

CAROLINA BBQ ... AND H<sub>2</sub>?

## South Carolina Jumps on the Hydrogen Economy Bandwagon

Hydrogen is the most abundant element in the universe and has a myriad of uses, from making margarine to fueling the space shuttle. Now, with President Bush's \$1.2 billion Hydrogen Fuel Initiative, hydrogen is at the center of some significant economic development efforts across the country.

South Carolina wants a piece of the action, hoping to generate high-paying research jobs in the near term and help create a new economic base in the long term. Others are trying to do the same thing, but the Palmetto State has several assets it hopes to exploit with some additional public and private support. Gov. Mark Sanford has proposed \$1.4 million in his 2006–2007 budget to help things along.

In pursuing hydrogen projects, the state's greatest asset may be the research and development experience of the Savannah River National Laboratory. The federally funded facility near Aiken, S.C., has worked with tritium, a radioactive isotope of hydrogen used in weapons, and has researched new ways to generate, store, and use hydrogen since 1951. In addition, the University of South Carolina (USC) and Clemson University have investigated hydrogen-related technologies, including fuel cells that use hydrogen and oxygen to produce electricity, since the 1980s.

Also, the automotive industry has a foothold in South Carolina. This puts the state in a good position to attract the industry's hydrogen R&D activities, says Patrick Serfass, director of program and technology development at the National Hydrogen Association. BMW Group, which has operated its massive Spartanburg County plant since 1994, and DaimlerChrysler AG, which plans to open a van factory in North Charleston this year, have been working on vehicles that use fuel cells and hydrogen-powered internal combustion engines.

Serfass and others say South Carolina needs to foster partnerships between manufacturers interested in hydrogen applications and universities doing the basic research for

such applications. "Corporate industrial involvement in South Carolina's efforts is vital because the economic benefits from hydrogen-related research are most likely to accrue to regions where research is applied, not necessarily where the research is just performed," noted a July 2005 report published by the South Carolina Hydrogen Coalition and the South Carolina Energy Office.

These partnerships are already occurring. USC formed the Industry/University Cooperative Research Center for Fuel Cells in 2003. Thirteen organizations provide about \$500,000 annually to the center, while \$250,000 comes from USC and the National Science Foundation.

More recently, Aiken County opened its \$10 million, 60,000-square foot Center for Hydrogen Research adjacent to the Savannah River National Laboratory in February. The national lab will lease about half the space at the center and the first private tenant will be Toyota, which is partnering with the lab to test hydrogen storage tanks for fuel cell automobiles.

Even with these assets, South Carolina has a lot of work to do before taking a leadership role in hydrogen-based enterprises. California, Connecticut, Ohio, and other states have been promoting the development of hydrogen

applications longer than South Carolina, plus they receive a lot more private and government R&D funding.

Also, the state will need more brain power to meet the challenge of turning hydrogen into a viable alternative to gasoline, which is more energy dense and easier to store and transport. While South Carolina has made progress in improving its public schools, student performance lags the

rest of the nation. "We're going to need engineers by the bushel," says Mike Esayan, deputy director of USC's fuel cell research center.

Finally, it will take patience for investments in hydrogen R&D to yield commercially viable and widely used applications. Timothy Considine, a resource economist at Pennsylvania State University, thinks it could be 20 years or more before the hydrogen economy becomes a reality. In the meantime, fuel economy improvements and other technological advances in fossil fuels will continue. "It's a moving target," Considine says.

— CHARLES GERENA



*South Carolina researchers want to work with industry to make hydrogen-fueled automobiles a reality.*

## Raleigh Region Rakes in Federal Money

A public policy group says the Raleigh region is top dog in the nation when it comes to attracting federal capital. The Triangle area, which also encompasses Durham and Cary, pulled in some \$789 per capita in “competitive economic development funding” in 2003.

Using U.S. Census data, the Public Policy Forum of Milwaukee, Wis., measured the 50 biggest metro areas by an unusual yardstick — the ability to pull in federal taxpayer funds in five categories: business assistance, such as Small Business Administration loans; research and development; work force development; infrastructure improvements; and community development.

The group found a significant link between per-capita income in metro regions and funding for assistance. (The group did not examine whether the funding led to higher incomes or simply went to communities with already high levels of wealth — in short, whether it was a case of causation or correlation.) The report is based on 2003 federal economic development grant data. In 2003, 65 percent of all federal economic development awards were competitive grants, loans, or loan guarantees.

Ryan Horton of the Public Policy Forum investigated the issue to find out how the forum’s home turf, southeastern Wisconsin, fared when it comes to tapping the federal cookie jar. He says he looked through the data and eliminated from the calculations money that’s automatically granted based on formulas, such as Community Development Block Grants.

“In today’s regional economy, with scarce resources, [it’s important to] maximize how you use each pool of capital,” Horton says. “How well are you competing for federal dollars?”

Research Triangle Park, its anchoring cities and universities (the University of North Carolina at Chapel Hill, North Carolina State University, and Duke University) are like a money magnet. In February, for example, the U.S. Department of Energy gave the Research Triangle Institute nearly \$1.6 million to spur hydrogen fuel development, and Duke and UNC received more than \$3 million from the U.S. Department of Health and Human Services, to name just two.

Other Fifth District metro areas showed up on the federal top 50. The Baltimore-Washington-Northern Virginia area ranked sixth, with about \$397 per capita; Greensboro-Winston-Salem-High Point ranked 34th, with about \$155 per capita; Charlotte-Gastonia-Salisbury ranked 47th, with \$79 per capita; and Virginia Beach-Norfolk-Newport News ranked 50th, with \$68 per capita.

— BETTY JOYCE NASH

## Tobacco Crop’s First Market Year

Tobacco production in the United States fell to about 640 million pounds in 2005, or about 242 million pounds below 2004, a decline that was expected with the end of the federal tobacco price support program.

In 2004, federal legislation did away with 1930s-era price supports for tobacco. Tobacco quota owners and producers are receiving compensation for their assets through a federal buyout. Many growers, especially those who farmed small plots exited tobacco altogether; others expanded. There was a 27 percent decline in tobacco acreage in 2005 over 2004.

Over the years that the tobacco quotas and prices were set by the government, U.S. tobacco lost market share to foreign tobacco. Currently, foreign tobacco makes up about 50 percent of the cigarette market.

Kent Hudson of Buffalo Junction, Va., does not grow tobacco anymore, but he is accustomed to the vagaries of the business. Hudson now moves curing barns. The tobacco business has always been like a yo-yo — up and down and up and down, he says.

Those in the industry hope that prices will stay competitive so that U.S. tobacco can regain market share. Blake Brown, an agricultural economist at North Carolina State University, says prices for flue-cured tobacco rose, driven partly by another poor crop year in Brazil. “In general, prices were higher than farmers expected,” he says.

Tobacco farmers are still in transition, says Stan Duffer, regional market development manager of the Virginia Department of Agriculture and Consumer Services. “The margin out here producing tobacco is pretty small,” he says. “The ones still producing are getting larger for efficiencies of scale. Some are trying it out to see if we can survive in this new arena.”

Todd Haymore, a spokesman for Universal Leaf Tobacco, based in Richmond, says higher fuel costs are boosting prices too. “Prices had to reflect fuel cost increases,” he says. “But everybody has to be aware that the United States went for a number of years pricing itself out of the world market and we have to work diligently not to repeat that process.”

China could be a huge potential consumer of U.S. tobacco. U.S. Flue-Cured Tobacco Growers, Inc., located in Raleigh, N.C., served as a secondary market for tobacco, using government loans to buy and store farmers’ unsold tobacco. The group sold 13.8 million pounds to China for about \$35.3 million late in 2005, according to the group’s newsletter. In June 2005 the cooperative’s manufacturing arm was admitted to the Master Settlement Agreement (in which cigarette companies agreed to pay the government \$246 billion and change the way tobacco products are marketed), and it has begun to make cigarettes under brand names such as Traffic and Kick, Passport and Fact, among others.

Demand is especially strong for U.S. burley tobacco;



*A mechanical harvester gathers last season's tobacco. Production, as predicted, dropped during the first year without the government price support system.*

exports so far in 2005 are up by 4 percent over 2004. Burley is grown primarily in Tennessee and Kentucky, but also traditionally grown on small plots in southwestern Virginia and western North Carolina. Some former flue-cured tobacco growers in the Piedmont and eastern part of the Carolinas and Virginia are taking a gamble and switching to burley.

Tobacco companies are offering incentives to farmers who can meet contract amounts, with bonuses for more. Haymore would not discuss Universal's contracts, but he says: "I do know those pilot projects in nontraditional areas have gone well, and our folks plan to increase the amount of burley grown in 2006. Everybody's looking to grow demand."

— BETTY JOYCE NASH

#### FILLING EMPTY POCKETS

### Payday Lending Regulation Tightens, Other Short-Term Products Emerge

North Carolina is now a payday lending-free zone. Since the law that permitted the practice expired in 2001, the state attorney general and the banking commissioner went after lenders who stayed in business by partnering with out-of-state, nationally chartered banks. At last in March, the state's three remaining major lenders agreed to shut down.

Some consumer advocacy groups rejoiced. They have long considered payday lending, also known as cash advance or deferred presentment services, a practice that gouges the most vulnerable borrowers. In payday lending, the borrower writes a postdated check for the loan amount plus a finance charge. The lender doles out the money and holds the check to deposit at a future date, typically the borrower's next payday.

Critics are alarmed by the payday loan's relatively short duration (usually two to four weeks) and high cost (a minimum of \$15 per \$100 borrowed), translating into an

annualized percentage rate of 391 percent for a two-week loan. This makes it hard for borrowers to accumulate enough money to repay the debt, especially for those on tight budgets — the same people most likely to be turning to payday loans in the first place.

But the growth in payday lending — the number of locations nationwide doubled between 2000 and 2004 to 22,000 — indicates that there are plenty of people who are willing to pay a premium to get out of a short-term cash crunch. "Clearly, payday lenders exist because people want the service," says Harry Davis, a finance professor at Appalachian State University and economist for the North Carolina Bankers Association.

Payday lenders say customers like being able to get their money quickly and easily.

Lenders are conveniently located and don't require much paperwork. They also don't probe a borrower's credit history, which may be embarrassing to reveal or disqualify some people for a loan or a credit card advance.

In addition, people want to avoid the consequences of falling behind on their bills. "To people who are desperate or chronically short of cash, paying \$60 to borrow \$300 for two weeks may not sound too steep, particularly if the alternative is being evicted or sending their children to school in tattered clothes," noted a Winter 2005 article in *AdvoCasey*, a policy magazine published by the Annie E. Casey Foundation. The Baltimore-based nonprofit organization focuses on issues facing low-income families.

Finally, payday lenders say their product is a relatively cheap alternative. A January 2002 survey conducted by the Consumer Financial Services Association of America, a trade group representing lenders, found that banks charge an average fee of \$25 per bounced check, while merchants levy an average fee of \$24. For a \$100 check, these charges translate into an APR of 1,278 percent.

Now that payday lending is gone in North Carolina, who will meet the demand for small amounts of short-term credit? In a word, banks.

Increasingly, banks are marketing automatic overdraft protection, a different practice than payday lending, that serves the same kind of customers. For a fee, banks will cover a check written against an account with insufficient funds, up to a predetermined amount.

This service can be pricey, depending on how it is used. "A fee of \$30 on a \$20 overdraft repaid in one week would result in an APR of 7,812 percent," noted a June 2005 report from the Casey Foundation. "Customers using fee-based overdraft protection multiple times a month in increments of less than \$100 are paying astronomical APRs." Payday lending may be gone from North Carolina, but there are alternatives for borrowers needing quick, easy credit.

— CHARLES GERENA