

Supply, meet demand

An ambitious project is looking to bring recycling feedstock to materials end-users for an entire region – going into the bin and back again.

BY WILL SAGAR

The recycling song of the new millennium is one of finding supply to meet strong demand, especially in the southeastern U.S. As the region rebounds from the exodus of textiles, furniture, cotton and tobacco, increased emphasis is being placed on green jobs and local manufacturing. In this, one can track an increase in manufacturing investment in the production of consumer goods created from recovered materials. The result is a strong recycling end-use infrastructure and, in turn, the many support jobs that are required to move material through its intended manufacturing lifecycle.

Mapping demand

The future development of the recycling infrastructure hinges on a critical point: community investment in the collection of recyclables. During tight budget times, those investments can come under critical review, posing the question: What is the true value of recycling? It's for that reason the Southeast Recycling Development Council (SERDC) recently unveiled the conclusion of a two-year study documenting the heavy regional presence of manufacturers that depend upon post-consumer recycled materials.

The finding that 206 manufacturers in the Southeast look to recycled feedstock to fuel their operations is catching the attention of regional decision makers. With those companies come some 47,525 employees and \$29.4 billion in annual sales volumes. Such attention-getting numbers can help move recycling from the feel-good to the do-good category.

A snapshot of demand by state

When communities invest in local recycling collection programs, they're supporting regional manufacturers who depend on recycled plastic, glass, metal and paper to make new consumer goods. It's interesting to elected officials, and the public alike, to know that today's plastic bottles can turn into tomorrow's carpet or new bottles, soda cans into more aluminum sheet, newspaper back into newsprint – all without leaving the Southeast. SERDC is now using its quantification of jobs and income to deepen and broaden the commitment of elected officials to supporting collection efforts, see Table 1.

When a revenue stream is really a revenue river

Some of the nation's and world's largest recycling end-users call the Southeast home. The study finds that more than 206 key industrial facilities depend upon recycled feedstock flowing from community and commercial recycling efforts. Collectively supporting more than 47,525 employees, these companies see a sales volume of more than \$29.4 billion, annually.



Source: SERDC, 2011

Manufacturing jobs are the Holy Grail in the hunt for economic development.

The motivation behind this project lies in connecting recycling's impact to the Southeast's strong manufacturing base. "Some of the nation's and world's largest recycling end-users call our region home. Unfortunately, many have to look beyond the Southeast to find materials, while these same commodities are disposed in landfills across the Southeast," explains SERDC Chairman Steve Carreras. "By collaborating across state lines, we can build effective recycling collection systems that provide essential feedstock to manufacturers who employ tens of thousands of people in the Southeast."

For example, increasing recycling rates in Alabama can help the 26 manufacturers in that state who rely on recycled content feedstock. These companies generate more than \$6.6 billion in yearly sales and employ more than 10,700 Alabama citizens directly working in the manufacture of recycled content product. Beyond manufacturing demand we can see direct impacts on the processing side as well:

- Custom Polymers PET in Athens, Alabama is currently expanding its capacity to an annual 180 million pounds and will employ 100 people. Byron Geiger, president, explains that, "In Alabama we found the workforce we needed, and here we are able to capitalize upon a freight advantage from our suppliers and to our markets. The Southeast has active manufacturing sectors and we want to tap into that material demand."
- With more than 300 employees, KW Plastics in Troy, Alabama is among the largest HDPE and PP plastics recyclers in the country. "Currently, KW receives enough plastic from Alabama to run the plant for only two days out of every year," points out the firm's director of market development, Stephanie Baker.
- The Barton, Alabama SCA Tissue plant recycles roughly 250,000 tons of paper per year. This is equivalent to almost 3 percent of the state's waste generation and represents an opportunity to feed local businesses with materials otherwise buried in landfills.

Fortunately for these companies and others in the region, the state of Alabama has begun to make more concerted investment in the collection side of the equation. Thanks to a \$1 tipping fee surcharge

Table 1 | Recyclings impact in the Southwest

State	Manufacturers	Jobs	Annual sales
Alabama	26	10,700+	\$6.6 billion
Arkansas	5	1,200+	\$0.4 billion
Florida	15	2,600+	\$1.5 billion
Georgia	31	7,000+	\$4.5 billion
Kentucky	17	4,300+	\$3.8 billion
Louisiana	10	2,900+	\$1.1 billion
Mississippi	3	525+	\$1.3 billion
North Carolina	30	2,800+	\$1.1 billion
South Carolina	24	5,300+	\$5.3 billion
Tennessee	30	6,500+	\$4.3 billion
Virginia	15	3,700+	\$3.6 billion
Region totals	More than 206	Greater than 47,525	Over \$29.4 billion

Figures in the chart only represent the manufacturing sector.
Source: SERDC, 2011

on all disposed waste, Alabama's Department of Environmental Management is now in the second year of a recycling grant program to support expansion of drop-off, curbside collection and other public recycling programs. SERDC has assisted Alabama with workshops training recycling coordinators and local officials on how to increase recycling in their communities to

Snapshot of Georgia's demand:

With companies that use recyclable materials to make bottles, newsprint, tissue, carpet, egg cartons, and more, Georgia has the second largest end-use market infrastructure in the nation for recovered materials. One-third of all plastic PET beverage containers recycled in North America are recycled into carpet in Georgia. With 19 mills utilizing recycled paper, Georgia's paper industry recycles almost 8 percent of all paper produced in the U.S.



Source: SERDC, 2011

take advantage of the enormous material demand in the state.

Connecting recycling to the green jobs movement

A recent North Carolina study documented yet another rise in recycling employment in the Tar Heel state. “With more than 15,000 people employed statewide and an annual payroll of at least \$395 million, the recycling industry in North Carolina is a steady contributor to our state’s overall economic strength,” says Scott Mouw, North Carolina’s State Recycling Program Director. “The 2010 jobs figure represents a 4.8 percent growth in the industry since 2008 during a time when North Carolina’s overall unemployment rate soared close to 10 percent.”

It’s that positive economic impact that has helped North Carolina lawmakers to pass legislation supporting the expansion of recycling in the state. A 2009 landfill ban on plastic bottles, pallets and oil filters reinforced existing bans on aluminum cans, yard waste, white goods, and other materials. During 2010, the legislation resulted in the long lasting impact of a 15 percent increase in small-to-medium size towns operating curbside collection programs. Plastic bottle collection by local government programs jumped 22 percent while oil filter recycling rose a dramatic 160 percent.

Using material flows to support regional industries

Home to 11 pulp and paper mills paying an annual payroll of \$1.4 billion to

16,868 employees, Tennessee realizes an annual recycling-related sales revenue in excess of \$5 billion. Paper mills alone generate \$123 million in tax revenue for state and local governments. Twelve additional plants, such as Alcoa and Gerdau AmeriSteel, use recovered aluminum and steel feedstock, respectively, employing an additional 3,100 Volunteer State residents. These metal plants bring over \$3.1 billion in annual sales to Tennessee. Larry Christley, environmental assistance program manager at the Tennessee Department of Environment and Conservation, explains that these figures have allowed him to better connect with state and local elected officials. “Strong economic data helps our state’s decision makers to give recycling the economic credibility it deserves,” he says.

Using the power of the cloud to speak to the crowd

SERDC is dedicated to keeping active tabs on the demand for recycled feedstock and thus has adopted the findings into an online tool (www.serdc.org/regionalresources) highlighting a visual demonstration of recycling’s economic presence. Each of the pins on the map represents a manufacturing facility relying upon feedstock collected in recycling programs. For each facility, the mapping tool indicates recycled feedstock used, the product created, the direct dollar impact of the site, and the number of manufacturing jobs created. The map can be sorted by material type, zoomed to specific areas or regions, and focused upon selected companies.

This tool provides unique insight to the reliance upon recycling that has developed over the years in the Southeast. With the capability to drill in on any given

location while selecting the material types in question, planners and decision makers can now see the true effect of recycling on their local economy. Zooming in on specific areas, it becomes evident that there are clusters or centers of activity. This facilitates the development of hub-and-spoke collection and process infrastructure.

Looking ahead to long-term impact

In 2006, Frank Hefner and Calvin Blackwell of the Department of Economics and Finance at the College of Charleston published a study called “The Economic Impact of the Recycling Industry in South Carolina.” By measuring the material recycled in the state and the jobs, wages paid and taxes collected from the businesses processing the material, they concluded that on average, every 1,000 tons recycled from landfills represents 1.68 additional jobs in the state, which generates \$79,800 in personal income, and \$3,687 in additional tax revenues to the state.

This money and these jobs are out there. Tools such as this SERDC mapping project will allow for this projection of expansion in hopes of continued commitment from community collection programs. And that will give proof to the statement that local investments in recycling collection results in regional return. **RR**

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