



The Bright Future of Florida's Energy Infrastructure: Toward a Smarter Grid

The most significant achievement of the 20th Century is getting old, very old. To be precise, 127 years old, if we choose to consider the legitimate birth of our national electric grid, September 4, 1882, the day of Thomas Edison's first attempt to distribute electricity in New York happened.

Like any old machine, our power grid is showing its age. It can no longer deliver the level of reliability and safety that we have grown accustomed to. Certainly, not up to 21st Century standards, when spectacular advances in telecommunications and information technology have relegated the once largest, most powerful, interconnected machine on earth to a catch up position in the

advanced technology world.

More than ever, modern solutions to problems require the integration of technologies that, not so long ago, were treated independently. At a time when it is a reasonable expectation to be able to communicate with anybody located anywhere in the world in real time, and have data, video, and voice transmitted almost instantly, not too many people find it unusual that these advances are not systematically applied to the oversight of intelligent transmission, distribution, and metering of electric power. We are not surprised to see a utility employee walking house by house, visiting hundreds of them daily, collecting information from our meters.

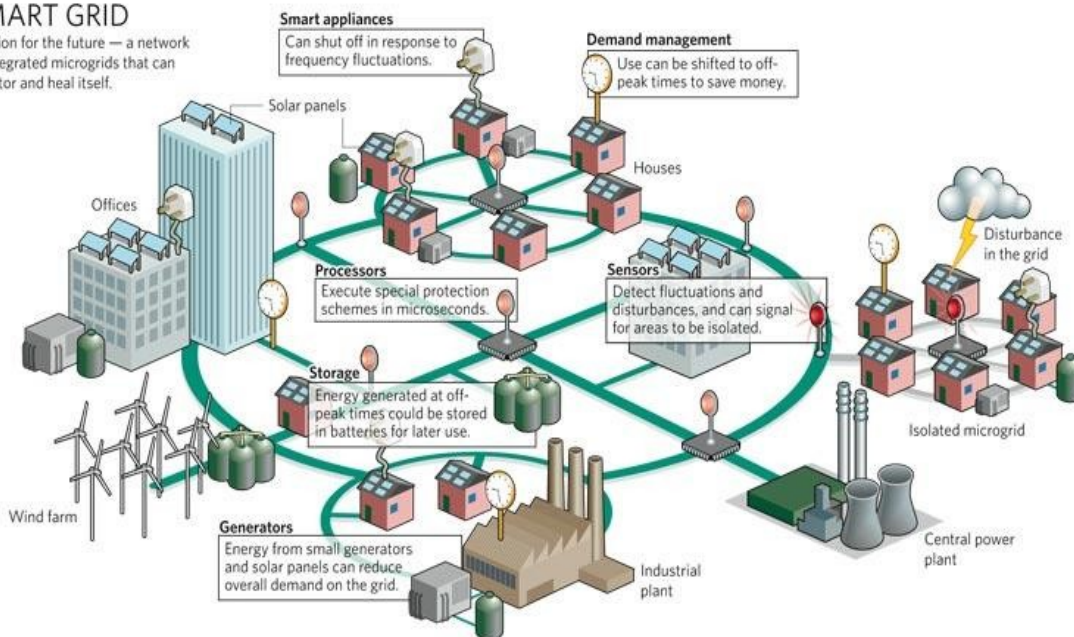
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SMART GRID

A vision for the future — a network of integrated microgrids that can monitor and heal itself.



Rough Terrain Forklift Certification

The present certification of operators for Rough Terrain Forklifts and other types of equipment on construction jobsites is very erratic to say the least. Many companies provide quality certification of operators, but many others provide little or no certification. Consistency is non-existent in whatever the level of certification. All forklift operators are required by OSHA to be certified so the need is there for uniform certification for all operators of this type of equipment.

The construction industry is a very diverse industry in which to work. Not only are there various sectors, such as a residential, commercial, industrial and highway; additionally there are dozens of skilled trades and careers within each sector. Another factor is the many brands of rough terrain forklifts; Lull, Caterpillar, Terex, JCB and Pettibone to name just some, all with their own unique features. It is not unusual for an operator to be operating different brands on the same jobsite.

A recent article in Engineering News-Record is proposing the creation of Portable Safety Records, including the certification of operators for use in the construction industry. There have been both pro and con response to this proposal, but it does speak to the need for quality training and certification.

There is a tremendous deficit of skilled labor in the state of Florida. This deficit existed when there was a heavy demand during the boom period and continues today. Many of the qualified personnel have left the state and will be slow to return, if at all. The number of equipment operators, including forklift operators needed to assist in the building of our state as our economy rebounds, are not currently available. Many new operators will need to be trained and certified.

These items lead us to utilizing an independent organization to facilitate the certification of the operators. The training can be accomplished by the construction industry both by the equipment suppliers and user companies. The certification process needs to be changed to improve on the deficiencies in the present system. By having an objective independent organization doing the certification, the future training will be elevated and more consistent.

The Banner Center Construction (BCC) is proposing to have accountability placed into the process prior to the



observation and sign-off. First a comprehensive written test for knowledge will be developed and then a standardized observation assessment test created. These assessments would be given by proctors certified through a process created by Subject Matter Experts (SME) and administered by BCC. The assessment centers would be located throughout the state and located at either a local equipment rental/sales business or at a local college with the appropriate facility.

The certification process needs to be changed to improve the deficiencies in the present system.

This provides the advantage of good equipment, assessors with current knowledge and skills facilitated through an existing network of professionals and SMEs. This provides the SME and other professionals a way to earn additional income along with the opportunity for the facility to work directly with the employers and operators. This will increase the dialog by all of the involved partners and continue to improve the assessments.

Upon the successful completion of the BCC assessment the operator would be provided a certificate of completion to present to their employer who would then perform the employer assessment. Upon submission of the documentation for this final action, BBC would issue a certificate and wallet card that will be valid for a specific time period, likely three years. Renewal would involve a review of the operator's history and the reassessment of the written and observation exams.

Forklift Certification—Continued on page 8

Reflections on the Recovery or “Country Boys Can Survive” Part II

In thinking of how to survive this economical downturn and others it reminds me of a favorite song from my youth and why it makes sense in any economy, much less the current dip. The song was one written by Hank Williams Jr., and yes I know you might be rolling your eyes at this moment but the song that I am referring to is “Country Boy Can Survive.” If you listen to the lyrics you will hear him describe how any person with the skills to produce or the skills to provide a tangible service which produces, or a person who repairs or builds something that they or others need, will survive. Statistically most people living or brought up in a rural environment grew up producing, repairing or building what they typically needed to live.

Fortunately, I have one of the most rewarding jobs with Progress Energy that I would think possible for someone who actually cares about his/her community. I am graciously charged with the privilege of working to develop programs in targeted high schools and community colleges focusing on the craft/technical skills that will meet our future workforce needs. Most of our academies are in close proximity to our plants or operational facilities, which coincidentally are for the most part in rural areas. In working with these students we have found that they still change the oil in their cars, fix the sink when it leaks, or tune the lawn mower when it needs it. By doing this they are actually learning the basic principles of tool usage, repair, and assembly. Most importantly, they are learning the troubleshooting that we can build upon. Effectively, they are learning transferable skills that if honed and perfected can be utilized to support a very comfortable lifestyle.

Some may disagree with me when I say this but I see in the near future that the table on the income compass will be turning towards the traditionally classified blue collar skills. Why? Because for so long every parent has sought to send their child to a college or university and now we are sitting on a glutton of educated people that have no hard skills that can be applied without electricity. The current administration has promised to develop programs so that every student can acquire a college degree. This reminds me of when I graduated from high school and everyone said “go get an electronics degree, they make the highest salaries.” Fortunately, I did not go

and in two years time those with electronics degrees were barley making minimum wage. The degree was useless because the job pool was over-saturated. If the world shut down tomorrow these people would literally starve to death if the government was not there to help them; even then many of them would parish.

To justify this point, let’s contrast those who would be out of work if just electricity was unavailable:

<u>Working</u>	<u>Not Working</u>
Masons	IT Technicians
Welders (use generators)	Software developers
Carpenters	911 Operators & System
Pipe Fitters	Movie Industry
Plumbers	Gaming Industry
Heavy Equipment	Cell Phone industry
Mechanics	Office Manager/CEO/ Presidents

I could go on with this list but the point I am trying to make is that when you acquire the training and skills in the craft/technical arena, I think that you are investing in your future. These skills are something that can never be taken from you. Sure they might change with the newer technology or tools, but it’s still the same basic set of skills that get the job done. This economy will change and it will get better, whatever the pains we have to go through we will have a booming economy again. Always remember that this country saved the world from tyranny and built countries before the digital age and it was all done by the traditional blue collar skills.

Kevin Gay

Kevin Gay is the Craft/Technical Workforce Program Manager at Progress Energy Florida. He is responsible for designing and managing entry level craft/technical pipeline development programs within Progress Energy Florida (PEF). He is a BCC Advisory Council Member and sits on a plethora of energy and education

Hot or Cold...Either Way it is Cool Training

The construction situation for Florida is still bleak. One of our growth areas, driven by federal stimulus dollars, will be in weatherizing and remodeling homes for energy savings. Grant funds have been released for entry level energy focused training, particularly when it focuses on low-income housing weatherization. Here is a unique success story in the beginning of that effort.

Tallahassee Community College (TCC – serving Leon, Gadsden, and Wakulla Counties), Workforce Plus, Inc. (the local Workforce Investment Board serving Leon, Gadsden and Wakulla Counties), the Capital Area Community Action Agency (CACAA - a local community based organization serving Leon, Gadsden, Gulf, Jefferson, Franklin, Calhoun, and Liberty Counties), and The Early Learning Coalition, Inc. of the Big Bend region (ELC – serves Leon, Gadsden, Wakulla, Jefferson, Liberty, Madison, and Taylor Counties providing school readiness and voluntary Pre-Kindergarten programs) created a unique partnership – The Big Bend’s Operation Re-employment Weatherization Project -to train and place low income adults into the construction industry. To date two classes with a total of 29 individuals from Leon County comprised of both men and women, have successfully completed the project and have either been placed or shortly will be placed into full-time employment with contractors performing weath-



erization upgrades/repairs under the Weatherization Assistance Program (WAP) funded with federal stimulus dollars.

Each partner believes that the success of the project has been that each partner has had specific, well defined tasks and responsibilities. The interesting point is that each of partners brought what they were already providing to the table – nothing new was required. The collaboration created an opportunity for success. . For example, Workforce Plus was responsible for underwriting the cost of the training, providing supportive services such as transportation and providing pre-training

Cool Training — Continued on 8

Legislative Update

Florida is looking at a 2.3 to 2.8 billion dollar shortfall in revenue to support the 2010-2011 budget. The last numbers I saw on unemployment exceeded 11% and Florida is projected to recover at a slower rate than most of the country. Unemployment obviously increases the filings for unemployment benefits, Medicaid and other social services, which will continue to add to the budget deficit. The other monster in the closet is the disappearance of federal stimulus money after the 2010-2011 fiscal year; and if Florida’s economy rebounds as slowly as predicted the state’s budget for 2011-2012 will be bleaker.

Florida’s Constitution (unlike the Federal government) **DOES NOT** allow the state to spend money it does not

have, therefore in May 2010 the Legislature must vote out a balanced budget. Passing a balanced budget is the only action required of the Legislature during the session. Based on current fiscal projections the Legislature will need to reduce spending by 2.3 to 2.8 billion for 2010-2011, so there will need to be more funding cuts across all agencies.

Marsan Carr

Marsan Carr is the Executive Director of the Florida Association for Career and Technical Education. FACTE is the only organization in the state of Florida solely dedicated to representing the interests of career and technical educators.

Green Jobs



Green Construction image from: The Education Report
<http://www.ibabuzz.com/education/wp-content/uploads/files/2008/04/greenjobs2.jpg>

Lately, there has been an influx of stimulus money pushed towards 'green jobs' and sustainable construction projects. With that, questions arise as to 'what is a green job?' Often, the definition of 'green jobs' used by members of congress has been, "jobs producing the next generation of renewable energy sources—wind, solar, geothermal—spur development of alternatives and help to combat climate change by reducing our use of carbon-emitting fuels (Sen. Max Baucus, D-Montana)." That being said, it leaves a fair bit of interpretation to those left to classify workers on a day-to-day basis in markets that do not have wind or solar farms being constructed.

The Department of Labor is looking at categories of types of work such as 1) green growth occupations, 2) green enhanced occupations, and 3) green new and emerging occupations. The construction industry falls across all three sectors. Green growth occupations include industries already in the green arena but where additional skills may be needed. Green enhanced jobs are those jobs that may require significant changes to existing skill sets. Green new and emerging are those jobs in which the skills required for installation are being developed parallel to the manufacturing process. Similar to the congressional definitions noted above, this leaves workforce boards with trying to classify jobs and positions to be filled, as green or traditional. The

Office of the Federal Environmental Executive defines green building as "the practice of 1) increasing the efficiency with which buildings and their sites use energy, water, and materials, and 2) reducing building impacts on human health and the environment, through better siting, design, construction, operation, maintenance, and removal--the complete building life cycle." This definition lends itself to better defining actual jobs. Using this definition anyone who is working with better design and construction practices or those focusing on increased energy efficiency would qualify as a green job. Anyone working on reducing the burden of construction practices such as recycling or working with low VOC paints and carpets would qualify. In short, a green job may be one in which it presents itself as a greener alternative to a traditional job or application. The simplest example might be that of a painter. A painter being assigned to work on a project using low VOC paints on a

LEED certified building would be considered 'green' as compared to a traditional painting job. Beyond this example all those which meet the general 'green collar' jobs such as solar would obviously qualify.

The end result or hope for this type of work is that all jobs become greener and that not only does the economy recover faster but that as an industry we do our best to preserve and improve the planet as a whole.

Jim Sullivan, Ph.D.

Prior to Jim's current position serving as Assistant Professor for the Rinker School of Construction at the University of Florida, he had been associated with over \$700 million dollars worth of private construction contracts. Jim is also a State of Florida Certified General Contractor. Jim serves on the Heart of Florida Chapter Board of Directors responsible for Emerging Green Builders and is a BCC Advisory Council Member.

Construction Industry Economic Stimulus

This **Construction Industry Economic Stimulus Initiative** (reconstructfl.com) is a service of Workforce Florida, in partnership with the Florida Public Affairs Center, the Florida Home Builders Association, the Department of Business and Professional Regulation, and other construction industry association partners. With funding support by Workforce Florida, this site brings together a strong public-private partnership to help Florida's construction community, heavily impacted by the national economic recession, access public and private sector programs and training opportunities that will help put Florida's construction industry and workers back to work.

Many programs exist (or are under consideration) at the local, state and federal levels that are ready to be used by individuals and businesses in the home building industry that will maintain existing jobs and create new ones. Since these programs are peppered throughout and among all levels of government, information about the programs, as well as access to and distribution of funds, is difficult to obtain. This site has been developed to provide speedy, streamlined and efficient delivery of the information and fund availability.

Here Florida's contractors can access information on construction related stimulus and tax break programs to help re-invigorate Florida's construction industry. Here contractors can "one-stop-shop" for federal and state economic stimulus programs, tax incentives, and related training and certification programs to better position themselves to build their businesses and put more construction workers back to work. This site is a service of Workforce Florida, in partnership with the Florida Public Affairs Center, the Florida Home Builders Association, the Department of Business and Professional Regulation, and other construction industry association partners.

Florida's home building construction industry has always been a mainstay of Florida's economy providing billions of dollars in revenue and employing more than 500,000 Floridians. The current catastrophic economic downturn has impacted this historically strong industry in epic proportions with hundreds of thousands of jobs lost and hundreds of small businesses forced into bankruptcy. It is hoped that the federal stimulus effort will create a significant number of job opportunities throughout Florida. The purpose of this site is to create awareness in the private construction industry regard-

ing these new opportunities. The need to match employers, job opportunities and needed training is at the heart of this initiative. **The web site provides information on:**

PROGRAMS

Federal, state and local stimulus programs aimed at the Florida construction industry. Browse our ever-growing catalogue of programs or search our database by keywords, tags or county.

OPPORTUNITIES

Keep up to date on proposed stimulus programs and up-coming opportunities that might benefit Florida's construction industry. Check back often for updates to these potential offerings.

TRAINING

Get information on construction related education opportunities and the training required to be eligible for certain stimulus programs.

One service that contractors can take part of is free training. Thanks to Workforce Florida, Inc., the Department of Community Affairs, and Building a Safer Florida, Inc. construction professional can now obtain valuable Federal stimulus construction business information, and earn Continuing Education Credits (CEUs) for wind mitigation and energy efficiency training.

Go here to sign up:

<http://reconstructfl.com/assets/FL%20Stimulus%20%20Hurricane-Energy%20CEU%20Training%20Flyer.pdf>

Hopefully this site provides the construction industry with needed business until the economy recovers.

Douglas Buck

Douglas Buck is Director of Governmental Affairs for Florida Home Builders Association and a member of the BCC Advisory Council.

Smart Grid— continued from page 1

The convergence of information technology and electric power has not happened fast enough. Typical customers find out about their household energy consumption the day they receive the bill. In some cases, utilities find out about power outages when customers call to report them.

The question is: how long will it take us to convert an antiquated centralized system into an intelligent distributed multi-nodal grid? How long before we experience a multi-modal network capable of assimilating diverse types and sources of energy, and capable of storing excess energy for critical times?

The Smart Grid will dramatically increase efficiencies with superconductive transmission lines, limit the loss of energy, reduce carbon emissions, and contribute to a more sustainable environment. In this network, intelligent monitoring systems will keep track of all electricity flowing in its lines, smart meters will report consumption patterns, appliances will control how much energy they use, alternative energy sources independent of size will feed the network, and electricity stored in batteries will supply quick jolts of energy when and where needed.

There is not enough time to reflect on how well our electric grid has served our country. Not enough time to celebrate the world-class innovation that made this unthinkable complex mechanism a system that all Americans have trusted for generations with a level of reliability that very few countries in the world could count on. We just need to make it better.

The good news for Florida is that we have already started to make considerable progress and we are poised to become a leader in the implementation of energy-efficient solutions and innovation. We are addressing the complexities of technology integration and our utility companies are investing heavily to make this transformation possible.

On Oct. 27, while touring the nation's largest solar farm in Arcadia, FL, President Obama announced 100 grants, totaling \$3.4 billion, for smart-grid efforts. The winners included 9 Florida recipients: FPL, Progress Energy, Southern Company, Lakeland Electric, Jacksonville Electric Authority, City of Leesburg, City of Tallahassee, Talquin Electric Cooperative, Intellon Corporation, and Quincy.



What does this mean for Florida? First and most importantly, it means jobs. More than 1 billion dollars has been pledged to be spent on Florida's Smart Grid. [FPL, recipient of over \\$200 million in grants, estimates their endeavors will create over 6,000 jobs](#) over the next 3-5 years including meter installers, line workers, equipment manufacturers, and cyber-security/setup technicians. Second, it means a more robust grid with less waste, less power loss, and less down time, all of which translates to less burning of fossil fuels and a cleaner environment. Finally, it means money: Consumers will be able to monitor and understand their energy use and run high energy consumption devices, like hot water heaters and dryers, when prices are lower.

The building construction industry desperately needs job opportunities for our unemployed workforce. This initiative, together with the development of more affordable solar solutions for residential use, will promote the infusion and integration of new technologies into building systems and open opportunities for the revitalization of the building sector.

Jose Farinos and Kevin Cooper
Florida's Banner Center for Energy

Jose Farinos
Dean of Advanced Technology
Indian River State College
Member of the BCC Advisory Council, Florida Energy
Workforce Consortium

Kevin Cooper
Director
Banner Center for Energy

Forklift Certification—Continued from page 2

This process, when instituted, will significantly raise the quality of the rough terrain operators in Florida, reducing accidents and injuries and making the construction jobsites safer. This same process could be used for other equipment such as boom and scissor lifts as well as the other types of forklift trucks further increasing productivity and safety on construction projects.

The need for qualified operators of all types of equipment will be in demand in the coming decade as the construction projects needing to be built with increasing urgency come on line. Now is the time to set up the process to be sure that the demands of qualified operators are properly assessed as the job opportunities increase.

Dennis W. Neal

Dennis Neal is the Safety and Training Director for Advanced Masonry Systems and a member of the BCC Advisory Council.

Cool Training —Continued from page 4

activities (employability skills and assessment); CACAA screened potential trainees for interest and project eligibility, providing supportive services, working closely with WAP contractors on job placement (CACAA also leveraged a 90 day On the Job Training or OJT reimbursement component paying the contractor 50% of the trainee’s wages to make the hiring of the trainees attractive since the majority of the trainees had no or little construction experience or background prior to training); ELC provided childcare services; and TCC provided the training.



The training developed was a competency driven system with industry recognized certifications where possible provided in 80 hours of both classroom and lab experience. TCC relied heavily on select National Center for Construction Education and Research (NCCER) construction curriculum and the OSHA 1926 curriculum. The 80 hours of just in time/focused training increased participation and reduced dropouts. The curriculum only focused on those tasks that WAP federal stimulus dollars can be used for - essentially the “must have” as versus the “nice to have.” The goal was to produce a worker with the right skills for the industry that had the ability to complete the weatherization activities/job tasks under WAP. The competency training modules included: Orientation to the Job, Construction Math, Thermal and Moisture Protection, Ventilation, Windows and Doors, Solar Screens, Dry Wall, Trim, Reflective Coating for Manufactured Homes, and Hot Water Heater Insulation Wrap. Trainees received NCCER certification for successfully completing appropriate NCCER modules and additionally, received a 10 hour OSHA 1926 Safety Card if they completed the Safety module. So either way, each trainee learned how to become a Weatherization Installer learning how to abate hot or cold intrusion, while participating in “Cool Training.”

Rick Frazier

Rick Frazier is the Director of Workforce Development at Tallahassee Community College. Rick is a strong advocate for construction based training and has a background as a brick mason. He is a BCC Advisory Board Member.

**Banner Center
for
Construction**

530 West University Ave
Gainesville, FL 32601
352-381-3831— Phone
352-395-5086— Fax

Banner Center Director

Kurt Morauer
352-381-3831
kurt.morauer@sfcollge.edu

Grant Coordinator

Meghan M. Cockrell
352-381-7084
meghan.cockrell@sfcollge.edu

Project Coordinator

Michael Wohl
352-381-7080
michael.d.wohl@sfcollge.edu

Contributing Writers

Kurt Morauer
Kevin Gay
Dennis W. Neal
Jose Farinos
Kevin Cooper
Marsan Carr
Jim Sullivan
Douglas buck
Rick Frazier

BCC Growth

As the Banner Center for Construction continues to expand its services to the Florida construction community it must grow as well. Santa Fe College has moved the BCC office to larger accommodations to better fit staff and program development. We have added another regular staff person, Mr. Michael Wohl, to help with program management, website development, and with our school outreach efforts. Michael joins our grant coordinator Meghan Cockrell in becoming certified as an NCCER Core instructor. Additionally, Michael has been certified as a NCCER “Your Role in the Green Environment” Instructor and as a Level 1 Energy Auditor Instructor. Our Director, Kurt Morauer, already certified as a NCCER Master Trainer, Assessment Administrator, and OSHA Outreach Instructor, also was recently certified to deliver the NCCER “You Role in the Green Environment” training.

Credentialed training is a continuous process that needs to occur at all levels within an organization. BCC not only promotes this philosophy to the construction

New Website

The Banner Center for Construction is pleased to announce the revamping of its website. When you now go to www.buildflorida.org you will see a new structure, new colors, and new services. Now it is easier than ever to find the information about construction in Florida.

One significant new service is a blog page just for construction educators. Interested in what other instructors are doing? Want to try something new in your program but would like to see if someone else has already tried it? Want to find material and tool resources or just find ways to save money for your program? If you are an apprenticeship instructor, a building trades teacher, or in-house safety or craft instructor, our blog could be quite helpful to you. We will send out information when the blog has gone live. Call the BCC staff at 866-489-5335 with any questions.

MTC Visit

Have we visited your school yet? If you are interested in career exploration for your students, we can help. If you are interested in getting local contractors more interested in your building trades program, we can help.

The BCC Mobile Training Center (MTC) is an exciting tool to help introduce your students to a bigger world. Please check out the video of it at our website, www.buildflorida.org. By tying a MTC visit in with local construction associations we can help you create a valuable career day opportunity.

Call our staff at 1-866-489-5335 to arrange an appointment

