Bes-Tech, Inc.

ETCC Open Forum

Building Energy Solutions & Technology, Inc.

Justin Bitz
Director of Business Development
July 24, 2012

Agenda

- Company Introduction
- Products Portfolio
- Digi-RTU™
  - Benefits
  - Case studies and savings data (daily/monthly/annual)
  - Partnerships

Bes-Tech Company Overview

- Headquartered in Omaha, NE
- Locations
  - Omaha, NE (headquarters)
  - Dallas, TX
  - Philadelphia, PA
  - San Jose, CA
  - Beijing, China

- Minority Owned (MBE certified)
- Servicing North America, Europe, and Asia

Bes-Tech
Saving Energy. Building Comfort.

Customers Served

Bes-Tech Solutions

Bes-Tech
Saving Energy. Building Comfort.

Services

- TPOR[SM]
- ECO24/7[SM]

Products

- Digi-Flow Meters
- Digi-Air
- EMCS
- Digi-Optimizer
  - Digi-WHP
  - Digi-RTU[TM]
  - Digi-CRAC

Rooftop Unit Market

- Cooling costs average 30-50% of energy costs for a commercial building[1]
- US Department of Energy estimates 62% of all cooling costs derived from RTUs[2]
- More than 60% of all commercial buildings have rooftop units[3]
- Over 2.7 billion square feet of commercial retail space cooled by packaged rooftop units[4]
- 9 million RTUs in the US, estimated that 75% of them are not running efficiently[5]

How the Digi-RTU™ Works

- Modulates both the compressor and fan speed based on actual loads using patented technology.
- No decline in demand or usage functionality
- No interruption of existing control including safety.

Digi-RTU™ Hardware

Bes-Tech
Saving Energy. Building Comfort.

Digi-RTU™ Installation

What the Digi-RTU™ does

- Proven technology that effectively:
  - Reduces the electricity consumption up to 60%
  - Reduces the electricity demand up to 50%
  - Improves temperature and humidity control
  - Reduces compressor cycling up to 75%
  - Improves equipment life span
  - Reduces maintenance costs
  - Reduces equipment noise

Benefits of a Digi-RTU™

- For Utility Companies:
  - Reduce kWh usage up to 60%
  - Lower peak system demand up to 50%
  - Decrease carbon emissions
  - Scalable
- For Consumers:
  - Reduce electricity consumption and costs
  - Reduce compressor on/off cycling up to 75%
    - Reduce maintenance cost
    - Improve humidity control
  - Reduce HVAC equipment noise in conditioned space

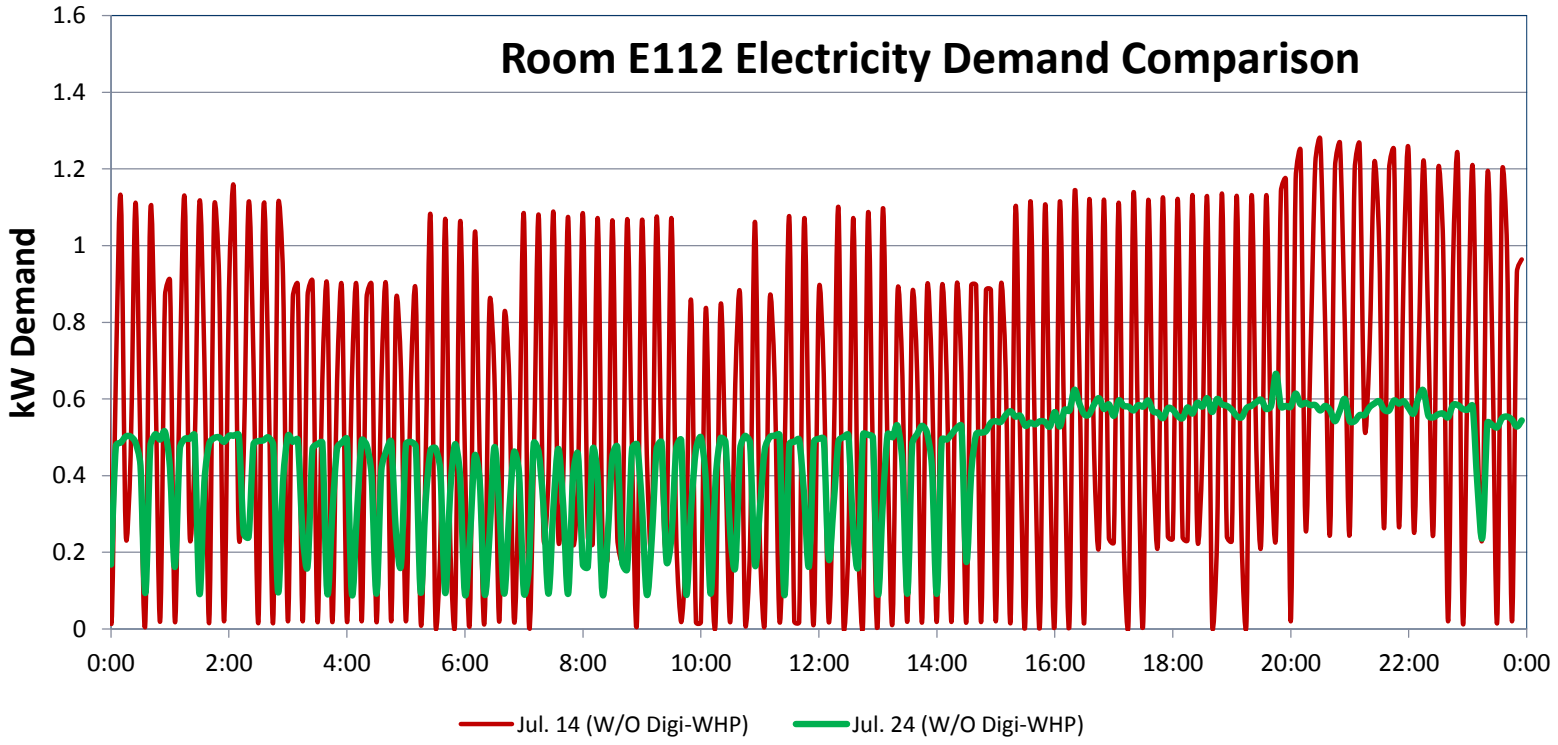
Case Study 1[6]

Heat Pump information

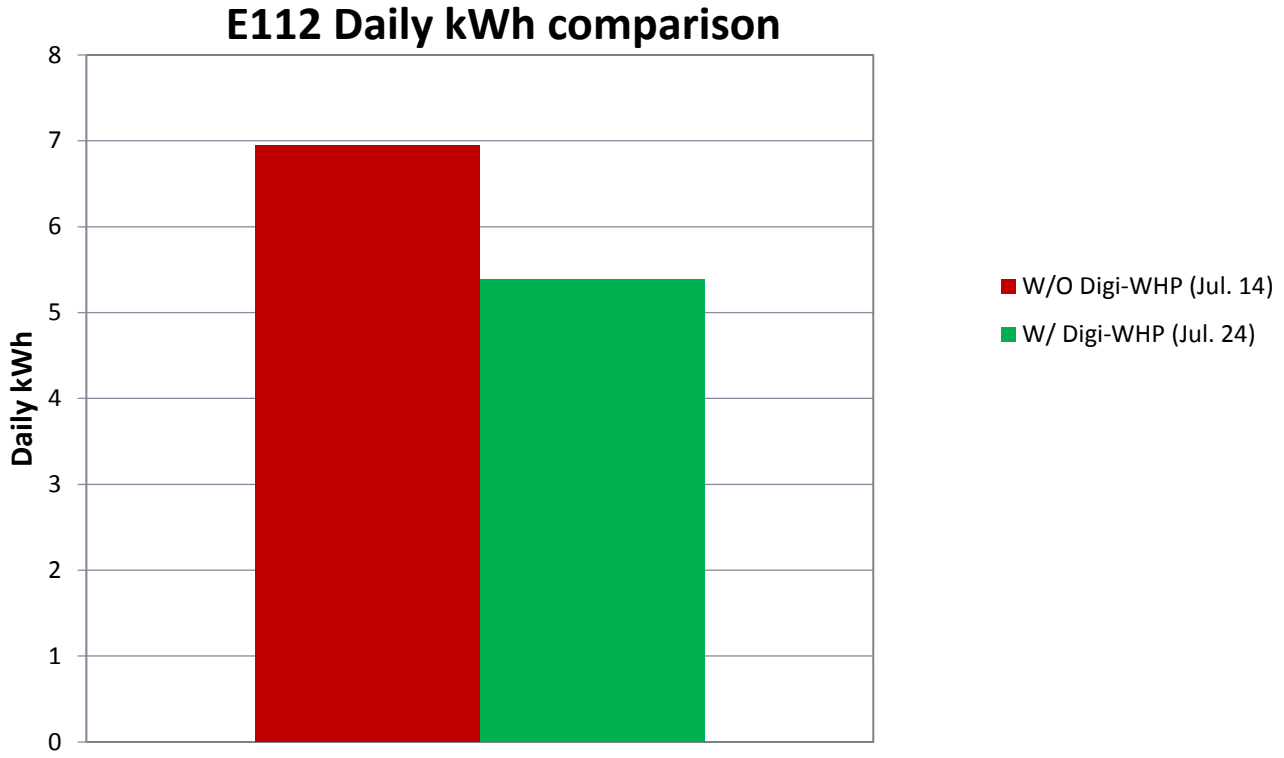
- 0.5 Ton, 1 compressor
- Serving a dormitory room
- Location: Bellevue, NE
- Weather data

Date	Outside Air Temperature		
	Avg	Max	Min
07/14/2009 (W/O Digi-WHP)	79	87	70
07/24/2009 (W/ Digi-WHP)	81	94	67

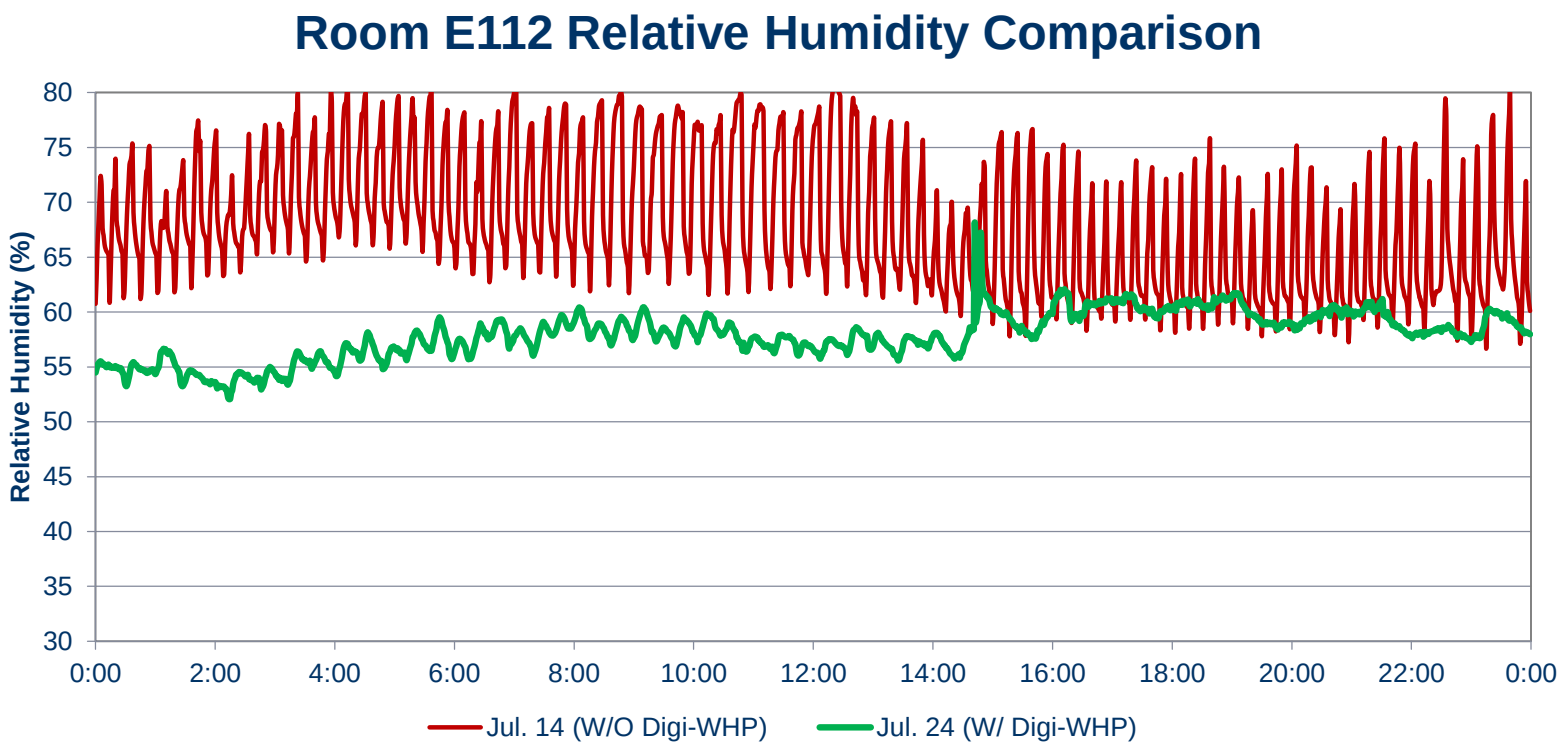
Digi-WHP: Electricity Demand (24 hour data samples)



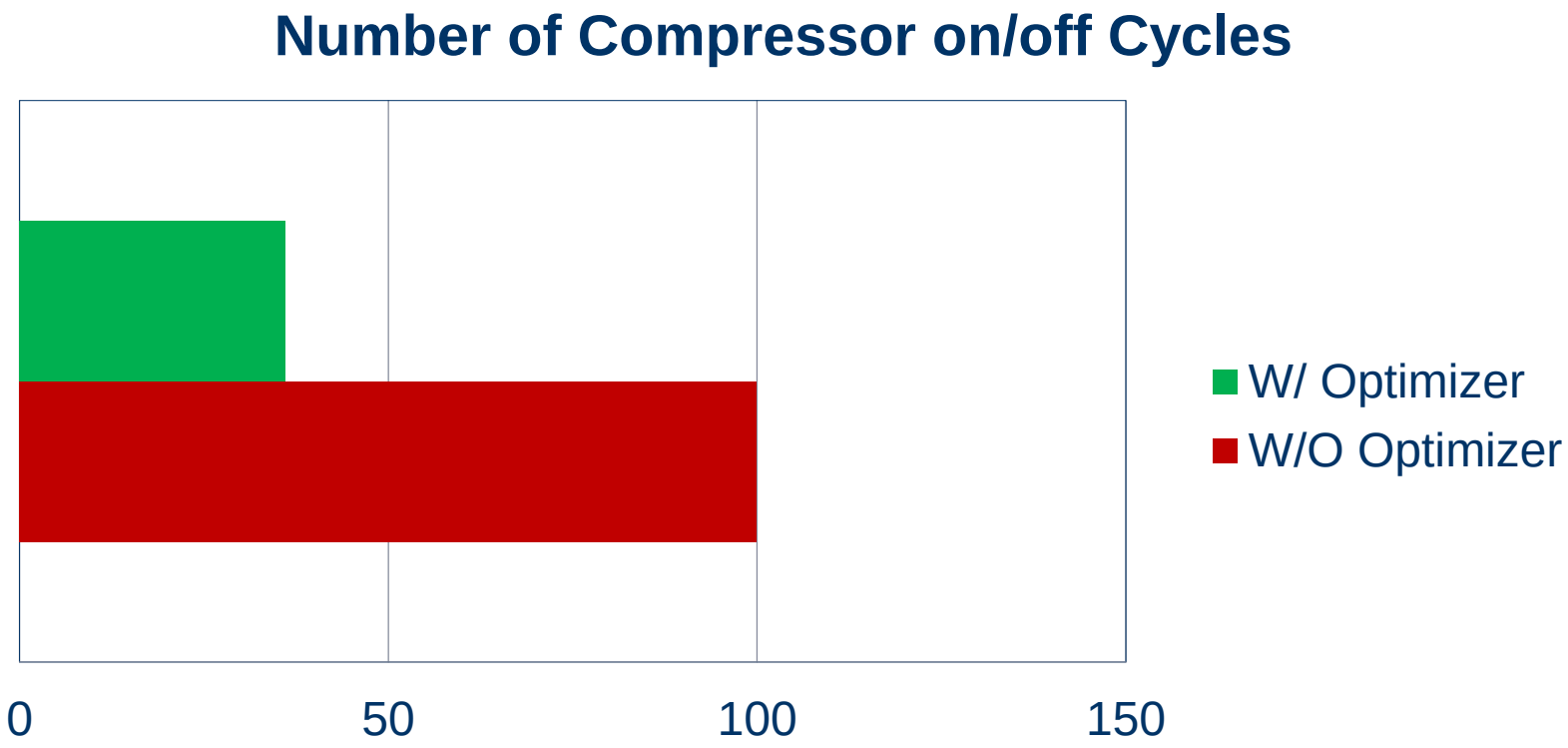
Digi-WHP: Electricity Consumption (24 hour data samples)



Digi-WHP: Relative Humidity (24 hour data samples)



Digi-WHP: Compressor On/Off Cycles (24 hour data samples)



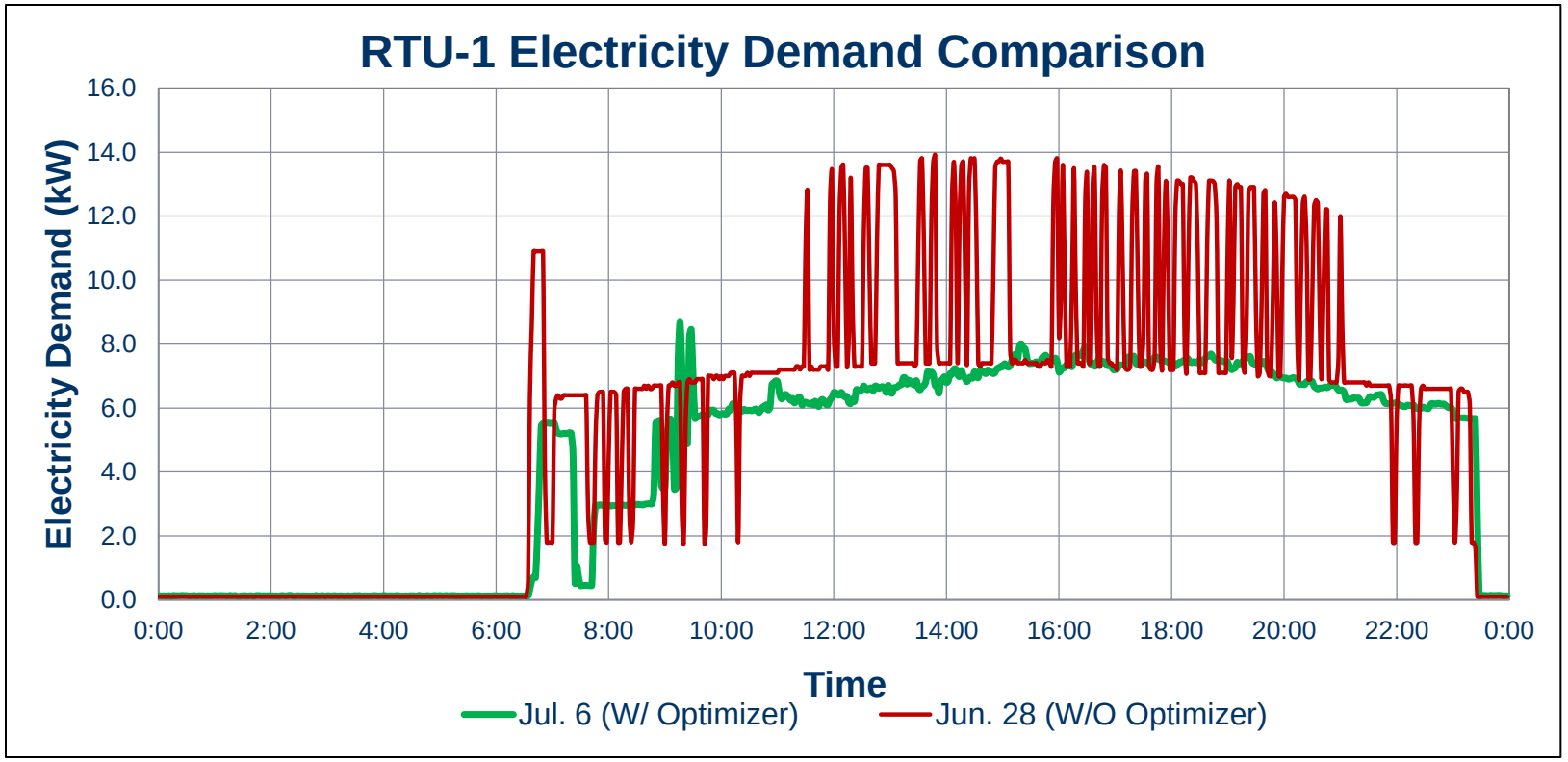
Case Study 2[7]

Rooftop information

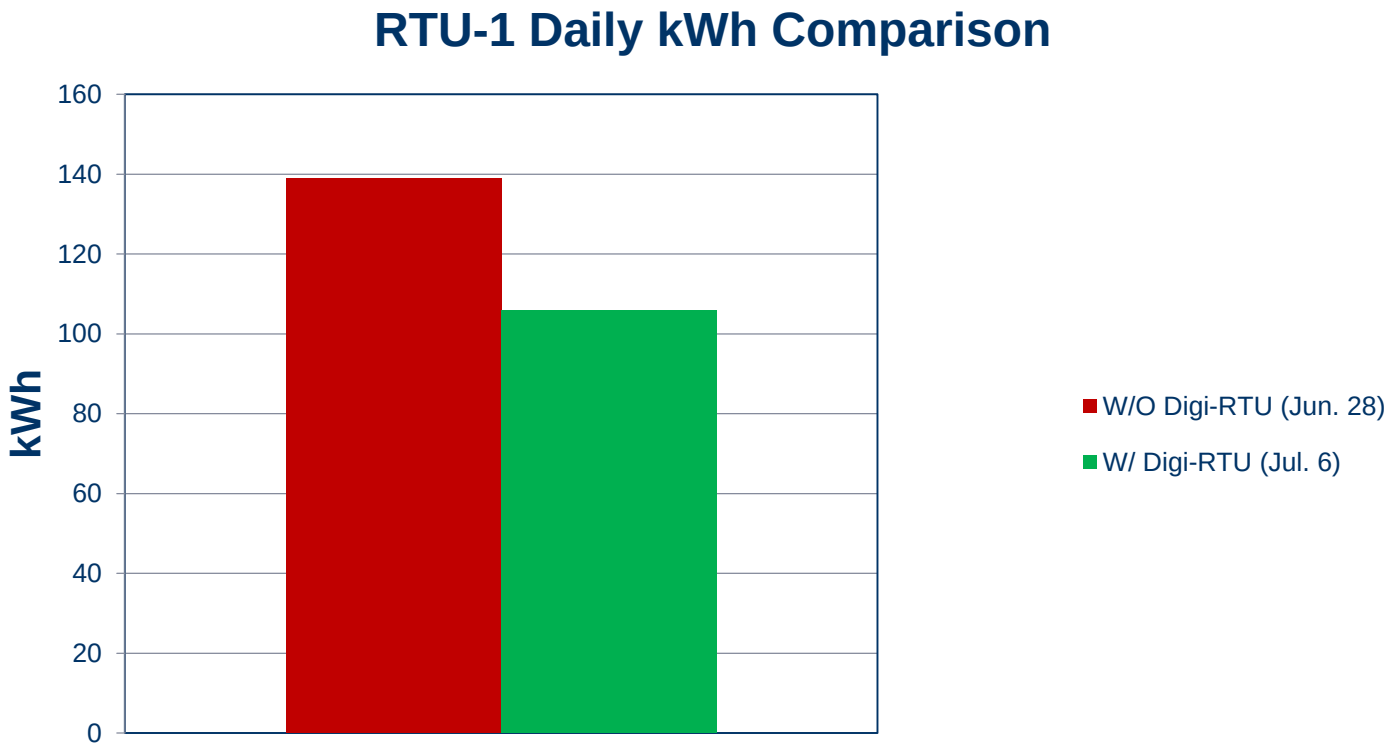
- 12.5 Ton, 2 compressors
- Serving a restaurant
- Location: Omaha NE
- Weather data

Date	Outside Air Temperature		
	Avg	Max	Min
06/28/2010(W/O Optimizer)	76	87	65
07/06/2010(With Optimizer)	78	88	67

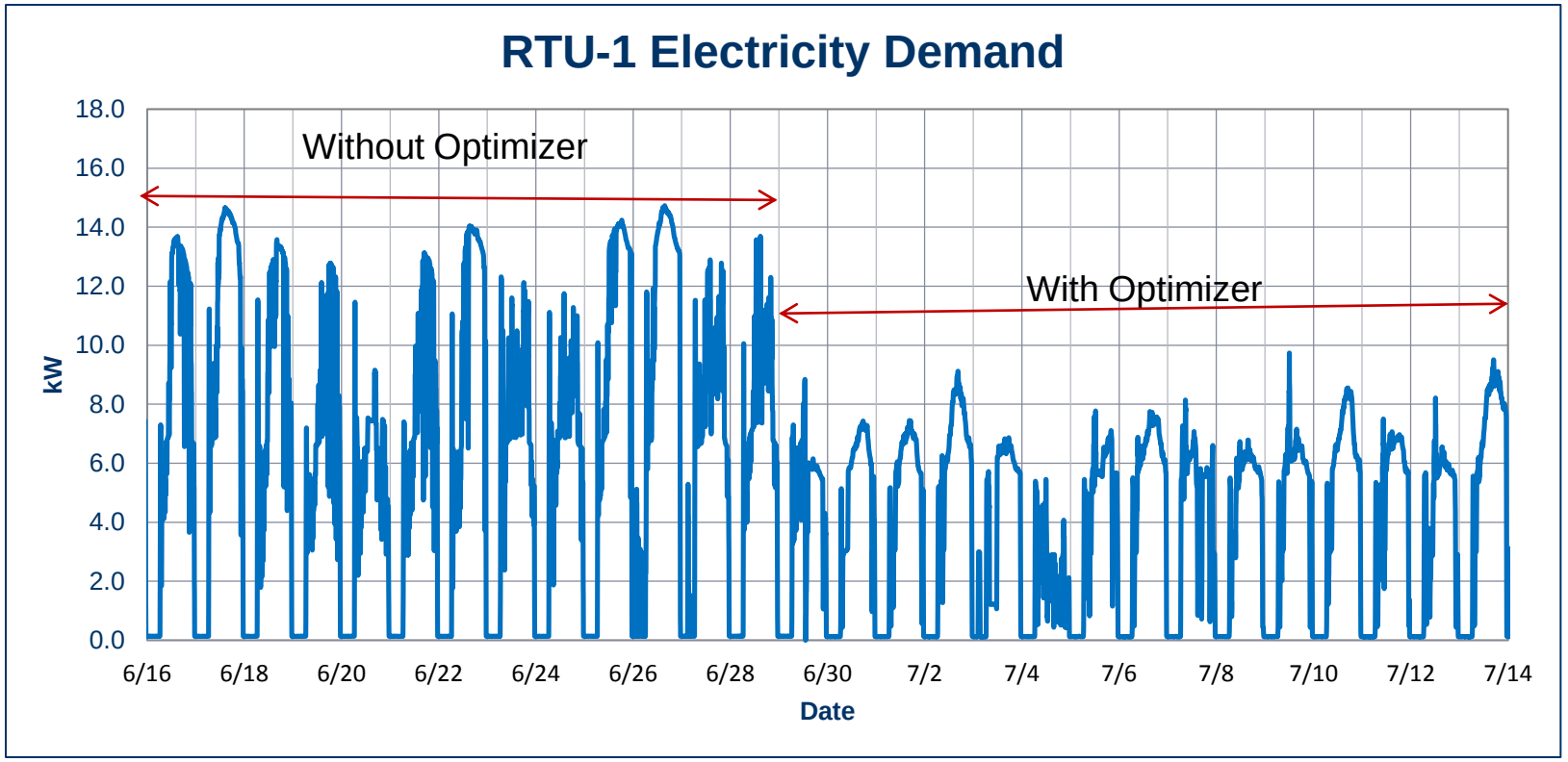
Digi-RTU: Electricity Demand (24 hour data samples)



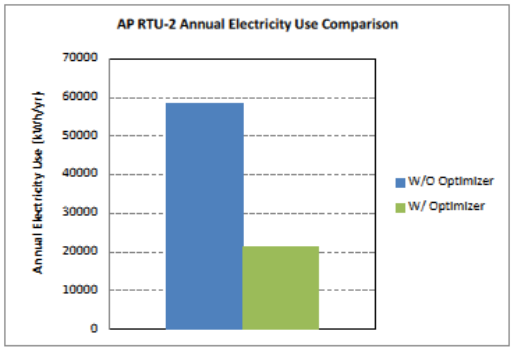
Digi-RTU: Electricity Consumption (24 hour data samples)



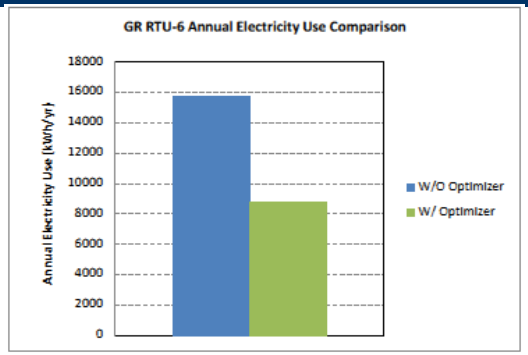
Digi-RTU: Electricity Demand (one month data sample)



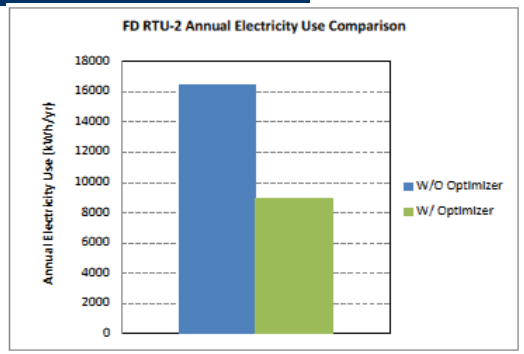
Consumption – Various Sizes[8] (2011)



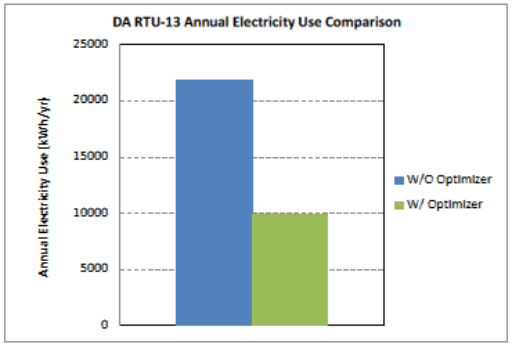
3 ton



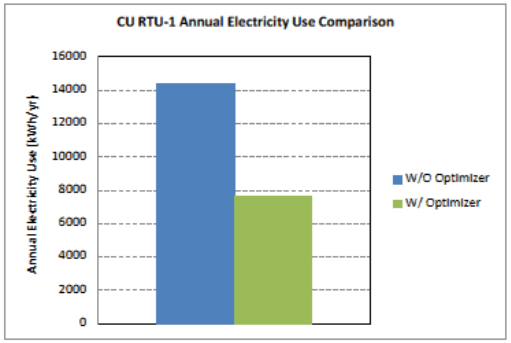
5 ton



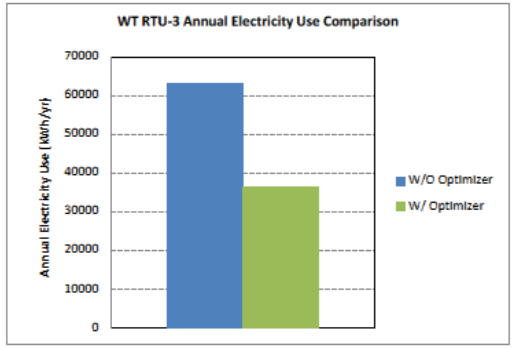
7.5 ton



10 ton



12.5 ton



20 ton

Update of 2011 Presentation

- Working on pilot projects for 30 units in conjunction with Omaha Public Power District
- Newsletter of APPA (April 2010, V28) says:

OPPD Digi-RTU (Digital Roof Top Unit) Pilot Project
Omaha Public Power District in Nebraska received a $50,000 grant to execute an innovative pilot for digital rooftop optimizers. The Digi-RTU units are controllers that easily mount to existing rooftop air conditioning units and allow the units to operate more effectively. Benefits include demand and energy reduction of 20 to 50%, improved room relative humidity (50 to 60%), noise level reduction of up to 50%, and reduction of compressor on/off cycles by up to 70%.

2011 DEED Energy Innovator Award (EIA) Winner[9]

Omaha Public Power District, Nebraska - OPPD Digital Roof Top Unit Pilot Project

Based on two pilot projects OPPD completed utilizing Digital Heat Pump Optimizer Technology, OPPD, in connection with developer DTL Controls, undertook a project which integrated Digital Roof Top Unit (RTU) Optimizers into Rooftop Air Conditioners at a test manufacturing facility. The typical RTU system consumes 30% - 40% more energy than needed and generally is equipped with a constant speed compressor and an oversized fan system. By adding a Digi-RTU Optimizer the kW savings per air conditioning unit ranged from 25% - 60% while the compressor cycling diminished by up to 70% and occupant comfort within the test manufacturing facility was maintained. Currently the optimizers are not plug-and-play technology so OPPD is working with the developers to determine what accommodations can be made to make them plug-and-play or as close to plug-and-play as possible for wider usage.

Tim Burke, Vice President of Customer Service & Public Affairs, Omaha Public Power District, Nebraska accepted Energy Innovator Award at APPA's National Conference from Lonnie Carter, President & CEO of Santee Cooper in Moncks Corner, S.C., and 2010-2011 APPA Board Chair. Click on the image for a larger view.

Public Utility Cooperative Relationships

Conclusion

- Digi-Optimizer:
  - Reduces peak demand
  - Reduces energy consumption
  - Reduces compressor cycling
  - Reduces maintenance costs
  - Improves room humidity control
  - Improves room temperature control
  - Reduces equipment noise

…and is scalable!

Bes-Tech
Saving Energy. Building Comfort.

Thank you for your attention.

Questions?