Residential Geothermal Upgrade - Huntsville Alabama
Case Study

Comfort and Efficiency With Geothermal
Mountainside Home Renovation

Project Goals

- Energy savings and environmental comfort
- Improve system performance and comfort
- Lower sound levels
- Reduce / eliminate electric resistance heating

Background

Huntsville Alabama homeowner Bill Stanley is an expert in veterinary medicine, specializing in developing vaccines for an international poultry breeding company. When he decided to remodel his Huntsville, Alabama mountainside home to incorporate geothermal heating and cooling, he contacted Mike Stolz of D&R Refrigeration.

However, when his previous geothermal system supplier could not meet requirements, Mr. Stanley contacted SAE Sales, the Manufacturer’s Representative for Bosch.

Mike Easterley at SAE suggested consulting with Mike Kelly of Geothermal Systems in Peachtree City, Georgia. Kelly is the geothermal distributor for Bosch and FHP products in the southeast.

Installation Summary

Five vertical bore holes were installed by a geothermal well driller. Installation of Bosch SM Series packaged 3-ton and TA Series split system 2-ton geothermal units was undertaken by D&R Refrigeration, who included two geothermal flow centers with purge tanks.

After reviewing the home’s piping, Mike Kelly reworked the supply piping to provide lower sound and improved capacity with more efficient zoning performance. A desuperheater provides domestic hot water from the geo system to a supplemental hot water tank.
Benefits and Conclusion

Homeowner Bill Stanley reported significant electricity savings with the new geothermal system. Mr. Stanley credits installer Mike Stolz and geothermal consultant Mike Kelly for helping with modifications to the interior piping and upgrading system performance in his home.

“There is much to say about all I have learned the last several months, and how pleased I am with my new Bosch geothermal system,” added Mr. Stanley.

“We have just come through 24 hours of extremely cold temperatures. For example, the low one morning at my house was 2 degrees F, and I didn’t have to use auxiliary electric heat. I expect my energy costs to be lower for winter 2015 compared with winter 2014, a savings of roughly 30%.

“I’ve learned that when installing a geothermal system, the contractor one chooses should be familiar and properly trained on geothermal best practices, to provide an efficient, well-performing system to meet home comfort needs.”