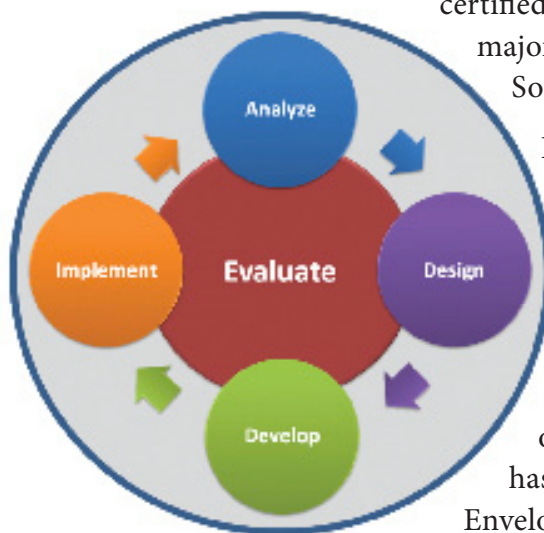


# Southface, After All These Years

Brad Turner

**Editor's Note:** Southface Energy Institute has been active in the world of sustainability, energy conservation and renewable energy for as long as any organization in North America. With a base in Atlanta, Georgia, and the word South in their name, you might think that they would have stayed close to home. But the results show otherwise, and though they are THE industry powerhouse in the Southeast, their impact has been felt around the world. We've keen to learn why Southface has been so consistently successful, somehow weathering the stormy years when other seemingly similar organizations have come and gone. So we asked Southface staff member Brad Turner to tell us what projects at Southface have had the greatest success, which caused some struggle, and what they'll do next to assure their place as a permanent player in the industry.



## What Works

Southface is a non-profit organization whose mission is to promote sustainable homes, workplaces, and communities through education, research, advocacy and technical assistance. My efforts at Southface largely focus on the education pillar of our mission. Among other projects, I manage the Southeast Weatherization and Energy Efficiency Training center (SWEET), a U.S. DOE Weatherization Training Center (WTC). We were the second WTC in the country to earn accreditation by the Interstate Renewable Energy Council (IREC), and in January of this year we became one of only eight training centers in the country to have achieved IREC Accreditation for all four Home Energy Professional Training Programs: Energy Auditor, Retrofit Installer & Technician, Crew Leader, and Quality Control Inspector. I oversee a team of highly trained, certified professionals who develop and deliver the majority of residential curricula and trainings at Southface.

In addition to our IREC Accredited training programs, we offer many additional certification trainings designed to create a career ladder for weatherization technicians, home performance professionals, builders, contractors, HVAC technicians, and others. One important accomplishment has been the development of our Duct and Envelope Tightness (DET) Verifier training. Southface created this course to teach professionals about the 2009 International Energy Conservation Code (IECC), and to perform blower door and duct leakage testing. The DET Verifier curriculum



and qualification has become a model used by several other states, and Southface has worked closely with them to advocate for adoption of the latest

versions of the IECC and implement the DET Verifier program. Additionally, to help code officials, building design, and construction professionals understand new code requirements, Southface has developed comprehensive energy code training resources.

## What's Been Hard

The period during the American Recovery and Reinvestment Act (ARRA) provided opportunities for growth at Southface. It also was a challenge to meet the training and technical assistance needs of multiple programs. The SWEET Center provided trainings and proctored certification exams almost every day during the ARRA years, with classes filled by students of all types and backgrounds. Being committed to building a sustainable business model, we made a conscious effort to strategically leverage those ARRA resources to leave us in a stronger position following its inevitable end.

We constructed the SWEET Center with ARRA funding, complete with a high-tech classroom, computer lab with remote learning capabilities, a life-size House of Pressure, a combustion lab, and two diagnostic cabins containing fully functional natural gas water heaters and HVAC systems. We built dozens of hands-on training props for

training on air-sealing and insulation, and we purchased a weatherization truck-and-trailer, enabling us to take our trainings on the road.

During this time we developed curricula for over 15 new courses and began offering those classes. We employed the Instructional Systems Design (ISD) and ADDIE models to create clearly defined goals, assessment tools, lesson plans, speaker notes, defined activities, and props. We incorporated various presentation methods to address the variety in learning styles.

It was during the ARRA funding that Southface staff members participated in the development of the DOE/NREL Advanced Home Energy Professional (HEP) certifications as subject matter experts. We served on certification scheme committees for creation of the HEP certification exams, and were instrumental in the rollout of the exams during the pilot phase. Our staff currently serve on the maintenance committee for the Standard Work Specifications (SWS) to provide review of public comments and resolution of ongoing updates to the SWS.

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With our eye on the future, we recognized the value of pursuing the IREC Accreditation for the Home Energy Professional Training Programs. Setting our sights on the lofty goal, we invested significant time and financial resources to complete the IREC Accreditation process. This highly challenging exercise made us not only a better training center, but a better organization as a whole, as many of the policies and procedures formalized during the accreditation process were implemented organization-wide, resulting in improvements in areas such as safety, curriculum development, procurement, marketing, data collection, data tracking, and client and personnel policies.

Southface has always invested in the professional development of our staff. We pride ourselves in having a staff with both real-world construction, engineering and architecture experience that is backed up with the highest certifications and accreditations offered in their fields. Hence, our trainers have multiple BPI certifications, including multiple HEP certifications, as well as additional certifications for any course that they teach, such as Lead RRP or OSHA. Our staff includes licensed architects, LEED AP's, Professional Engineers, and two engineering Ph.D.'s. I'm a licensed building contractor and a real estate agent.



## What We'll Do Next

Looking forward, we see new opportunities emerging as energy codes advance and we approach the possibility of a truly market-ready zero-energy new home or commercial building. We recognize these opportunities, and will work to maintain our position as leaders to advance these technologies. Increasingly, we'll seek advancement in the areas of renewable energy, consumer behavior, valuing and financing energy efficiency, building operations, and the relationship between energy efficiency and health. We believe that advancement in these areas will become a major solution in the quest for a healthy planet.

One example is the work Southface has done recently in the areas of renewable energy development and advocacy. Made possible through a grant by the Kendeda Fund, Southface has developed a resource called the Georgia Energy Data which quantifies and promotes the rapid progress of the solar industry in Georgia. It tracks energy consumption by source and capacity by source, and greenhouse gas emissions across the state. This project provides critical information to support much of the related advocacy and policy work Southface performs in Georgia and the Southeast.

On the research front, Southface has both residential and commercial U.S. DOE-supported projects underway. The Advanced Commercial Buildings Initiative seeks to identify barriers to deep energy reductions in small commercial buildings of less than 50,000 square feet, and to develop and pilot programs to overcome these barriers. Leveraging many of our existing programs, such as our EarthCraft Light Commercial green building program for new construction, and Grants to Green for existing buildings, we are benchmarking current performance using utility bills, multiple energy modeling tools, site assessments, and envelope infiltration tests. Our largest building so far had some unique requirements for pressure diagnostics:

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it required eight (8) fans working simultaneously to run the U.S. Army Corps of Engineers protocol!

We're also partnering with the Home Innovation Research Lab on Building America research, advancing real-world knowledge toward building cost-neutral zero-energy ready homes. For this work, we work with homebuilders, housing authorities, major manufacturers, utilities, national labs, and others to implement advances to energy efficient solutions in test homes. With this data on the performance of technologies such as ducted heat pump water heaters, insulated exterior sheathing, slab edge insulation, ground source heat pumps, and others, we're building an industry-leading body of knowledge.

Finally, Southface is proud of our recent approval from the Department of Veterans Affairs for payment to veterans and other beneficiaries who receive education from Southface.

## **Our Big Vision**

The entrepreneurial spirit and passion demonstrated by the hard-working professionals at Southface have positioned us uniquely in the world of sustainability and energy efficiency. We supplement our strengths by partnering with other organizations that share common goals, thus realizing greater impact in our collaborative efforts. One good example is our EarthCraft green building certification program,

which was developed in partnership with the Greater Atlanta Homebuilders Association in 1999 and has now certified nearly 32,000 homes.

In the future, we'll leverage our abilities and influence to systematically infuse energy efficiency and health into the design, construction, funding, and operation of buildings in Georgia and across the country. We will continue to collaborate with partners such as the Home Depot Foundation, Habitat for Humanity International, Enterprise Green Communities, the Georgia Environmental Finance Authority (GEFA), and others to bring the many environmental, economic, and health benefits of green building practices to affordable housing and low-income communities.

We will continue to capitalize on these strengths to promote our vision of a future where our neighbors and co-workers will demand to live and work in healthy, energy efficient buildings, not only because they recognize the environmental, financial, and health benefits, but because they believe it is the right thing to do.



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