WATER HEATERS: GETTING THE MOST FOR YOUR MONEY

What gets hot, for less

Getting hotter. Senior research engineer Carlos Colon removes water from an integrated collector storage solar water heater to calibrate the system. The 40-gallon ICS system costs about $3,500.

FLORIDA SOLAR ENERGY CENTER. The Legislature and Florida Energy Committee formed the center in 1974 during the energy crisis, in response to disreputable businesses bilking customers by making inflated claims about untested solar systems. The center, which rates solar systems, is the first state-supported energy organization.
Plan can’t please everyone

Obama, FDR not perfectly matched for comparison

WASHINGTON — In sheer size, the economic measures announced by President Barack Obama to address the economic crisis “we’ve never known” are remarkably similar to those put forward by Franklin D. Roosevelt. The FDR administration was famously created to battle the Great Depression, and a political tour-de-force in the new administration. Yet gloom and uncertainty persist about the plan’s ability to defuse the economic crisis.

Stocks plunged to six-year lows after the burst of bill signings, billions spent on stimulus money and individual tax rebates. But, many economists say, the country’s troubles have increased, driven by worries that the $820 billion economic stimulus bill will not work. Why the skepticism?

See PLAN, 5A

ANALYSIS

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Getting hotter. Senior research engineer Carlos Colon removes water from an integrated collector storage solar water heater to celebrate the system. The 40-gallon ICS system costs about $5,500.

Testing 7 systems, researchers see more efficiency in solar

Studying efficiency. The Florida Solar Energy Center’s $6.7 million research facility has been testing prototypes of water heaters to determine which are the most cost-effective and efficient.

Shuttle launch delayed again

CAPE CANAVERAL — Shuttle Discovery’s launch date remained uncertain after a marathon meeting Monday between NASA officials and federal regulators.

They could not agree on the year’s first mission next Friday, tentatively planned, and a mid-March launch. The space agency was uncertain if it could substitute 13-story external tank. That allows the tank to maintain a proper pressure as liquid hydrogen is added to the shuttle’s main engines to the soon-to-be-launched, 13-story external tank.

If pressure rises too high or is too low, or if a fragment from a booster valve punctures the gas tank, the rocket’s mission could be jeopardized.

Civic leaders honored in 4 under 40 event

Four Bradenton residents, and a Mount Dora businesswoman were honored Monday at the Civic Leaders of 4 under 40 event. The event honors young leaders in the community.

Buske, 40, near 67

Sunny, high near 76

Chance of rain: 6 percent.

Winds: E to NE at 10 mph.

GETTING THE MOST FOR YOUR MONEY

SUNNY HIGHLINES

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Review of FSEC Activities:
OPPAGA Review
External Review
Strategic Plan
Federal Stimulus Package

James Fenton
February 27, 2009
A Research Institute of the University of Central Florida
Opportunities for FSEC

Good News

- 20% RPS in Florida?, Solar Taking Off!
- Large Increase in Demand for Solar and Building Efficiency Training
- Large Increase in Demand for Solar Systems Certification
- Substantial Funding Increases to DOE EERE should trickle down to FSEC
- Funding to UCF’s Florida Energy Systems Consortium Cut only 28%
- Recruitment for 3 Endowed Chairs Continues

Bad News

- 19% Decrease in E&G Budget July 2007 to July 2009 ????
- Utility Bills went up 40%
FSEC Review (OPPAGA)


Provided summary letter (Aug 14, 2008) to the 13 requests
Provided 52 Attachments

Received 4 page Draft Report February 13, 2009
Florida Solar Energy Center Conducts Research and Development; Legislature Could Direct Fee Increases and Drop Certification Requirement
Question 1: What are the Florida Solar Energy Center’s major activities?

Question 2: How well is the center performing in testing and certifying solar energy systems?
<table>
<thead>
<tr>
<th>FSEC’s Major Activities (FY07-08)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expenditures (M)</strong></td>
</tr>
<tr>
<td><strong>Research and Development</strong></td>
</tr>
<tr>
<td><strong>Technical Assistance</strong></td>
</tr>
<tr>
<td><strong>Education and Outreach</strong></td>
</tr>
<tr>
<td><strong>Testing and Certification</strong></td>
</tr>
<tr>
<td><strong>Support Activities</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>
Solar Thermal Standards, Testing and Certification Program

• Third-Party Certification Required to Protect Consumers
• 2005 Energy Policy Act, 30% tax credit; substantial increase in manufacturers and distributors
• Florida RPS 20% renewables by 2020
• Only one US testing facility today (5 to 7 early days)
• Backlog for testing and certification up to 3 years (today) before 2005, kept up using one mobile test platform

GOAL (Reduce Testing Time)
• Improved Data Acquisition
• Additional Test Stands
• Automated Reporting
• Provisional Collector Performance Ratings
• Increased fees $3K to $10K
• Private labs enter testing market
Recognized Strengths:

- DOE Building America Program, DOE Southeast RES (PV), DOE Fuel Cell Membranes, DOE Center of Excel.
- H₂ Tech & Ed, DOE Solar H₂ Prod (SAIC/FSEC), NASA H₂
- FL Universities.

Technical Programs (Buildings, PV, Hydrogen and Fuel Cells)

Weaknesses:

- Unbalanced R&D Portfolio (heavier on applied projects)
- Distance UCF Campus
- Lack of well articulated vision and roadmap
- Perceived by UCF Faculty as a funding source
- FSEC Culture, 70% Faculty Time Supported on Contracts vs. 25% Tenure-track faculty
FSEC Strategic Plan January 2009

Mission
FSEC’s mission is to research and develop energy technologies that enhance Florida’s and the nation’s economy and environment and to educate the public, students and practitioners on the results of the research. Florida is one of the nation’s most rapidly growing states, but has very limited fossil energy resources. As a result, the mission and activities of the Florida Solar Energy Center are a critical component of the future energy security and sustainability of Florida’s economy and public welfare.

Vision
Energy Independence for Florida
This plan comprises five strategic goals designed to achieve FSEC’s core mission and move Florida toward energy independence. These five goals are:

Goal 1  Improve and expand core research and development programs
Goal 2  Enhance energy industry commercialization
Goal 3  Expand energy education programs
Goal 4  Enhance product testing and certification programs
Goal 5  Expand communications and public outreach programs
Federal Stimulus Package
Stimulus Package

$16.8 billion for the DOE Office of Energy Efficiency and Renewable Energy (EERE). The funding is a nearly tenfold increase for EERE, which received $1.7 billion in fiscal year 2008.
EERE Legislation ($Mil)

- EERE RDD&D $2,500
- Biomass $800
- Geothermal $400
- IT Improvements $50
- Unspecified $1,250

- EE & Conservation Block Grants $3,200
- Formula $2,800
- Competitive $400

- Weatherization Asst Program $5,000

- State Energy Program $3,100

- Advanced Battery Manufacturing $2,000

- Advanced Fueled Vehicles
  - Pilot Grant Program $300

- Transportation Electrification $400

- Energy Efficient Appliances Rebates and EnergyStar $300

- TOTAL EERE $16,800
$4 billion to rehabilitate and retrofit public housing, including increasing the energy efficiency of units.

An additional $510 million to do the same for homes maintained by Native American housing programs.

HUD will receive an additional $250 million to increase the energy efficiency of HUD-sponsored, low-income housing.
Other Stimulus Funding

- 4.5 billion to the U.S. General Services Administration (GSA) to convert federal buildings into high-performance green buildings. The act also directs $4 million toward the establishment of an Office of Federal High-Performance Green Buildings within the GSA.
- $500 million to the Department of Labor to prepare workers for careers in energy efficiency and renewable energy.
- $300 million to fed agencies to cover the costs of acquiring greener motor vehicles, including hybrids, electric vehicles, and plug-in hybrid vehicles, once they become commercially available.
- $100 million for the Energy Conservation Investment Program within the Department of Defense.
- $100 million for U.S. Navy and Marine projects.
Renewable Tax and Grants

- The Department of Treasury is to provide grants equal to 30 percent of the cost of solar property placed in service during 2009 and 2010, in lieu of the section 48

- Repeals Penalty for Subsidized Renewable Energy Financing

- Renewable Energy Loan Guarantee Program including $6 billion to pay credit subsidy costs.

- $2.3 billion to fund 30% Renewable Energy Manufacturing Investment Credit

- Remove $2000 cap on Solar Water Heating tax credit allowing full 30%

Source: SEIA