

# Climate Smart Communities Webinar

## Telephone call-in number

- 1-866-394-2346
- Code: 1982360347#
- No audio signal will be transmitted over the Internet



# **Welcome**

**Kim Farrow**

**Environmental Program Specialist**

**Office of Climate Change**

**New York State**

**Department of Environmental Conservation**



# Climate Smart Communities Webinar

## E-Mail Addresses



- Mark Lowery  
[mdlowery@gw.dec.state.ny.us](mailto:mdlowery@gw.dec.state.ny.us)
- Kim Farrow  
[kxfarrow@gw.dec.state.ny.us](mailto:kxfarrow@gw.dec.state.ny.us)
- Climate Change Office  
[climatechange@gw.dec.state.ny.us](mailto:climatechange@gw.dec.state.ny.us)

# Climate Smart Communities Webinar

**Website Address**



<http://www.dec.ny.gov/energy/50845.html>

# Climate Smart Communities Certification

- Goals:
  - To provide a more structured framework of local climate actions, while maintaining flexibility to all CSCs to be certified
  - To encourage local action through recognition
- Launched April 22, 2014
- Information and manual at <http://www.dec.ny.gov/energy/96511.html>
- Webinar September 11



James Clayton, NYSDEC

# NYS CLIMATE SMART COMMUNITIES

## Energy Data Management Resources

Webinar, June 12, 2014





# CSC 10 Pledge Elements

- #1 Pledge to Combat Climate Change by Becoming a CSC
- #2 Set Goals, Inventory Emissions, & Move to Action
- #3 Decrease Energy Demand for Local Government Operations
- #4 Encourage Renewable Energy for Local Government Operations
- #5 Realize Benefits of Recycling and Other Climate Smart Solid Waste Management Practices
- #6 Promote Climate Protection Through Community Land Use Tools
- #7 Plan for Adaptation to Unavoidable Climate Change
- #8 Support a Green Innovation Economy
- #9 Inform and Inspire the Public
- #10 Commit to an Evolving Process





# CSC Pledge Elements

## # 2 Set Goals, Inventory Emissions, & Move to Action

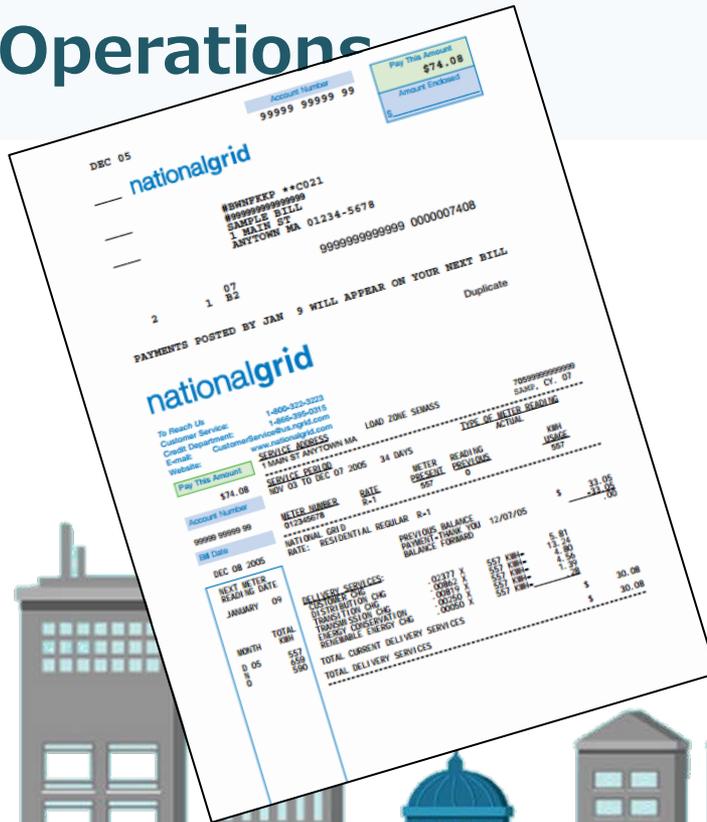
“  
You can't manage what  
you don't measure.”



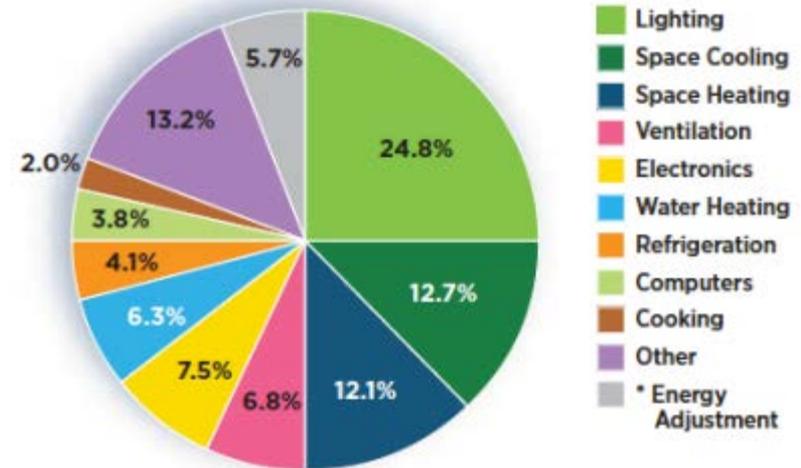


# CSC Pledge Elements

## #3 Decrease Energy Demand for Local Govt. Operations



Commercial Primary Energy End-Use Splits, 2006



Source: 2009 Buildings Energy Data Book, U.S. Department of Energy, Table 3.1.4  
[http://buildingsdatabook.eere.energy.gov/docs/xls\\_pdf/3.1.4.pdf](http://buildingsdatabook.eere.energy.gov/docs/xls_pdf/3.1.4.pdf)

\* Energy adjustment U.S. Department of Energy, Energy Information Administration uses to adjust for discrepancies between data sources. Energy attributed to the commercial buildings sector, but not directly to any specific end-use.



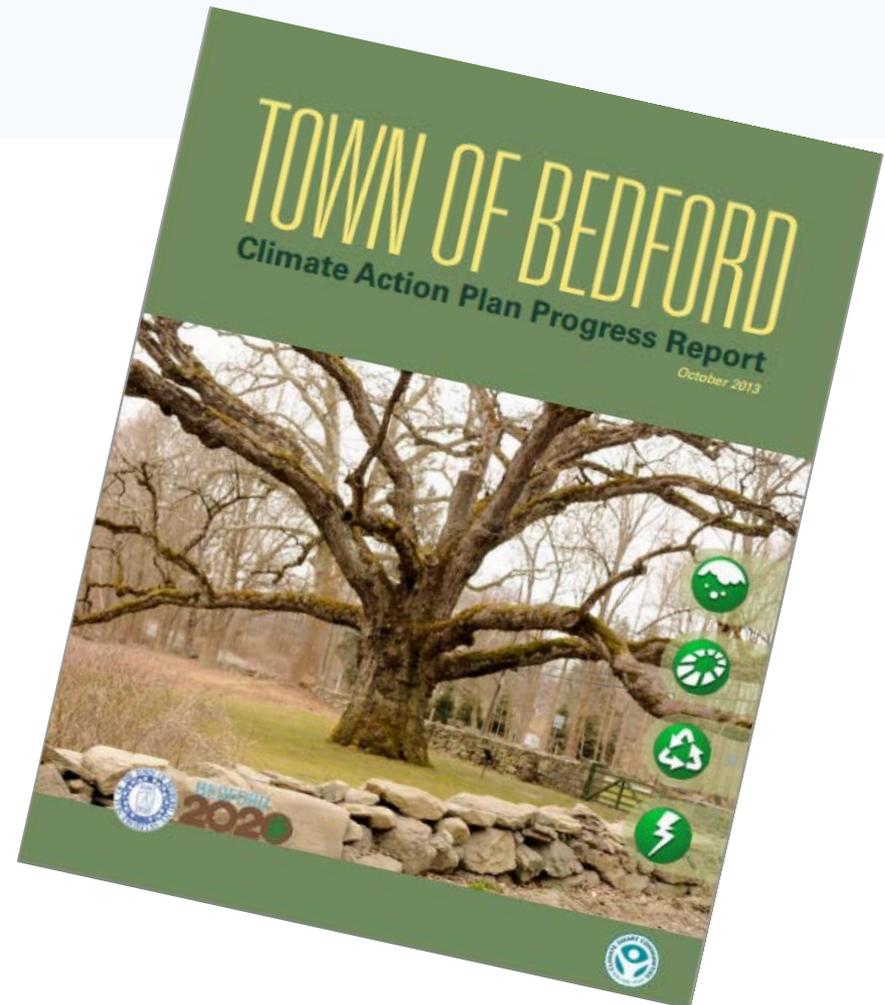
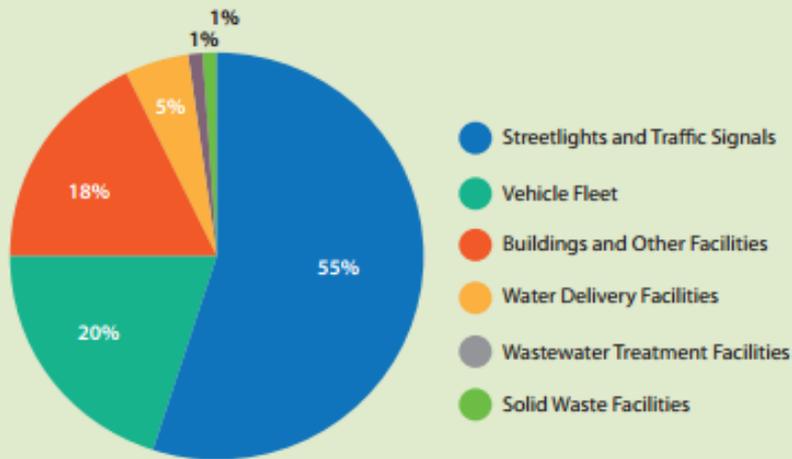
# CSC Pledge Elements

## #1 Commit to an Evolving Process

0

### ENERGY COSTS (\$)

In addition to the costs associated with all energy use in the government operations, this total includes operations and maintenance costs for the streetlights.





# Why an energy data management tool?

- Provides a central location for tracking energy data – demand, consumption, costs
- Reports for sharing with key staff/department heads and for budget planning
- Ensure billing consistency/accuracy
- Track progress
- Identify anomalies, highest consuming or least efficient facilities/equipment
- Review data on quarterly or monthly basis
- Energy data tracked regularly that can be used for GHG inventory inputs





# Options

- Today we will hear from just 3 options a local government has for energy data tracking (no/low-cost options)
- Other options are available, Energy Management Systems, etc





# Thanks!

Kari Hewitt  
Sustainability Planner  
VHB

[khewitt@vhb.com](mailto:khewitt@vhb.com)

[www.midhudsoncsc.org](http://www.midhudsoncsc.org)





**FACILITY  
DUDE**

# UtilityTrac

## Energy Management Solutions

Presented by Brandon Chaney  
Applications Engineer

*Simple, affordable online tools to manage your facilities.*



## Who is the Dude?

- **Founded in 1999**
- **Based in Cary, NC**
- **270 Employees at HQ**
- **8500+ Clients across North America**





# Who is the Dude?

## FacilityDude Solutions



### **Maintenance**

- >> **MaintenanceEDGE™**
- >> **InventoryEDGE™**
- >> **Capital Forecast™**
- >> **Critical Alarm Automation™**



### **Energy**

- >> **UtilityTrac™**



### **Facility Usage**

- >> **Facility Schedule™**
- >> **Facility Schedule Automation™**

# The 7 Steps to Effective Energy Management



- **Organization**
- **Normalization**
- **Segregation**
- **Investigation**
- **Remediation**
- **Verification**
- **Evaluation**

# Organization *Get it to where you can use it.*

- ▼ City of Dudeville
  - ▼ Fire Department
    - ▼ Fire Headquarters
      - Fire HQ-Diesel
      - Fire HQ-Electric
      - Fire HQ-NG
      - Fire HQ-Propane
      - Fire HQ-Refuse
      - Fire HQ-Telecom
      - Fire HQ-Water
    - ▼ Fire Stations
      - Fire Station 1
      - Fire Station 2
      - Fire Station 3
      - Fire Station 4
  - ▶ Government Center Complex
  - ▶ Municipal
  - ▶ Police Department
  - ▶ Public Works
  - ▶ Recreation
  - ▶ Water

- *Single database*
- *Ease of navigation*
- *Flexibility in reporting*
- *Data rollup*



Customer Number / 300-1234-567 1000001234	
Previous Bill	30,000.00
Payments & Adjustments	
Payment 000000	20,000.00
Sub Total	10,000.00
Balance	80.00
Electric	
General Service FC	
Service Availability Charge	\$7.27
Energy Charge 47,000 kWh x \$0.005	\$235.00
Energy Charge 50,000 kWh x \$0.021	\$1,050.00
Peak Capacity Charge 107,000 kWh x \$0.015	\$1,605.00
Fuel Adjustment 100,000 kWh x \$0.00001	\$0.75
Regulatory Adj. 100,000 kWh x \$0.00002	\$0.75
Total Electric 800 Thousands	\$4,788.77

ELECTRIC ACCOUNT DETAIL	
Account No.	1000001234
Account Name	City of Dudeville
Address	123 Main St, Dudeville, NC
City	Dudeville, NC
State	NC
Zip	27001
Service Type	General Service
Service Start	01/01/2024
Service End	12/31/2024
Usage	47,000 kWh
Rate	\$0.005
Amount	\$235.00

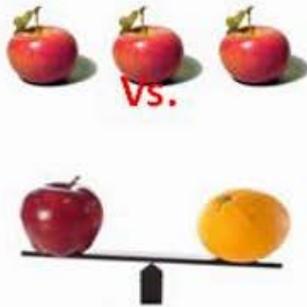
  

GAS ACCOUNT DETAIL	
Account No.	1000001234
Account Name	City of Dudeville
Address	123 Main St, Dudeville, NC
City	Dudeville, NC
State	NC
Zip	27001
Service Type	General Service
Service Start	01/01/2024
Service End	12/31/2024
Usage	107,000 kWh
Rate	\$0.015
Amount	\$1,605.00

A county in NC saves \$1,000 a year by consolidating several meters at a building that had been repurposed from a clinic to office space.

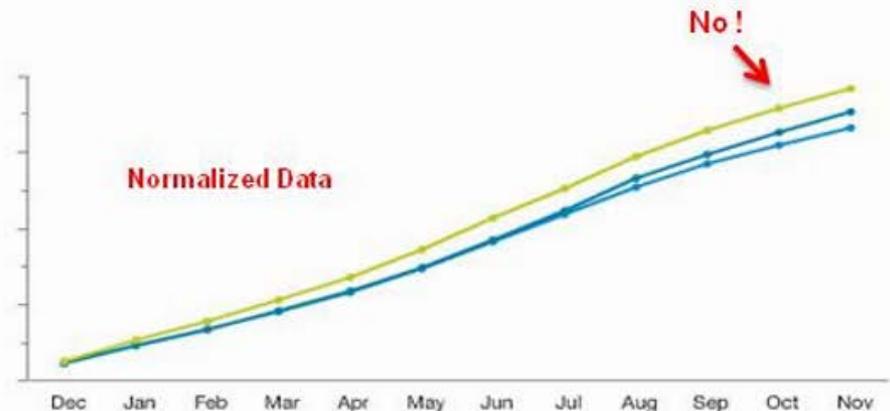
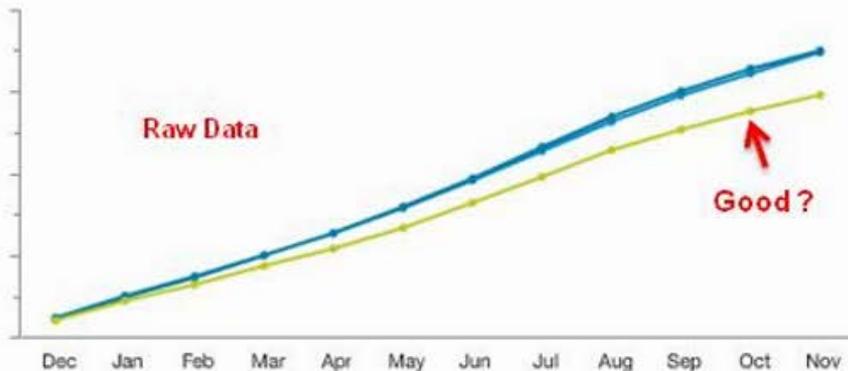
# Normalization

Because true comparisons cannot be done without adjusting for changes in billing days and weather.



Nothing Is As It Looks!

Weather Can Affect The Data



# Segregation

Compare similar buildings and meters to identify outliers.

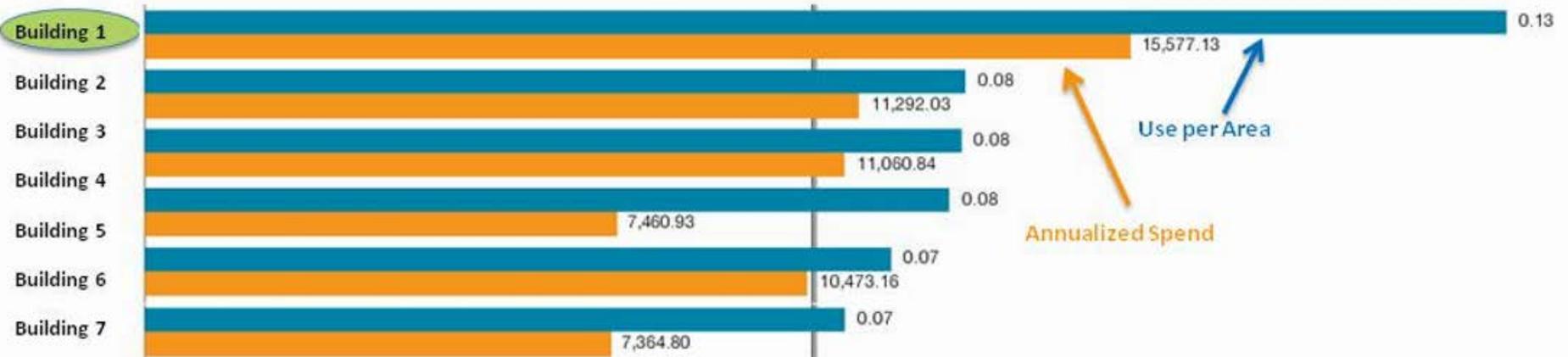
## Find Low Hanging Fruit



Benchmark by:

- Use /Sq.Ft.
- Cost /Sq.Ft.
- Demand /Sq.Ft.
- Unit Cost
- and other ways

Average Use (MMBTU) Per Area



While identical in size, Station 2 had twice the electric cost than Station 5. Data proved this was happening for 3 years. Client received \$15k refund because of incorrect meter multiplier.

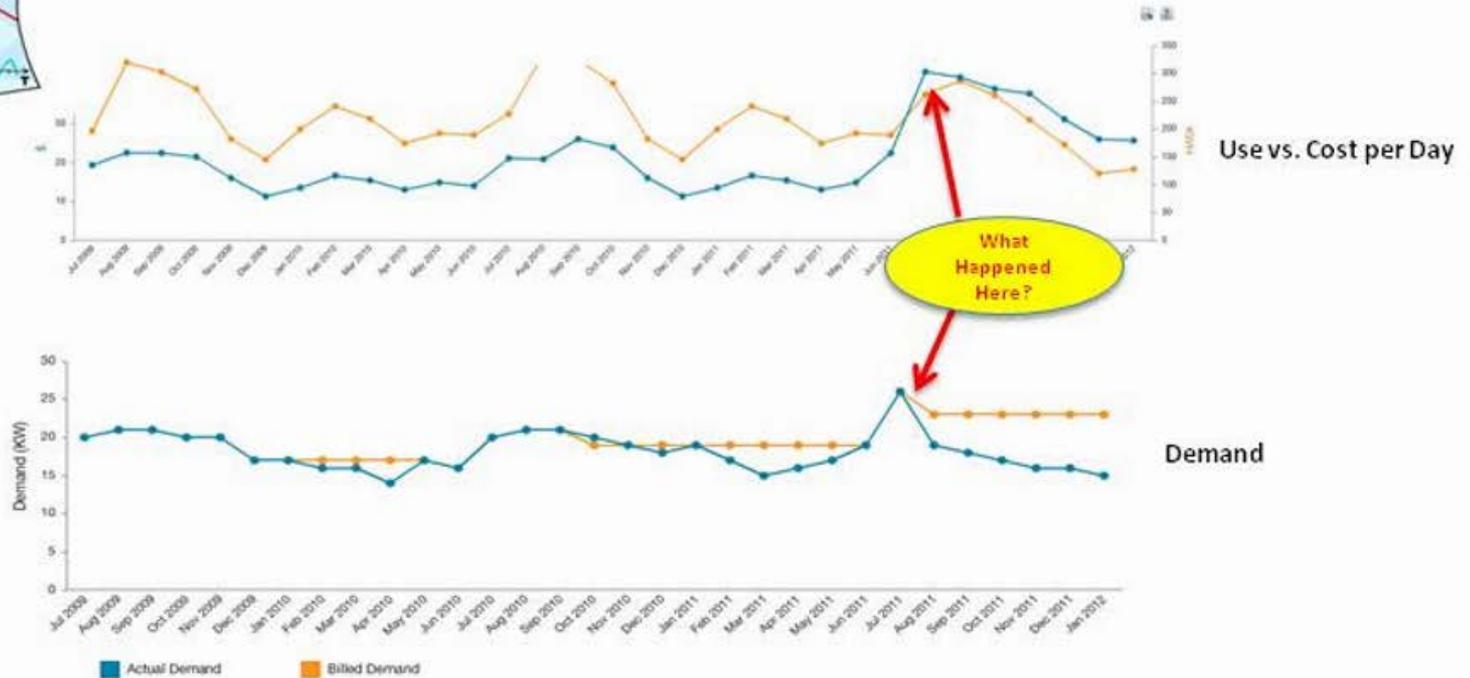
# Investigation

Look further to identify potential conservation opportunities.

What's going on?  
What needs to be done?

Reports Charts Graphs

Many different ways to look at the data



A hospital in Kansas noticed a gradual increase in water. Changed a pump and saved 11,000 gal/day

**Remediation** *Develop and implement energy conservation projects*



No Cost Projects

Low Cost Projects

Capital Projects

Performance Contracts

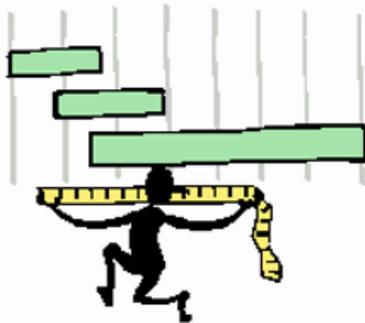
**Document project ..**

- **Start-Stop dates**
- **Implementation cost**
- **Expected savings**
- **Other project data**

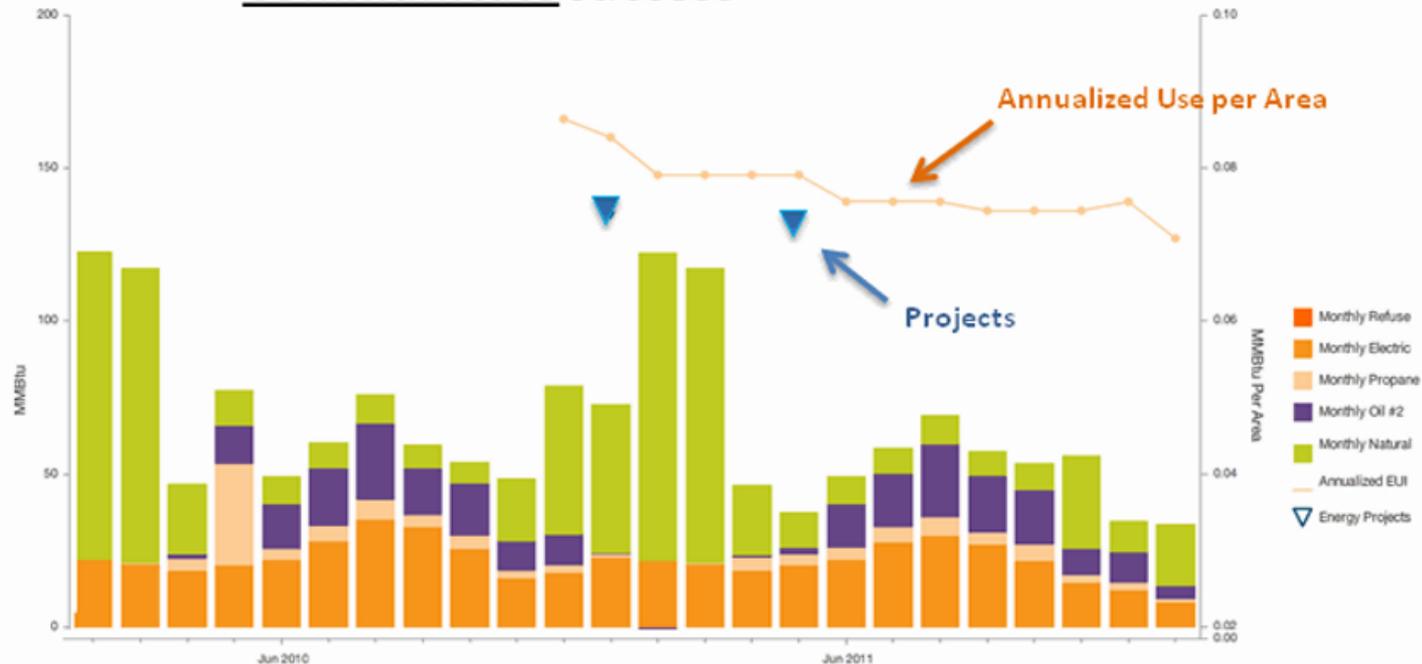
# Verification

With normalized year to year data, measure effects of conservation projects.

What were the results?



- Verify that you accomplish what you wanted
- Communicate success



A city in Connecticut noticed abnormal oil use during winter months at the garage. They found that block heaters for the vehicles were free running. Thermostats enabled a 40% oil savings.

# Examination

## Proactively guard against billing errors and unusual trends.



- Billing errors
- Data entry errors
- Significant deviances from normal use/cost

So, so many things to look for.....

Description	Severity	Settings
Control code is a duplicate of an existing bill.	Moderate	
Select line items by observation type code with a value greater than or equal to	Moderate	Obs Type = CITYTAX, Value >= 0
Cost per day is greater than the same month last year.	Moderate	20 Percent > Last Year
Unit cost is greater than the same month last year.	Moderate	10 Percent > Last Year
Cost per unit is greater than the average of the prior 2 calendar months.	Moderate	20 Percent > Avg
Abnormal load factor. Use too high, demand too low or days too low.	Severe	Max Load Factor = 100
Billed demand greater than the same month last year.	Moderate	20 Percent > Last Year
Billed demand less than the same month last year.	Moderate	50 Percent < Last Year



## *The Solution*



1. **Organization** – Simple tree structure, comprehensive search
2. **Normalization** – Behind the scenes
3. **Segregation** – Benchmarking capability,
4. **Investigation** – Numerous charts, graphs and over 200 reports
5. **Remediation** – Record project info
6. **Verification** – Comprehensive measurement with normalized data
7. **Examination** – 52 configurable audits



# Energy Solution

*UtilityTrac Plus* is an affordable application that enables building owners to track, analyze, and report on utility consumption and cost.

## Features:

- Utility Bill Tracking & Auditing
- Reporting with Easy Exports
- Energy Benchmarking & Budgeting
- Energy Cost Avoidance
- Obtain Energy Star Ratings



ENERGY STAR  
PARTNER

# Measure, Manage and Save with



UtilityTrac **Plus**<sup>™</sup>



## Cloud Technology

- Lowest cost of ownership
- No Hardware or Software – Just a web browser
- Immediate updates

## We Do The Heavy Lifting

- Setup done for you
- 2 years of bill data entered for you
- Unlimited training provided

## Unlimited Support

- Phone, email and chat support
- 8am – 6pm Eastern
- Award winning client service team

## Bill Tracking

- Streamlined bill entry, including import capability
- Any level of bill detail – all types of energy and money charges
- Any type of utility – energy and non-energy
- Building and non-building
- Bill audits
- Deregulated accounts
- Native, common and global units of measure
- Hierarchical organization of data

## User Access

- Unlimited users
- Role based
- Location based

## Benchmarking

- Client buildings
- Data on similar buildings in our database
- Seamless integration with ENERGY STAR
- EUI, ECI and many other methods

## Analysis Tools

- Multi-facet analysis
- Image and raw data capture

## M&V

- Uses local daily HDD /CDD
- Weather data automatically imported daily
- IPMVP compliant
- Project correlation



## Reporting

- Over 250 available reports
- Flexible filtering
- Exportable/Printable
- Favorites

## Cloud Technology

- Lowest ownership cost
- No client hardware or software
- Browser access from anywhere
- Continuous enhancements & updates

## Service

- Complete initial setup - 2 years bill data
- Unlimited training and support
- Phone, email or chat support
- Award winning client service team
- On-line help documentation and videos

## Subscription

- Annual renewal
- Based upon # of meters
- No contracts

# For More Information

Please Contact:

Jolie Medlin

Account Executive

[Jolie@facilitydude.com](mailto:Jolie@facilitydude.com)

919-674-8728

Brandon Chaney

Applications Engineer

[brandon.chaney@facilitydude.com](mailto:brandon.chaney@facilitydude.com)

919-674-8760