



**Oconee County**  
**REAL ESTATE, FACILITIES &**  
**LAND MANAGEMENT MEETING**  
**AGENDA**

**November 14, 2017**

**5:30 p.m.**

*[meeting will either immediately precede or follow the Budget, Finance & Administration Committee meeting, which is also scheduled at 5:30 pm].*

**Oconee County Administrative Offices**

**County Council Chambers**

**415 S. Pine Street, Walhalla, SC**

1. Call to Order
2. Approval of Minutes:
  - May 9, 2017
3. Discussion Items *[to include Vote and/or Action on matter brought up for discussion, if required]*
  - New Air System at Oconee County Courthouse
  - Update on Westminster Magistrate – Mr. Moulder
  - Update on Fair Oak Youth Center
4. Other Business *[to include Vote and/or Action on matter brought up for discussion, if required]*
5. Adjourn

There will not be a scheduled opportunity for public to comment at this meeting.  
Council members will discuss recommendations from the Administrator at this meeting.

If time permits at the end of the meeting *[and at the Committee Chair's discretion]* the Committee may take agenda related questions from the public.

**[This agenda is not inclusive of all issues which the Committee may bring up for discussion at this meeting.]**

**Assisted Listening Devices [ALD] are available to accommodate the special needs of citizens attending meetings held in Council Chambers.**

**ALD requests should be made to the Clerk to Council at least 30 minutes prior to the meeting start time.**

Oconee County Council & Committee meeting schedules and agendas are posted at the Oconee County Administration Building and are available on the County Council Website [www.oconeesc.com/council.html](http://www.oconeesc.com/council.html)  
[All upcoming meetings will be held in Council Chambers unless otherwise noted]

## BEVERLY H. WHITFIELD

CIRCUIT COURT  
(864)638-4280 EXT 3

CLERK OF COURT  
P.O. BOX 678  
WALFALA, S.C. 29691  
FAX (864)638-4282  
E-MAIL: [bwhitfield@oconeesc.com](mailto:bwhitfield@oconeesc.com)

FAMILY COURT  
(864)638-4280 EXT 3

June 13, 2017

To: Mr. Scott Moulder  
County Council Members

As all of you are aware, we are constantly having problems with our heating and air. In the last month, the air has been off at least 12 of the 20 days we have been here. When they had to replace parts the week of May 15 we were having Family court and General Sessions Court and I went out and bought as many fans as possible to help but it was still very hot. Last week during Family Court the air was off again and the Judge had to stop court twice because a couple of attorneys got sick from the heat and he let them go outside to their cars to cool down.

We are today again without air and will be until the end of the week as they have to replace a chiller. With temps in the high 80's and no way to vent any air this courthouse will be miserable.

That said we need this system replaced and a new one working. Our court schedule for the next 6 months is extremely heavy and I have multiple courts running at one time. Just the heat from the bodies makes it miserable even if the air is working so imagine how it will be if the air is not working.

If you need anything further, I will be glad to meet with you.

Yours truly,  


Beverly H. Whitfield  
Clerk of Court  
Oconee County  
864-638-4283  
[bwhitfield@oconeesc.com](mailto:bwhitfield@oconeesc.com)



**Daikin Chiller Proposal**  
Oconee County Courthouse  
415 South Pine Street  
Walhalla SC 29691

**Prepared for:**  
Mr. Lake Jullian  
Maintenance Director  
415 South Pine Street  
Walhalla SC 29691

**November 9, 2017**

**Prepared by:**  
Chris Kelley  
Account Executive  
Daikin Applied  
186 Parris Ridge Drive  
Spartanburg SC 29316

*Engineered for flexibility and performance™*



## Project Overview – Exhibit A

Daikin Applied (formally McQuay Factory Service) provides Turn-Key HVAC installs, HVAC service repair, and maintenance service in over 50,000 locations throughout the world. In this area, Daikin Applied has earned a reputation for excellence which can be attested to by our long term existing customer base. Many of Daikin Applied customers are long term service agreement customers of 16 to 20+ years.

With Daikin Applied you get the resources and support of an international corporation combined with the dedication and accessibility of a local organization. We have an ongoing commitment to providing responsive, expert field service and support.

Daikin Applied has been a world leader in chiller technology. We continue to grow and offer advance technology to our customers worldwide with reliable and efficient equipment.

Since 2007, we have been offering an Air-Cooled chiller utilizing the scroll compressor technology with R-410a refrigerant. This advanced technology has given our customers unforeseen performance in their operating and maintenance cost of their equipment along with the use of an environmentally acceptable R-410A refrigerant in our chillers. With either two or three scroll compressors per refrigerant circuit, excellent part-load performance is achieved. These units feature lower sound levels and smaller footprints in some sizes, continuing Daikin's legacy of high quality, high efficiency, and quiet operation.

Daikin Applied is honored to provide a turnkey replacement project for the McQuay ALS chiller located at the Wilkes County Courthouse facility. Please review the following information on the existing McQuay chiller.

The existing McQuay Screw chiller has been in operation for over eighteen years and it is reaching the end of its life cycle. It has operated well over this time period, however the annual full maintenance service cost will continue to escalate over time due to the risk and costs associated with catastrophic compressor failures and costs of R-22 refrigerant.

*Daikin recommends replacing the one unit due to following:*

- *Equipment life cycle – The current chiller is at the end of its life cycle and will incur more cost to operate and maintain.*
- *Refrigerant type (R-22) – This refrigerant is no longer being made and replacement refrigerant is being phased out under the EPA "Clean Air Act".*
- *Efficiency of the current chiller is well below design due to the condenser coil condition and age of the chiller. This is causing a much higher energy usage than a newer replacement chiller.*

The replacement chiller will be manufactured in our Staunton, Virginia manufacturing facility. The Daikin Plant is over 550,000 square foot facility on a 12+ acre complex with approximately 500 employees, working 3 shifts, manufacturing Screw, Scroll, and Centrifugal chillers ranging from 10 to 2700 tons per machine, with 3 AHRI certified test stands and Registered ISO14001 facility.

With this support of the Commercial Chiller Manufacturing Facility, Daikin Applied can provide fast response service not only for parts if needed in an emergency but having access to the numerous engineers who engineered, tested, and built this unit.

Please review the following scope of work and pricing to replace the existing chiller.



## Scope of Work

Daikin will provide the equipment, labor and materials to remove the existing McQuay Model ALS170A Screw Chiller and install a new Daikin Model AGZ170E Scroll Chiller. This service will include the following:

1. Coordinate all work with the Oconee County Courthouse personnel
2. Lock & Tag Out electrical service feeding chiller
3. Recover the refrigerant from the existing chiller and dispose of per EPA Guidelines
4. Disconnect the electrical, control wires, and chilled water piping on the existing chiller
5. Have a crane setup and remove the existing chiller and scrap
6. Furnish and install 20" Tall structural I beams to raise the chiller height to allow for better airflow through condenser.
7. Have the crane set the new chiller on the new steel and existing concrete pad
8. Reconnect the electrical, control wires and chilled water piping to the new chiller
9. Install new thermometers and gauges at the chiller
10. Furnish and install a new flow switch
11. Leak test new piping
12. Re-insulate chilled water piping including new piping installed
13. Remove electrical Lock Out and power up new unit and setup for proper operation
14. Start chiller, log and check for normal operation
15. Cleanup area.
16. Review installation and operation of new chiller with Oconee County Courthouse personnel
17. Provide up to two (2) hours of owner training.

## Project Specific Inclusions

1. Equipment: Nominal 170 Ton Daikin Air Cooled Chiller made to order
2. Crane & Rigging
3. Mechanical
4. Electrical
5. Insulation to match existing
6. Recover and dispose of existing refrigerant per EPA Guidelines
7. Work based on existing chilled water isolation valves holding
8. Overtime and Afterhours Work (includes weekend work)
9. Permits
10. All applicable taxes
11. \*Owner training
12. The old chiller including refrigerant to become Daikin's property. The scrap value of this old chiller has been included in our pricing.

## Project Specific Exclusions

1. Building Automation work to include control wiring (Daikin Applied will reconnect control wires for start/stop, flow switch, and alarm contact which are in place currently)
2. Water Treatment



The following standard items are not included:

1. Engineering and/or Design
2. CAD Drawings
3. Any work related to hazardous materials (such as asbestos, lead, etc.)
4. Structural work (engineering, structural steel, reinforcing, lintels, etc.)
5. Temporary cooling systems
6. Any work found outside of the scope of services provided. This will be quoted separately.



### Daikin Chiller Information

Provide One (1) new Daikin Air-Cooled Chiller Model AGZ170E



The chiller will be equipped as follows:

- Standard AGZ170E Nominal 165 tons
- Packaged Air-Cooled Scroll Chiller
- High Efficiency Model
- 460 Volt 60 Hertz 3 Phase
- Factory-assembled, charged, and run tested (In Commercial Chiller Manufacturing Facility in Staunton, Virginia)
- Six Scroll compressor design (3 compressors per circuit)
- R-410a Refrigerant
- Dual Refrigerant Circuits
- Single-Point Power Disconnect with Circuit Protection
- Standalone MicroTech III Chiller Controller
- Electronic Expansion Valves
- Wire Grill Protection for Condenser Section. (Picture shown includes louvers which are not included)
- Phase and Under/Over Voltage Protection with LED
- Daikin Factory Service Representative Start Up
- 1<sup>st</sup> Year Parts, Labor and Refrigerant Warranty, 5 year compressor parts only warranty

EXHIBIT A



## Pricing Summary

Our base price for performing this turnkey replacement including five (5) year compressor warranty is: \$109,580.00

The unit has Daikin's new condenser coil design whereas the coils are not exposed on the sides of the unit. The new unit comes with wire grilla for the coil area to help prevent debris from entering the coil area. This chiller will be located in the same location as the existing chiller.

Submitted By:

Daikin Applied  
Chris Kelley

(Name of Signer)

(Signature)

11/09/17

(Date)

Acceptance By:

Approved By: Daikin Applied Americas Inc.

(Full Legal Name)

(Name of Signer)

(Signature)

(Signature)

(Title)

(Title)

(Date)

(Date)

(Customer PO)

TK CK110917

(Proposal #)

Pricing is firm for thirty (30) days.

Billing will be due upon invoice.

Pricing and acceptance are based upon the Daikin Terms & Conditions, which are attached.

This proposal is being submitted by Daikin Applied Americas, Inc. (hereinafter also referred to as "Daikin Applied")





Replacement Daikin Chiller Return On Investment

Replacement chiller cost--\$109,580

	<i>Existing Contract</i>	<i>New Chiller/Contract</i>	<i>**Energy Savings</i>
Year 1	\$15K	\$2500	\$5,480
Year 2	\$16.5K	\$2500	\$5,480
Year 3	\$18K	\$2500	\$5,480
Year 4	\$20K	\$2500	\$5,480
Year 5	\$22K	\$2500	\$5,480
Year 6	\$24K	\$2500	\$5,480
Year 7	\$26K	\$2500	\$5,480
	Total: \$141,500	Total: \$17,500	Total: \$38,360

\*\*Annual energy savings on new replacement chiller is calculated based on the following:

## Design Conditions

Existing McQuay ALS170 chiller: 11.4 IPLV efficiency (Integrated part load)

New Daikin AGZ170 chiller: 16.6 IPLV efficiency (Integrated part load)

Annual operating hours: 3,611 hours (chiller operates above 45 degree ambient)

Utility cost: \$.09/kwh (estimate)

## Calculations and formula

See attached Daikin chiller energy analysis page

## Simple payback

**3.93 years**

# Daikin Chiller Economic Energy Analysis

## Building Information

User:   
 Facility:   
 Date:   
 City:   
 Building Type:   
 Load Profile:   
 Cooling Capacity:   
 Energy Rate:   
 Expected Maintenance/Repair Reduction:  %/yr.

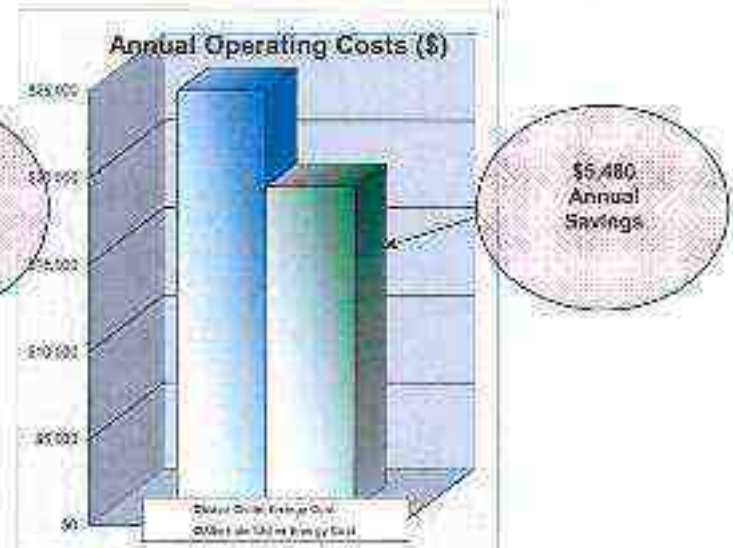
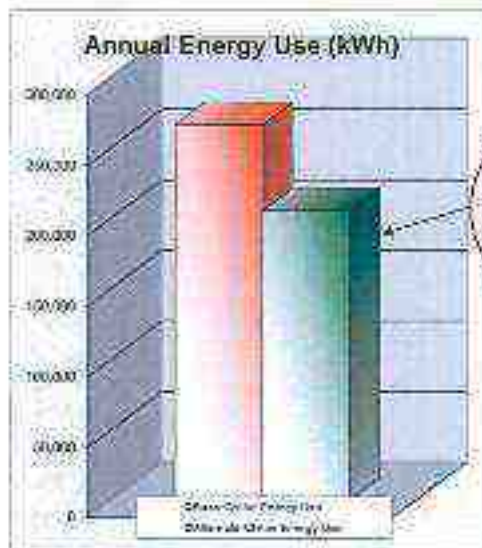
## Chiller Comparison<sup>2,3</sup>

Chiller Type:  Chiller Load:   
 Base Chiller 1:  tons  
 Base Chiller 2:  tons  
 Alternate Chiller 1:  tons  
 Alternate Chiller 2:  tons  
 Two Chiller Configuration:   
 Initial Investment:   
 Expected Rebate:   
 Initial Investment After Rebate:   
 "Other Tangible" Savings/Benefits:  %/yr.

Annual Operating Hours <sup>1</sup>	% of Design Load	Base		Totals		Alternate		Totals	
		Chiller 1 kW/ton	Chiller 2 kW/ton	kWhr	Energy Cost	Chiller 1 kW/ton	Chiller 2 kW/ton	kWhr	Energy Cost
Default	User	Enter	N/A			Enter	N/A		
23	N/A	1.295		5,082	\$456	1.224		4,776	\$430
191	N/A	1.235		35,917	\$3,233	1.086		31,818	\$2,864
575	N/A	1.155		90,497	\$8,144	0.951		74,312	\$6,668
363	N/A	1.105		47,597	\$4,283	0.842		36,358	\$3,272
50	N/A	1.062		5,445	\$490	0.762		3,907	\$352
138	N/A	1.022		11,956	\$1,076	0.682		7,978	\$715
304	N/A	0.978		20,188	\$1,815	0.650		13,431	\$1,209
416	N/A	0.931		19,456	\$1,751	0.619		12,330	\$1,164
523	N/A	0.888		15,762	\$1,419	0.587		10,450	\$940
1035	N/A	0.840		14,784	\$1,331	0.555		9,775	\$880
3611	0			286,628	\$23,986			205,734	\$18,516

- Notes: 1. Operating hours for defined building types are typical and should be modified for the specific building.  
 2. Base chiller = Chiller as currently configured.  
 3. Alternate chiller = Chiller after modification.

Results	
Initial Investment:	\$0
Initial Investment After Rebate:	\$0
Annual Energy Saved:	\$5,480
Annual Maintenance Savings:	\$0
Annual "Other Tangible" Savings:	\$0
Annual \$ Saved:	\$5,480
Simple Payback Without Rebate:	0.0 Years
Simple Payback With Rebate:	0.0 Years



\*The energy savings and other information provided in this document are for comparative purposes only and are not a guarantee of monetary savings, or energy performance. Your buildings savings may vary based upon actual weather conditions, cooling load profile, energy costs, construction methods and other factors outside the scope and control of Daikin. For more detailed analysis consider using Daikin's Energy Analyzer™, Daikin's Energy Analyzer I™ program, or other more detailed approach.



Oconee County  
Council

Oconee County  
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District I

Wayne McCall  
District II

Paul Cain  
District III

Julian Davis  
District IV

J. Glenn Hart  
District V



.....LEGAL AD.....

**PLEASE ADVERTISE IN THE NEXT ISSUE  
OF YOUR NEWSPAPER**

The Oconee County Council will meet in 2017 on the first and the third Tuesday of each month [excluding July & August which will meet only on the third Tuesday of the month] at 6:00 p.m. in Council Chambers, Oconee County Administrative Offices, 415 South Pine Street, Walhalla, South Carolina unless otherwise advertised.

Oconee County Council will also hold a Planning Retreat in February 2017 [TBD] in Council Chambers to establish short and long term goals.

Additionally, Council will meet on January 2, 2018 at 6:00 p.m. in Council Chambers at which point they will establish their 2018 council and committee meeting schedules.

Additional Council meetings, workshops and/or committee meetings may be added throughout the year as needed.

Oconee County Council Committees will meet in 2017 on the following dates/times in Council Chambers, 415 South Pine Street, Walhalla, South Carolina unless otherwise advertised.

The Law Enforcement, Public Safety, Health & Welfare Committee and the Transportation Committee at 5:30 p.m. on the following dates: January 10, April 11, July 11 and October 10, 2017.

The Real Estate, Facilities & Land Management Committee and the Budget, Finance & Administration Committee at 5:30 p.m. on the following dates: February 14, May 9, August 8 and November 14, 2017.

The Planning & Economic Development Committee at 5:30 p.m. on the following dates: March 14, June 13, September 12 and December 12, 2017.