



**Ken Field**

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*Exclusively in the Blue Valley Times*

## Fuel for Thought

The amount you pay to heat your home depends on many factors. The size of the area you are heating, the cost of fuel, efficiency of the unit producing the heat, efficiency of the structure to contain the heat, and the temperature at which you attempt to keep the space. Each of these can be broken down enough to be an article of their own so let's start with fuel.

The currently price for 1 million btus of electricity is \$39.75, oil is \$28.49, natural gas is \$24.41, and propane is \$26.66.

Straight electric heat is %100 efficient so that stays constant as you use it. Oil is 85% efficient at best so you pay \$32.76 to get the 1 million btus. Natural gas and propane systems can be anywhere from 80% to 96% so those prices are as follows. 80% natural gas \$29.29, 96% natural gas \$25.39, 80% propane \$31.99, and 96% propane \$27.73. That allows you to compare apples to apples, ALMOST. Heat pumps use electricity but use it more efficiently than electric backup heaters or electric baseboard heat. A typical heat pump has a COP (coefficient of performance) of 2.0. That means when it is running it can use electricity twice as efficiently as electric baseboard. When the outdoor unit is operating properly it can provide 1 million btus for \$19.88. Because it will have to defrost occasionally and also need help from the electric backup heat it is impossible to calculate exactly what it will cost to operate but it is well over \$20.

Inefficient systems of every type are the least expensive to install and easiest for contractors to convince homeowners to buy. They are also the worst investment because they perpetuate the wasteful use of fuel. I have not installed a boiler that has a hot water coil (summer/winter) hookup in probably 20 years. I just refuse to use them because they are wasteful and inefficient. If you want it done wrong, get someone else to do it. There are very efficient ways to do the same job but there is slightly more initial cost. The payback comes fast and keeps on paying back forever. I also do not promote 80% efficient gas furnaces and boilers. Occasionally they make sense but not usually. The operating cost of an inefficient system will haunt you long after you forget the price you paid to upgrade to something efficient.

There are maintenance costs that need to be factored in with everything but electric baseboard heat. However, there are several taxes on electricity that are not accounted for in the cost per kwh that probably exceed maintenance costs for other fuels.

Ken Field is the owner of Slate Belt Energy and Field's Service, Inc. As a certified energy rater and contractor, he is qualified to assess every aspect of energy usage and prescribe solutions to save energy. He can be reached at 610-759-6306 or email [Ken@FieldsService.com](mailto:Ken@FieldsService.com)

## "Commissioners Reorganize with Ciesla as Director"



Warren County Surrogate Michael J. Doherty administers the oath of office as County Commissioner Jason J. Sarnoski begins his fifth three-year term on the board. With Sarnoski were his wife, Tammi, and children Skyler and Jason.



Warren County Commissioner Lori Ciesla, second from left, is sworn in as the board's Director for 2023 by U.S. Representative-elect Thomas Kean, Jr. while seven friends – Scott Dorrlor, Jackie Hlinka, Gail Perruzzi, Lori Fiore (partially hidden), Melissa Saykay, Katie Hirner (partially hidden) and LisaMarie Agolio – stand with her, during the county government's annual reorganization meeting at the Warren County Courthouse in Belvidere.

## EPA Qualified Outdoor Wood Furnaces

### A new generation of clean

When John Hanley built his 4,000 square foot log home in a small Ohio township 17 years ago, he chose propane for heat and domestic hot water because it was an economical choice.

But, when propane prices increased and his annual fuel bill reached \$6000, he dropped the thermostat to 63°F to manage his costs. His wife, however, suffered with severe arthritis and lowering the ambient temperature caused her discomfort. He began looking for a more affordable home heating solution. His research led him to outdoor wood furnaces.

Today's outdoor wood furnaces, also called wood boilers or wood-fired hydronic heaters are a clean, cost-effective alternative to the safety, mess and health concerns of indoor wood burning, while also providing a ready supply of domestic hot water.

The outdoor furnace heats water in an insulated water jacket surrounding the firebox. The heated water circulates through underground pipes to a forced-air furnace, boiler or radiant floor heating system that distributes even, adjustable and comfortable heat.

Hanley knew some townships placed restrictions on the installation of outdoor wood furnaces to address smoke emission issues. It was important for him to set a good example in his own community

by choosing a unit that was EPA qualified. Central Boiler, an American-owned company in business since 1984, helped create the EPA Hydronic Heater Program. Their E-Classic was the first outdoor wood furnace meeting Phase 2 of the program.

Central Boiler's new E-Classic models utilize a three-stage gasification technology and a self-regulating thermostatically controlled system that burns wood so completely that combustion efficiencies approach 100%. This means the owner burns less wood, with very little residual ash and virtually no smoke. By minimizing the emissions, this cleaner generation of outdoor furnaces is the optimum choice for people concerned with the environment.

Hanley chose an E-Classic to heat a 2,500 square foot barn/garage in addition to his home and hot water. Now, Hanley's wife keeps the ambient house temperature at 76°F. "She's happy and she has endless hot water for her whirlpool bath," he says.

Company reliability was also a factor in his choice. "Central Boiler stands behind their products and this sort of warranty service is really important to me."

Finally, because he cuts his own wood, he has eliminated his home heating costs enabling him to redirect the money saved to their children's university educations.

*"This furnace is the way to go. You can't beat it," says Hanley.*



In 2002, concerns regarding smoke emissions from outdoor wood furnaces prompted a number of manufacturers to form the Outdoor Furnace Manufacturers Caucus and ultimately partner voluntarily with the EPA to create a program that gave homeowners choices for cleaner, more efficient models. EPA states that outdoor hydronic heaters that are EPA Phase 2 program qualified are 90% cleaner than unqualified units.



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## The NCC Spartans Win Their 7th Region 19 Champions of Character Cup

By Mia Rossi

BETHLEHEM, PA - Region 19 has announced that the Northampton Community College (NCC) athletics program has been awarded the Champions of Character Cup for their outstanding commitment to community service and sportsmanship during the 21-22 academic year. The award, which is presented annually, is given to the program which demonstrates outstanding results in character development of its student-athletes and coaches by embracing the true spirit of competition through the five core values of respect, responsibility, integrity, servant leadership and sportsmanship.

"Winning the Champions of Character Cup is truly an honor for our program and the college as a whole," remarked Director of Athletics, Troy Tucker. "It something we set as a goal each year."

The 2021-2022 Champions of Character Cup Award is the 7th overall for the NCC athletics program and 6th consecutive award. "I want to thank our coaches; Adrian Yaguez, Brennan McCarthy, Terrence Bomar, Mario Barrantes, Rachael Caywood, Rick Wilmott, and Tammy Smith," stated Tucker. "They are truly the driving force behind this, and they stress the importance of community service throughout the recruiting process. They want their student-athletes to understand how important that piece is to our program before they even set foot on campus."