



# CRISIS AND CONSERVATION: EXAMINING NJIT'S ENERGY POLL



## AN NJIT MAGAZINE INTERVIEW

THE ENERGY DEBATE IS HEATING UP among many New Jersey residents. Half believe the nation and the state are heading for an energy crisis, according to NJIT's first public opinion poll. Released early this summer, the poll of four hundred residents also found that 75 percent of the people regard higher energy prices as a financial burden and would reduce their consumption to lower their bills. Conservation measures they support include taking shorter showers, putting lights on timers, using less air conditioning and washing clothes in cold water. Only going to bed earlier received a thumbs down. Half the women, 49 percent, and even more men, 55 percent, said no. And before the hot summer days had even begun, residents were already predicting large-scale blackouts.

NJIT public relations director Sheryl Weinstein recently caught up with two NJIT energy experts: Herb Tate, distinguished research professor of energy studies, former president of the New Jersey Board of Public Utilities (BPU) and consultant to the U.S. Environmental Protection Agency (EPA); and Erv Bales, research professor of architecture, EPA consultant and Energy Star Labels Home Program consultant. As they reviewed the findings, both expressed surprise and dismay.

**SHERYL WEINSTEIN (SW):** What in the NJIT energy poll struck you as most notable?

**HERB TATE (HT):** People's belief that in New Jersey you can have blackouts on the magnitude of what we saw in California. Where did people get that notion?

**ERV BALES (EB):** The poll reveals a widespread misconception about saving energy. People think energy conservation is synonymous with sacrifice. In 1977 [President] Carter got on TV in a heavy sweater with the lights turned down. It made people think energy conservation was supposed to be painful.

**The 1970s oil embargoes taught us that short-term measures like taking shorter showers or turning out the lights fail because they're not sustainable. People only do these things because they perceive a crisis. When they think the crisis is over, they return to their old habits.**

**SW:** Let's talk about the blackouts first. Mr. Tate, aren't the people polled correct, at least to an extent? We had a heat wave this summer and folks in Jersey City and Hoboken went several days without energy.

**HT:** The blackouts we saw this summer were limited to two cities and were local shortages. In California, the whole state was involved. In addition, blackouts in California are an accepted way of conserving power. The state has had rolling blackouts for years.

**SW:** Are you saying blackouts are part of California's energy policy? If you are, how does that differ from policy in New Jersey?

**HT:** There are three reasons for the California blackouts.

Number one: California environmentalists have passed unfavorable laws and regulations for building new power generation plants. The result is that the demand for energy has outstripped the supply. It takes four years to complete an application for a new

plant. That's before a developer can even begin construction. In New Jersey, the approval process usually takes four to six months.

Number two: Without adequate facilities, California utility companies don't have enough transmission to bring in power. Plus they have to buy energy encumbered by laws and regulations that do not bring in the best prices.

New Jersey participates in a unique wholesale market. Called the Pennsylvania, New Jersey, Maryland (PJM), the market permits seven states (including New Jersey) to lean on one another for buying power. PJM also maintains an 18 percent reserve energy margin calculated to keep in storage what it needs to cover peak operating times. Conversely, California utility companies have been permitted to maintain only an 8 to 10 percent operating margin. It doesn't take long to drop under 8 percent capacity.

Number three: When California utility companies were deregulated, the process included a few unforeseen loopholes. The worst one has been demanding that utility companies, who must under law serve 95 percent of the customers, buy energy only from the spot market. The practice quickly created huge, volatile swings in pricing causing California to experience an 84 percent increase in rates last year alone.

New Jersey has different market rules. Utility companies may enter into contracts between themselves and a third-party supplier. Such bilateral contracts offer utilities the chance to pass up the spot market because they can enter into long-term, fixed-price contracts that won't vacillate with the spot market.

**SW:** Dr. Bales, let's turn to you. What should people know about energy conservation?

**EB:** They should know that short-term emergency measures don't work. The survey focused on short-term sorts of things. The 1970s oil embargoes taught us that short-term measures like taking shorter showers or turning out the lights fail because they're not sustainable. People only do these things because they perceive a crisis. When they think the crisis is over, they return to their old habits.

**SW:** So what measures are sustainable?

**EB:** We should be looking at long-term solutions like sustainable building design.

**SW:** Can you explain what you mean by that?

**EB:** Sustainable or green building design means using minimal energy and water. It means protecting the site resources and using many different renewable



materials. Contrary to what most people think, green living is easy, cost-effective and of course it helps the environment.

**SW:** Help us out, Dr. Bales. What are some renewable materials that we could use in our homes and offices?

**EB:** You want to use bamboo flooring instead of oak flooring, since bamboo grows faster; select paint made without volatile organic chemicals; and install photovoltaic sheets that collect solar energy on residential and commercial buildings.

**SW:** Okay, but what if I'm not planning to build, renovate or redecorate? How about some simpler energy efficient measures I can take in my home?

**EB:** I like energy efficient light bulbs. Phillips Electric manufactures a fifteen-watt bulb that throws off sixty watts of light, lasts ten times longer than a traditional bulb and cuts energy consumption by 70 percent. It's easier and cheaper to use these than traditional ones. Think of the immediate dollar savings: replacing ten bulbs will yield about a ten-dollar reduction in your monthly energy bill.

Also, try weather-stripping and caulking gaps around windows and door frames about every five years. Even new windows need help after the first five years. If you plug holes, you'll see fewer drafts in winter and consistently cooler air in summer. You'll save energy and save money.

Finally, furnaces and air conditioners need attention. After fifteen years, you need new ones. Starting this year, New Jersey residents can get a five-hundred-dollar rebate from their utility companies for a new high efficiency furnace under a program started by Herb Tate. Plus, you'll reduce energy consumption and energy bills by about 30 to 40 percent.

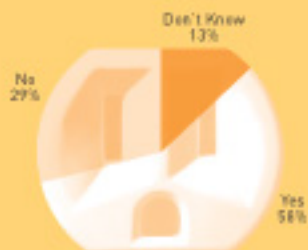
**SW:** Thanks, Dr. Bales. Any concluding thoughts?

**EB:** This is a subject we sometimes don't want to talk about. But in the end, by taking the long-term view on energy use we can not only avoid the short-term pain, but save national resources.

**HT:** The poll showed me that people are not fully educated about what can happen in our region. The truth is, New Jersey is being looked at as a success story to counter the California experience. That's because New Jersey has a legislature that studies the issues, learns from other states and then moves ahead so that we can stay in the forefront of progress. ■

## NJIT ENERGY POLL Q&A A SAMPLE

1| Do you think the country is headed for an energy crisis?



2| Do you think New Jersey is headed for an energy crisis?



3| How likely do you think it is that there will be electricity shortages and blackouts in New Jersey this summer?



4| As you may know, the prices for gasoline, natural gas and heating oil have increased in the past year. For you and your family, how big a problem are these higher prices?



5| Will the price of gas cause you to consider changing your vacation plans this summer?

