

November 23, 2015

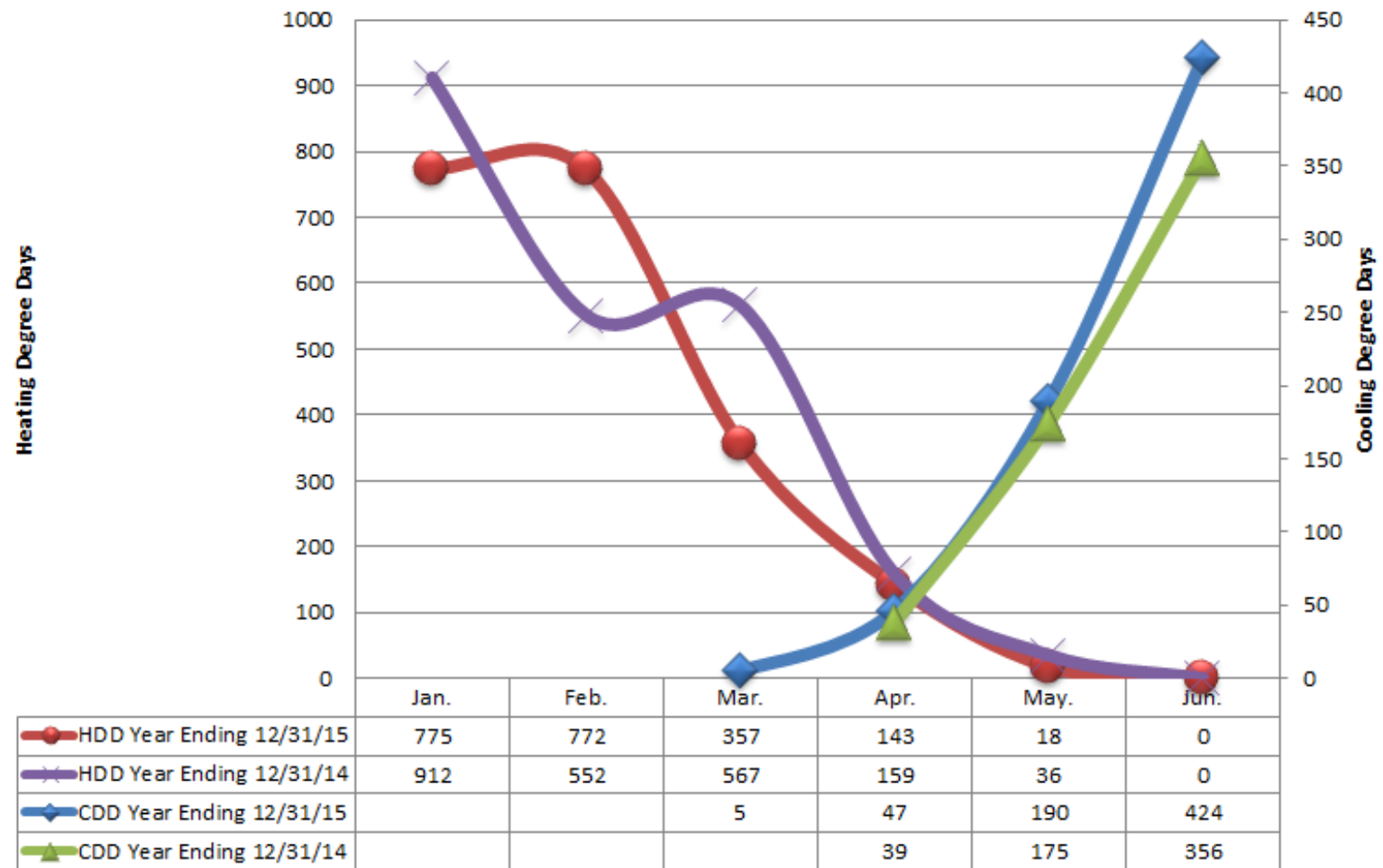
Rock Hill Schools

District Energy Update

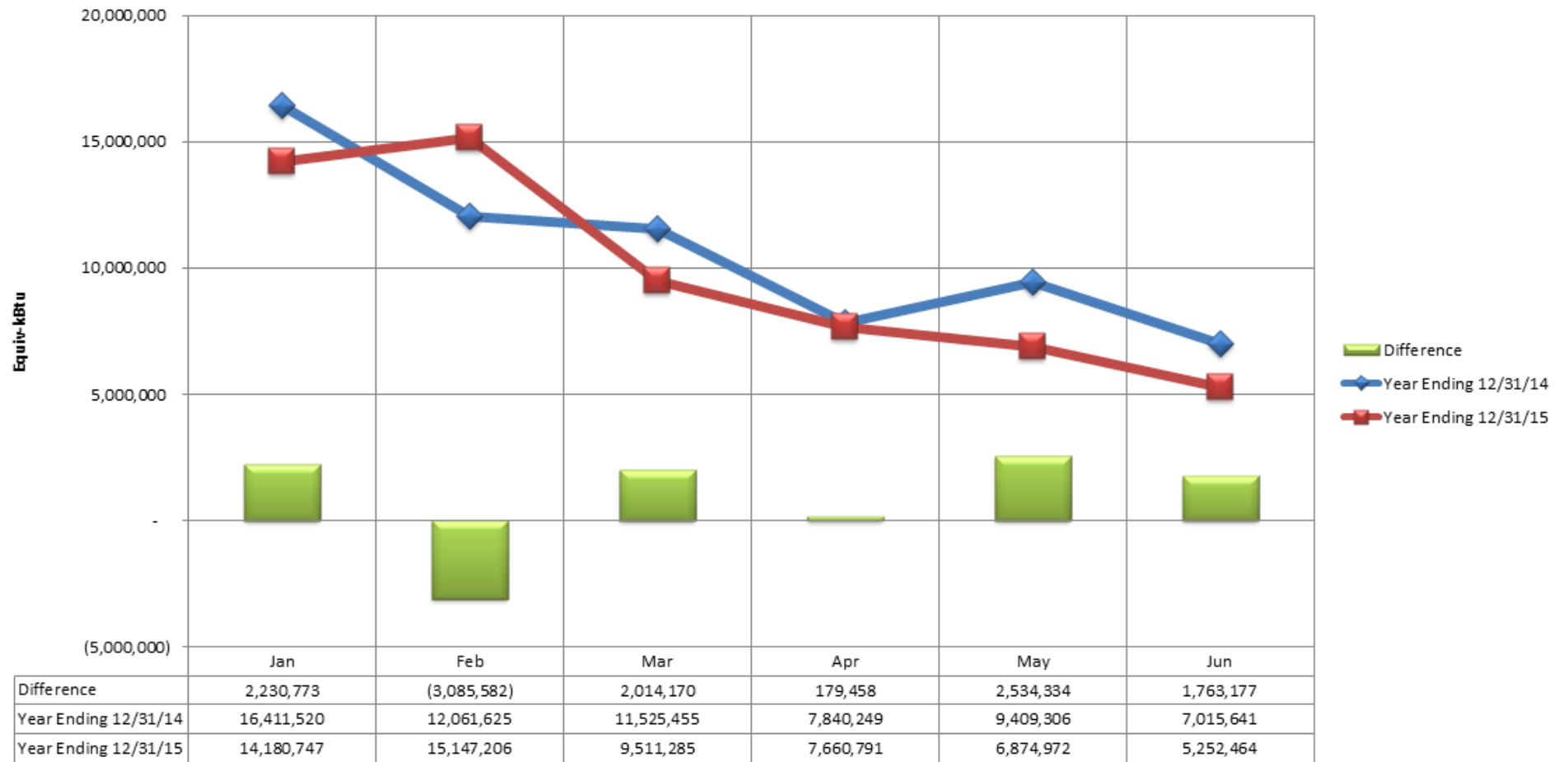
For the period of January 1, 2015 – June 30,
2015

Kim Melander
Energy & Systems Manager

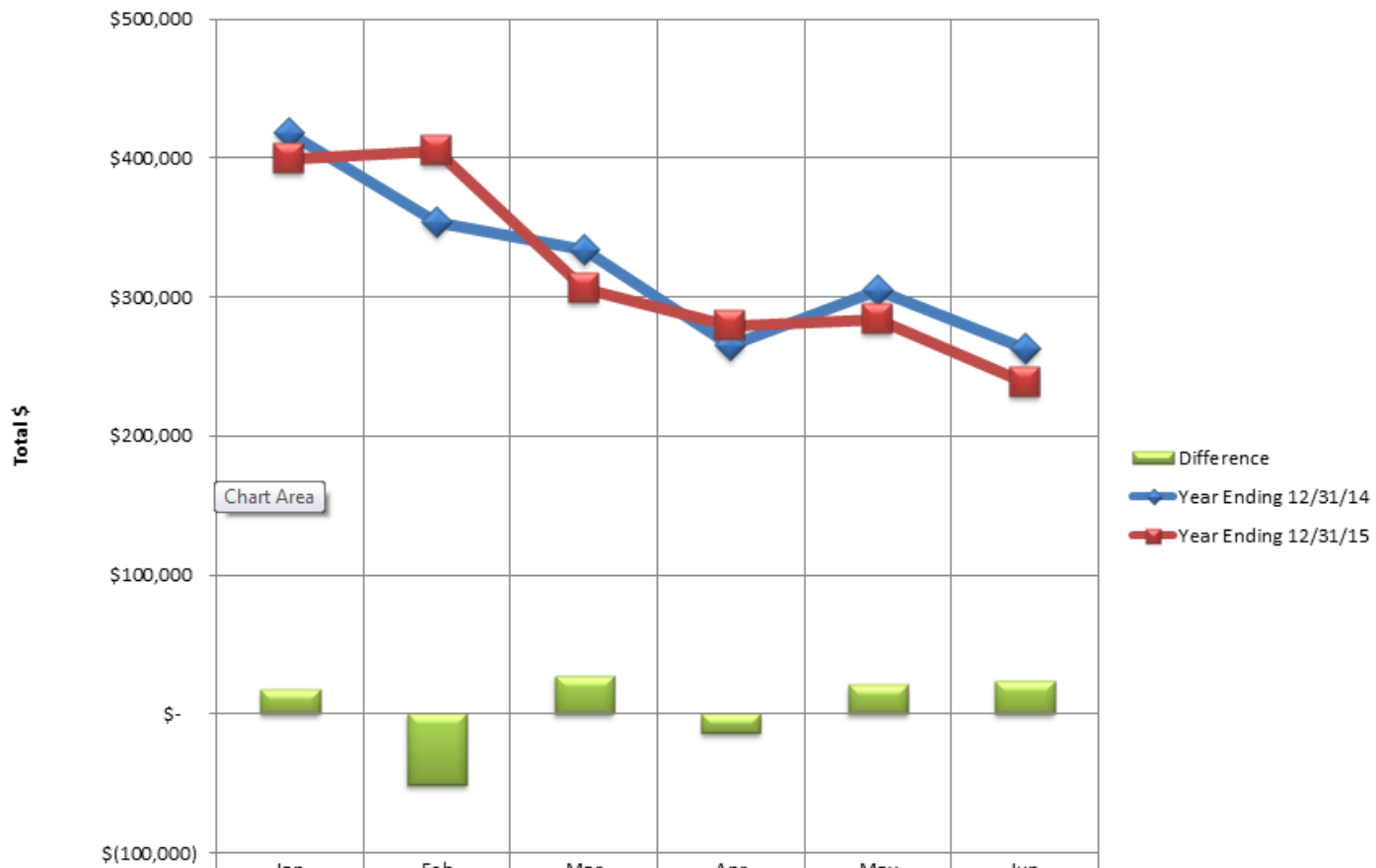
Heating and Cooling Degree Day Comparison



Equivalent kBTU for Rock Hill School District

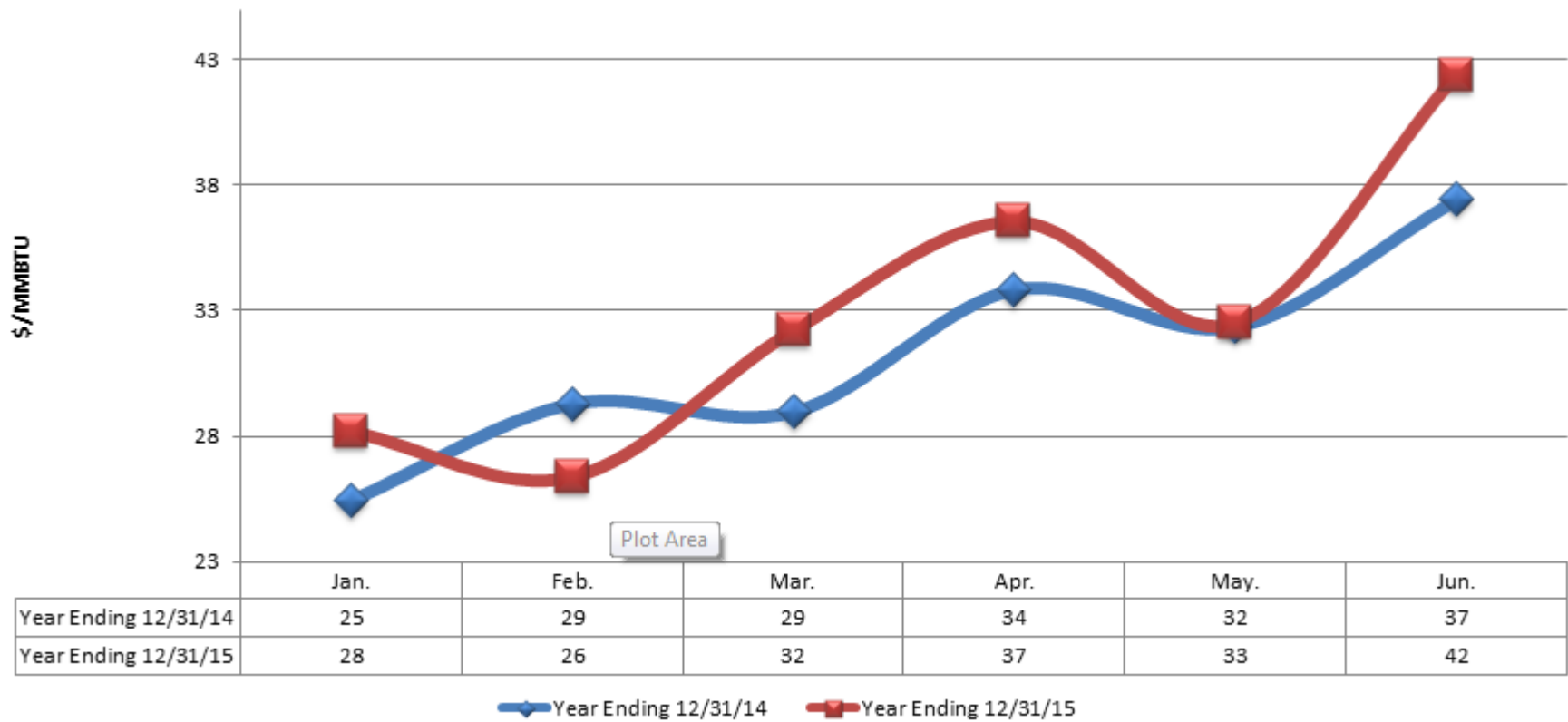


Total Energy \$ for Rock Hill Schools



	Jan	Feb	Mar	Apr	May	Jun
Difference	\$17,695	\$(51,363)	\$27,512	\$(14,105)	\$20,746	\$24,179
Year Ending 12/31/14	\$417,361	\$353,229	\$333,759	\$265,255	\$304,403	\$262,518
Year Ending 12/31/15	\$399,666	\$404,591	\$306,247	\$279,360	\$283,657	\$238,340

Combined Energy Cost/Unit for Rock Hill Schools



Rock Hill Schools Energy Management Department
 Energy Savings and Avoidance Report
 January 1, 2015 through June 30, 2015

Section 1

<i>Actual Use and Cost for Base Period (1/2009 through 6/2009)</i>				
<u>Energy Type</u>	<u>Base Use Recorded</u>	<u>Units</u>	<u>Avg Unit Cost</u>	<u>Energy Cost</u>
Electric	17,180,855	kWh	0.1043	\$1,792,325
Natural Gas	192,152	Therm	1.2626	\$242,618
Total Energy:	77,853,458	kBtu	Total Cost	\$2,034,943

Section 2

<i>Actual Use and Cost With Energy Management Program (1/2015 through 6/2015)</i>				
<u>Energy Type</u>	<u>Current Use Recorded</u>	<u>Units</u>	<u>Avg Unit Cost</u>	
Electric	12,422,408	kWh	0.1406	\$1,746,447
Natural Gas	162,298	Therm	1.0192	\$165,413
Total Energy:	58,627,479	kBtu	Total Cost	\$1,911,860

Section 3

<i>Energy Saved 2014 Compared to Base Period</i>				
<u>Energy Type</u>	<u>Base - Current</u>	<u>Units</u>	<u>Percent Saved</u>	<u>Savings</u>
Electricity	4,758,447	kWh	28%	\$45,878
Natural Gas	29,854	Therm	16%	\$77,205
Total Energy Saved:	19,225,980	kBtu	Gross Savings:	\$123,083
Percent Saved:	25%			6%

Section 4



Cost Avoidance - Without Our Energy Program:

Rates: Base period consumption at current period rates would be an additional: **\$576,327**

"Load Creep": Additional equipment, operating hours and efficiency lost due to age would cost: **\$48,309**

Adjustments for weather, bill period differences & other deviations: **\$373,242**

Total Cost Avoidance: \$1,120,960
Adjusted Savings: 38%

Utilities Budget Update

<u>Budget</u>	<u>YTD</u>	<u>Balance</u>	<u>% Complete</u>
\$3,700,000	\$759,481	\$2,940,519	21%

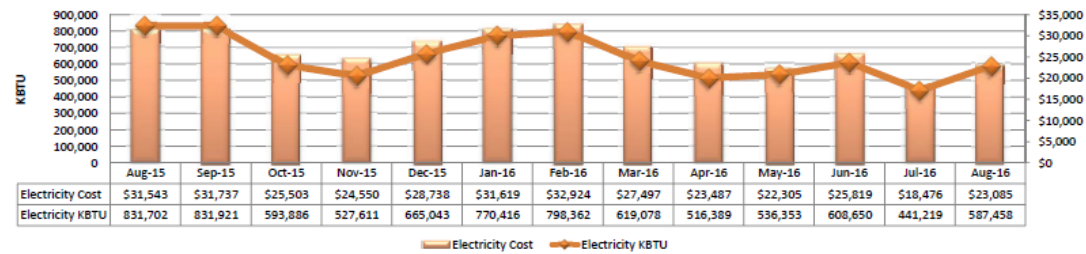
2015-2016 Goals

- New energy conservation initiative.
 - Challenge schools to improve - purpose
 - Provide monthly energy reporting - tool
 - Provide energy dashboards – tool

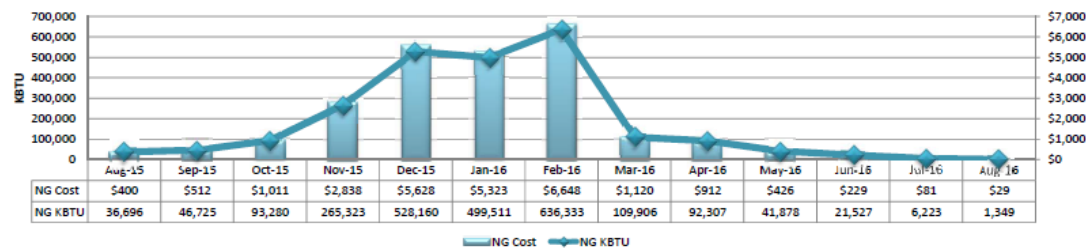
Rock Hill School District
Utilities Budget Report
Report Period: 7/1/2015 through 10/30/2015
Date: 11/18/2015
By: Kim Melander

<u>ACCOUNT</u>	<u>School</u>	<u>Budget</u>	<u>YTD</u> <u>Expenditure</u>	<u>BALANCE</u>	<u>PCT Cmplt.</u>
100-254-0321-000-002	BES	\$87,249	\$14,821	\$72,428	17%
100-254-0321-000-004	CHMS	\$184,135	\$58,155	\$125,980	32%
100-254-0321-000-005	CCD	\$48,039	\$7,294	\$40,745	15%
100-254-0321-000-006	EZES	\$62,243	\$14,321	\$47,922	23%
100-254-0321-000-007	DCMS	\$218,339	\$59,679	\$158,660	27%

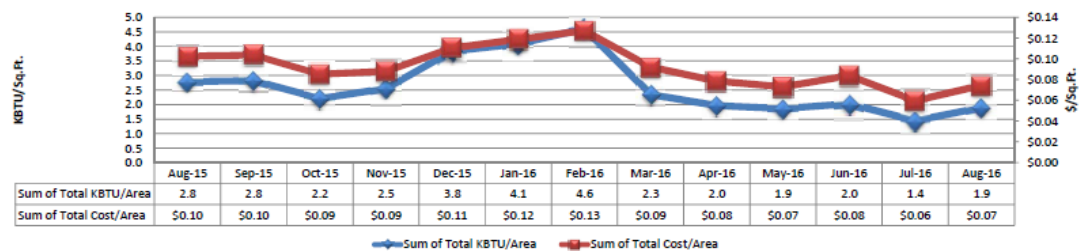
Electricity Usage and Cost Chart



Natural Gas usage and Cost Chart



Energy Intensity and Energy Cost KPI's



PX:Connect



10:07 AM

Current Conditions
58.0 °F
Overcast

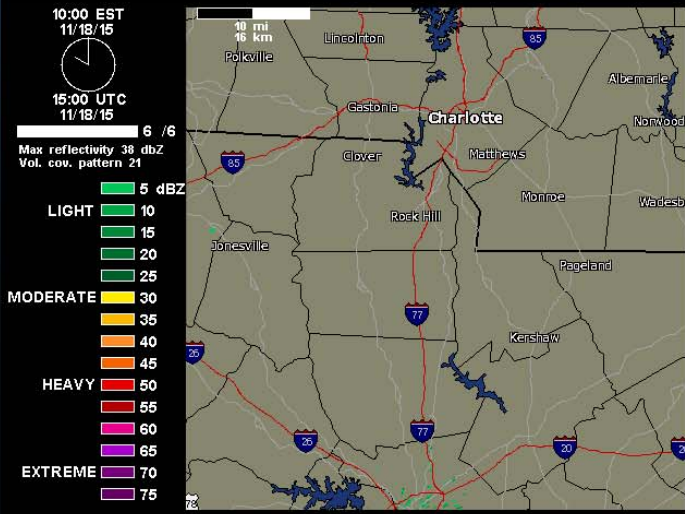
OA Humidity 84.0 %
OA WB Temp 55.2 °F
Barometric Press 30.2 in Hg
Wind Direction Variable
Wind Speed 3.5 mph

Today Forecast
68.0 °F/64.0 °F
Rain
Precip: 81 %

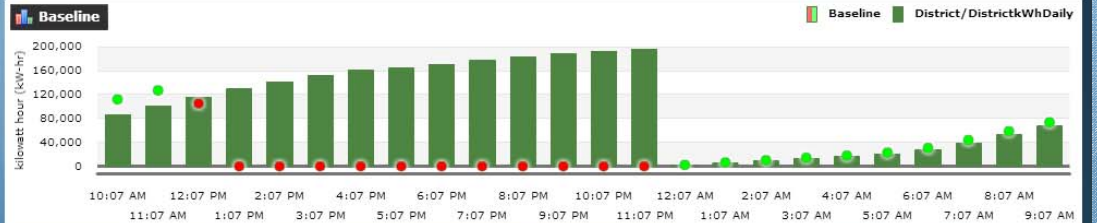
Tomorrow Forecast
73.0 °F/44.0 °F
Thunderstorms
Precip: 23 %



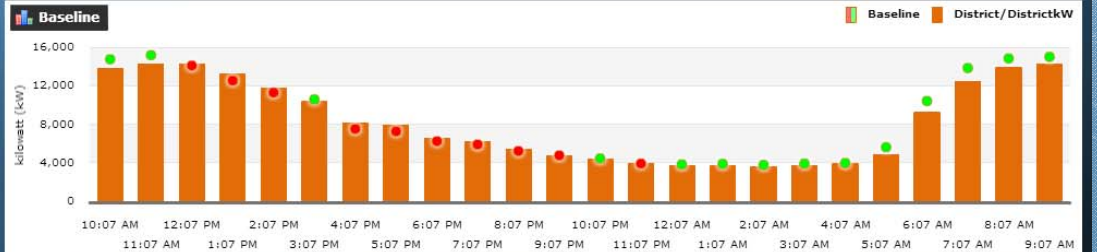
PX:Connect



Baseline Comparison



Baseline Comparison



2015-2016 Goals

- Academic collaboration – Kiosk energy dashboard.
- Energy Star labels for remaining buildings.
- Efficiency upgrade projects
 - Control system upgrades and enhancements – ongoing.
 - Lighting upgrades – replace blown bulbs with LED
 - Energy and sustainability integrated into Capital improvement projects.

Questions?

Thank you for your support!

Have a safe and happy
Thanksgiving Holiday!