Energizing Florida's Cities with Solar

Florida Redevelopment Association Annual Conference

October 29, 2009

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flaSEREF

FlaSEREF

- Established by the Florida Solar Energy Industries Association to promote the growth of solar energy in Florida
- Operates as a contractor on behalf of the Governor's Energy Office
- Administers Market Transformation and Public Awareness Programs

Solar Energy in Florida

Solar Technologies

- Solar Water Heating
- Solar Pool Heating
- Solar Electric (Photovoltaics – PV)

Solar Water Heating

- Uses the sun's heat to produce hot water for domestic use
- Provides 50 to 90 percent of household hot water needs (back up electric or gas is provided)
- Water heating represents about 15% of household energy consumption
- Commercial installations include small scale up to large industrial scale systems for hotels and restaurants

Solar Water Heating – Residential Single-family

Solar Water Heating – Residential Multi-family

Solar Water Heating – Commercial

Solar Water Heating – Commercial

Solar Pool Heating

- Uses the sun's heat to increase pool water temperature
- Allows swimming year round in some cases
- Can also provide night time cooling to reduce pool water temperature
- Most cost effective use of solar energy
- No federal tax credit available

Solar Pool Heating – Residential

Solar Pool Heating – Condominium

Solar Pool Heating – Atlanta Summer Olympics

Photovoltaics (Solar Electric – PV)

- Uses the light of the sun to generate electricity
- Produces direct current electricity which is converted to alternating current
- Systems are grid tied with the serving utility or in some cases off grid with battery back up
- Requires subsidies to be cost effective in most cases, but costs are declining
- Rising electric rates improve cost effectiveness
- Florida law provides for net metering and interconnection with electric utility (applies to investor owned utilities only, but municipals and rural electric cooperatives allow as well)

Photovoltaics (Solar Electric – PV)

- **Applications include:**
  - Remote Power (off-grid applications, highway signage, street lighting, water pumping)
  - Distributed Generation (grid-connected residential and commercial applications)
  - Central Station (utility scale applications)

Photovoltaics – Residential with SDHW

Photovoltaics – Residential Building Integrated

Photovoltaics – Residential Multi-family

Photovoltaics – Community Owned

Photovoltaics – Customer Owned and Sited

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Photovoltaics – Orange County Convention Center

Financial Incentives

Federal Solar Tax Credits:

- **30% Federal Residential Tax Credit (for solar water heating and PV, no cap)**
- **30% Federal Business Investment Credit (for solar water heating and PV, no cap)**
- **Business Investment Credit Available as Grant in lieu of tax credit for 2009-2010**
- **Available to taxable entities, individuals only**

Financial Incentives

Federal Tax Credits for Energy Efficiency

- Tax credits are available at 30% of the cost, up to $1,500, in 2009 & 2010 (for existing homes only) for:
- Windows and Doors
- Insulation
- Roofs (Metal and Asphalt)
- HVAC
- Water Heaters (non-solar)
- Biomass Stoves

Financial Incentives

Federal Tax Credit for Energy Efficient New Homes

- **$2,000 tax credit for a new energy efficient home that achieves 50% energy savings for heating and cooling over the model code**
- **At least 1/5 of the energy savings must come from building envelope improvements**
- **Applies to new homes located in the United States whose construction is substantially completed after August 8, 2005 and that are acquired from the eligible contractor for use as a residence from January 1, 2006 through December 31, 2009**
- **Tax credit goes to the builder**

Financial Incentives

Florida Financial Incentives:

- **Sales Tax Exemption:**
  - Solar water heating, pool heating and photovoltaics
- **State Solar Rebate Program**
  - Solar Water Heating
    - $500 for residential systems
    - $15/1,000 Btu for commercial systems ($5,000 cap)
  - Photovoltaic Systems
    - $4 per watt
    - $20,000 cap for residential systems
    - $100,000 cap for commercial

Financial Incentives

Florida Financial Incentives:

- **State Solar Rebate Program**
  - Solar Pool Heating
    - $100 for residential or commercial solar pool heaters
- **SunBuilt Program**
  - $500 Rebate to Homebuilders for installing solar water heating
- **SunCatcher Program**
  - Incentives for Hotels, Restaurants and Condominiums that install solar water heating, solar pool heating and photovoltaics

Financial Incentives

- **Florida Property Tax Exemption:**
  - Enacted in 1980
  - Constitutional amendment approved by voters in 1980
  - Sunset in 1990
  - Re-enacted in 2008
  - Constitutional amendment repealed in 2008 by new constitutional amendment
  - Laws Conflict, new implementing law not enacted in 2009
  - ?????

Utility Incentives

- Include rebates, low interest loans, and performance based incentives
- Consider energy efficiency incentives as well to maximize conservation efforts and optimize solar investments
- Gulf Power, Progress Energy, JEA, GRU, OUC, City of Tallahassee, Clay Electric Cooperative currently offer solar incentives
- Orange County provides supplement to Progress Energy, OUC and Winter Park Electric customers
- Current proceeding before the Florida Public Service Commission will result in new utility program offerings
- http://www.flaseref.org/utilityIncentives.html

Solar Weatherization Assistance Program

- **Stimulus funding has significantly increased WAP funds, and solar is an eligible measure, subject to prior approval**
- **Renewable energy systems such as solar water heating will be considered during WAP FY 2009-12.**
- **Sub-grantees interested in installing this renewable energy system should contact the state office for clarification of guidelines.**
- **Weatherization measures that are required through the Priority List and audits must be provided before installation of a renewable energy saving system may be considered.**
- **Prior approval for installation of a renewable energy saving system is required from the state office.**

Evolving Financial Models/Incentive Programs

- **Property Tax Assessment Model**
  - Berkeley CA
  - Palm Desert CA
  - Boulder County CO
  - Sonoma County CA

- **Community Solar**
  - Solar Shares (SMUD – CA)
  - SunSmart (Utah)

Evolving Financial Models/Incentive Programs

- **Public and Private Sector: Purchase and Own**
  - Google
  - Microsoft
  - **Publix**
- **Public and Private Sector: Third Party Ownership**
  - Wal-Mart
  - Whole Foods
  - **Orange County Convention Center**

Evolving Financial Models/Incentive Programs

- Qualified Energy Conservation Bonds
- Build America Bonds
- Recovery Zone Economic Development Bonds
- Recovery Zone Facility Bonds
- Advanced Energy Manufacturing Tax Credit (48C)

Evolving Financial Models/Incentive Programs

Energy Efficiency and Conservation Block Grants (EECBG)

- **Non-Entitled Cities and Counties**
- **Electric Car Rebate**
- **Competitive Solicitation (NEW)**
- **Retrofit Ramp Up**
- **General Innovation Fund for Local Governments**

Evolving Financial Models/Incentive Programs

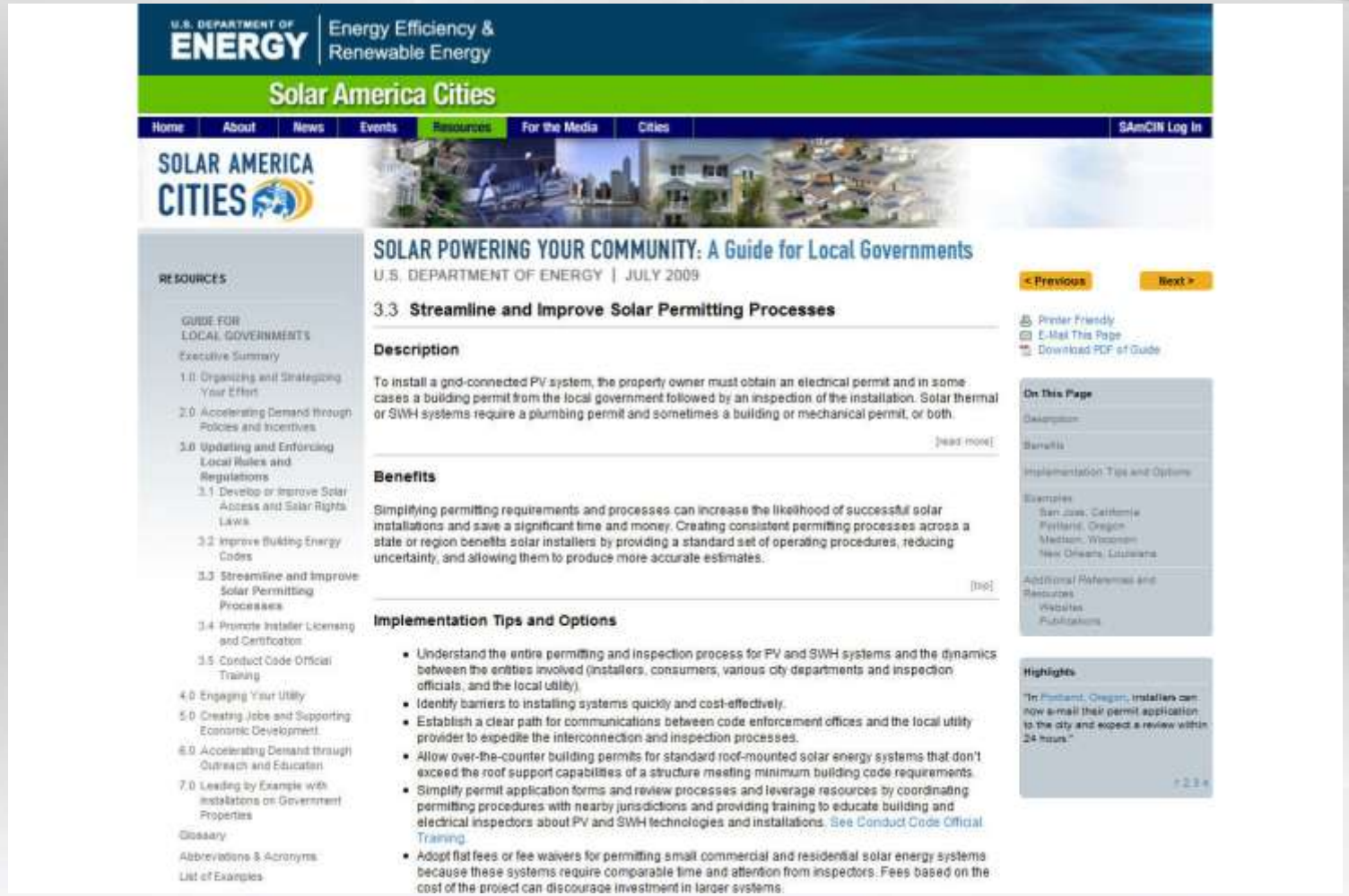
State Energy Program:

- **Clean Energy Opportunity Fund**
- **Solar Energy Loan Program**
- **Florida Residential Retrofit Grants/Loans**
- **Florida Clean Energy Grants**

Too Much Information!

- http://www.energy.gov/recovery/index.htm
- http://www.smud.org/en/community-environment/solar/Pages/solarshares.aspx
- http://www.sgsunsmart.com/index.htm
- http://www.floridaleagueofcities.com/Advocacy.aspx?CNID=1579
- http://www.floridaleagueofcities.com/EconomicStimulus.aspx
- http://myfloridaclimate.com/climate_quick_links/florida_energy_climate_commission

www.solaramericacities.energy.gov/



Thank You!

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