

Bracken's System On Energy Efficiency

Jerry Bracken's house peaks out at you through the pine trees as you approach it on a gravel road through the woods. The toys in the yard and the attractive appearance of the two story frame house make the 1600 square foot residence look like the all American home. Beneath its blue exterior lies a well insulated house with an unusual heating and cooling system. Living in Advance, North Carolina, about 15 miles southwest of Winston-Salem, the Brackens wanted a heating system which would both heat and cool their home economically.

Bracken realized that air source heat pumps lose efficiency when the outdoor temperatures reach extremes. If outdoor temperatures fall much below 35 degrees F., the air source heat pump has to rely on electrical resistant heat coils which make it operate like an electrical furnace. In the summer, the air source heat pump must operate like a conventional air conditioner which means it must work harder as the weather gets hotter.

To make his heat pump system more efficient than an air source one, Bracken decided to use water based heat pumps. He selected two Carrier heat pumps with a combined capacity of 40,000 Btus and plumbed them in parallel; one in a closet downstairs and the other in an upstairs closet immediately overhead. The heat pumps used well water with an average temperature of 57 degrees F. as their source of hot or cold temperatures. Unfortunately, the heat pumps required as much as eight to ten gallons of water per minute at peak periods, an averaged from 12 to 15 thousand gallons per month.

In times of drought a water source heat pump could be a liability, especially if you were not returning the water to a well.

Bracken decided to close the loop on his water use. Instead of a continuous supply of well water Bracken devised a system which circulates about 75 gallons of water through his septic tank drain field in a 400 foot loop of cast iron soil pipe.

Although N.C. State University had done a study on using septic fields as the medium

for a heat exchanger, few if any studies had been done using a system with somebody actually living in the house as an average family would year around. Bracken received \$1,580 from the Department of Energy's Appropriate Technology-Small Grants Program to develop a demonstration project using a ground loop energy exchanger. The project monitoring the effectiveness of the system. Bracken installed 23 thermocouples at strategic points in the system for monitoring purposes. He rented a recording device which kept a record of water, soil and air temperatures through the first heating season. Not surprisingly, the ground and water temperatures proved substantially warmer in winter and cooler in summer than the outside air temperatures.

The moderating influence of the earth's stored solar energy meant that the water source heat pump did not have to work as hard extracting heat on cold days or cold on warm days as an air source heat pump would have. As a result, Bracken us-

ed less electricity to heat his house than an air source heat pump or an electric furnace would have used. In fact, Bracken figured his system would heat more economically than oil or gas furnaces or practically anything short of a person who used wood and cut it himself on his own land. Since one can't air condition with wood, Bracken figures his system is the best one to have on a year around basis.

Using a separate meter, Bracken kept track of the exact electrical consumption his heating system used during the winter of 1981-82.

For the months from October 1981 through March 1982 his system used 3809 kilowatt hours (kwh) electricity worth about \$230 at \$.06 per kwh. Many similar sized homes use that much in a month.

If you would like more information on Bracken's system and its performance, you write him at Rt. 2, Box 188, Advance, N.C. 27006.

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C.O.A. Senate Chicken Fry

Why do chickens cross the road? The Student Senate at College of The Albemarle hopes that this coming Saturday, people will carry a lot of chickens across Water Street to Waterfront Park.

The Senate is sponsoring a Chicken Fry from 11 A.M. until 7 P.M. Saturday at Historic Park on the Corner of Water and Ehringhaus streets in Elizabeth City. Plates are \$3.50 each.

Richard Banks, senate president, said the proceeds from the fry will be donated by the student governing body to the COA Foundation. The foundation kicked off its first annual fund drive on Good Friday with a \$30,000 goal.

Lighthouse Movies

The Lighthouse in Elizabeth City this Friday will host two movies "Don't Call Me God/I'll Call You" and for the kids "Miriam and Moses" both start at 7:30 P.M. You won't want to miss these! Saturday, April 16, New Life Band will be ministering in song. Starts at 7:30 P.M. Don't miss this blessing.

"We hope to have a strong response locally and from people in our area who have benefited from the college's services," Banks said.

"This will be a fine opportunity to show support for our community college, and to enjoy a great meal, too."

St. Anne's Bake And Rummage Sale

St. Anne's Catholic Youth Organization will be having a Bake and Rummage Sale this Saturday at the Church. In case of rain it will be held in the Church basement. The sale is from 9:00 A.M. until 2:00 P.M.

The money is to help cover expenses for a 3 day religious convention coming up in May. Come see what we have for you.

Christian Fellowship To Meet

The Edenton Chowan Christian Fellowship Union will meet April 24, at Canaan Temple A.M.E. Zion Church, Edenton. Rev. Thomas McPherson is the pastor.

To Understand The National Guard And Reserve

Every employer in this country - large or small, public or private - has a stake in a strong national defense and a vital role to play in ensuring its continuation.

Understanding the role of the National Guard and Reserve and the vital missions they perform in maintaining a strong defense posture is important for all employers as citizens. There are many who make a direct contribution to the effort - those who have members of the Guard and Reserve working for them.

Employers can provide positive support for their citizen/military employees in many ways:

- Sign a Statement of Support for the Guard and Reserve and display it proudly and prominently for all to see.

- Formalize personal policies concerning participation in the Guard or Reserve. Include provisions for military leaves of absence exclusive of earned vacation time and job opportunities and benefits equal to those for employees who do not participate.

- Encourage employee participation in Guard and Reserve programs, recognizing that their dedication, training and commitment will enhance their performance on-the-job.

- Recognize in internal communications the accomplishments of Guard and Reserve employees for their patriotic part-time activities.

- Seek immediate resolution of job/military training conflicts.

Without the support and cooperation of their civilian employers, members of the Guard and Reserve often encounter problems in their efforts to perform a patriotic duty. With support, our national defense will remain strong and ready.

Since 1973, this nation has met its military and personnel requirements without the aid of a draft. The National Guard and Reserve Forces have been assigned increasingly important roles in all-volunteer total force and are the primary source for augmentation in any

emergency requiring rapid and substantial expansion of the active forces.

Because of this increased reliance, the training and readiness of the Guard and Reserve Forces must be maintained at the highest possible level. They are being provided with more modern equipment, aircraft, vehicles and armament, and steps are being taken to make citizen/military service both attractive and maintaining a strong Guard and Reserve depends upon this nation's employers.

The National Committee for Employer Support of the Guard and Reserve (NCESEGR) asks all employers to sign a Statement of Support for the Guard and Reserve. By doing so, they show their support by ensuring the same job and career opportunities to Guardsmen/Reservists as to other employees and by granting leaves of absence for military training without sacrifice of vacation time.

While these actions are no more than what is required by law, signing indicates the willingness of employers to cooperate fully and to support the total force policy.

Helms Reports On Jeane Kirkpatrick

WASHINGTON—Jeane Kirkpatrick is one of the finest—if not the finest—people in public life today. She is, of course, the U.S. Ambassador to the United Nations. She is brilliant, perceptive and courageous. And she doesn't hesitate to speak her mind about the United Nations.

I sense a growing feeling across the country that the United States should get out of the United Nations. It is a farce. It is also a haven for spies who come into the United States in droves pretending to be "diplomats" representing their respective countries in the UN. The FBI has been quite candid about this.

Yet, year after year, Congress continues to appropriate enormous sums of the American taxpayers' money to help support the United Nations. This fiscal year, for example, the United States will furnish a total of \$763,106,000 to the United Nations.

KIRKPATRICK—In early March, Ambassador Kirkpatrick testified before a subcommittee of the Senate Appropriations Committee. Her testimony was virtually ignored by the major news media. If the taxpayers of America had any way of learning what Mrs. Kirkpatrick said, I believe they would be up in arms—demanding that the United States stop financing such a large percentage of the UN's operating costs.

Among other things Ambassador Kirkpatrick told the Senate subcommittee that the UN "is not at all, she said, an institution that reflects or represents the world in the way representatives bodies usually do."

She raised an important question: Can the UN be made an institution which helps resolve differences rather than exacerbate them?

FLAWED—Mrs.

Kirkpatrick noted that most Americans have "a fundamentally flawed mental picture of how issues are decided at the United Nations." Issues are not decided on merit, she said. The UN representatives vote together in blocs, regardless of the issue at hand. As she put it, "Favors are extended, obligations accumulated and discharged, arms are twisted, horses traded and occasionally, or so one hears, a vote may be bought—or at least rented."

And almost always, the UN votes are against the interests and wishes of the United States. In short, the United Nations follows the communist line, time after time.

BEHAVIOR—The voting behavior at the United Nations is indeed interesting—and depressing from the U.S. point of view.

A study of the 200 most im-

portant issues discloses that the West Europeans were the only bloc of nations voting with the United States more than 50 per cent of the time. Latin American nations voted with the U.S. 38 per cent of the time. Asian nations only 26 per cent. African nations 23 per cent. The East Europeans 8 per cent. Then there are the non-aligned nations which voted with the United States 22 per cent of the time.

WHERE—Occasionally I am asked where I would most like to see the United Nations have its headquarters, if not in the U.S. I am quite sincere when I say that it would be fine to headquarter the UN in Moscow.

I believe it would have a salutary effect if the hundreds of "diplomats" and their staffs were to have to observe how a communist country operates, and how the Russian people have to live.

It wouldn't be long before the diplomats would be clamoring to come back to the United States where there is freedom to be enjoyed, and an abundance of good food and comfortable homes.

If these foreign diplomats are so dead-set upon voting with the communists, they ought to learn, first hand, what communism is.

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