Admin</td>
<td>Motors retrofitted with variable frequency drives</td>
</tr>
<tr>
<td>1223034</td>
<td>AR099_999:07- AR Agency Building 3</td>
<td></td>
</tr>
<tr>
<td>1326308</td>
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</table>
Green.Arkansas.gov

Resources and More Information

- Login with your agency username and password
- Locate your agency folder
  - If you do not have a folder,
    • Contact Cathy Heath, cathy@ark.org to get a StEP uploaded.
- Locate the Cadmus Group folder
  - Available to all agencies
  - Reference and training documents are posted here for you to download
    • The Act 1494 reporting template
    • The training workbook
    • Slide sets
    • Additional Portfolio Manager and energy managers training information to come
Green.Arkansas.gov

Resources and More Information
One Example: ADEQ’s StEP Achievements to Date

• 33.7% decrease overall energy .......... FY09-FY10
  – (ADEQ Headquarters)
• 15.5% reduction in fleet fuel ............ FY09-FY10
• 44% reduction in office paper ............ FY05-FY10
• 57% reduction in solid waste (HQ).... FY08-FY10
  – Recycling program responsible for most
  – All field offices recycling paper and aluminum
• Employee StEP/EMS training program
Submitting 1494/ StEP Reporting Template

- Complete Cover tab and provide notes in Rollup Reports
- Ensure that all data reported for Act 1494 compliance and StEP reporting is accurate
- Save template as “Agency Name_Act 1494_StEP Reporting Template”
- Submit template with all Baseline (2008) – 2011 tabs completed by October 31, 2011
- Include a cover letter from Agency Director verifying that all submitted data is accurate
- Put template and cover letter in your Agency folder at green.Arkansas.gov
- Email EEllis@ArkansasEDC.com to let him know
Arkansas@cadmusgroup.com

Toll-free support line: 1-855-266-9773
(8 am – 5 pm weekdays)
## Contacts

<table>
<thead>
<tr>
<th>Arkansas Energy Office</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed Ellis, CEM, (501) 682-7694</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:eellis@arkansasedc.com">eellis@arkansasedc.com</a></td>
<td></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>The Cadmus Group, Inc.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vicky Kiechel 703- 247-6177</td>
<td>Hanna Grene 703-247-6120</td>
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<td><a href="mailto:Victoria.Kiechel@cadmusgroup.com">Victoria.Kiechel@cadmusgroup.com</a></td>
<td><a href="mailto:Hanna.Grene@cadmusgroup.com">Hanna.Grene@cadmusgroup.com</a></td>
</tr>
<tr>
<td>Kudret Utebay 703-247-6138</td>
<td>Chris Faulkner 703-842-5517</td>
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<tr>
<td><a href="mailto:Kudret.Utebay@cadmusgroup.com">Kudret.Utebay@cadmusgroup.com</a></td>
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