North Central Texas SolSmart Informational Webinar

June 22, 2017
11:00 a.m. - 12:00 p.m.

Sponsored by:

North Central Texas Council of Governments

www.GoSolarTexas.org
SolSmart is a prominent national recognition and technical assistance program which recognizes local governments for their efforts in building stronger solar environments around the country."
Common Barriers to Solar

- Environmental Impact
- Reliability concerns
- Lack of HOA support
- Historic Preservation
- Other
- Lack of utility support
- Lack of policy support
- Lack of education
- High upfront cost

0 50 100 150 200 250 300 350
Dramatically falling costs

US Average Installed Cost for Residential PV

Avg. for 2015: $3.50/W (SEIA)

43% drop in price 2010 - 2015
Dramatically falling costs

Change in Soft Costs and Hardware Costs Over Time

- Soft costs remain nearly 2/3s of installed cost

- 2010: $7.00, Soft Costs: $3.00, Hardware Costs: $4.00
- 2012: $6.00, Soft Costs: $3.00, Hardware Costs: $3.00
- 2014: $4.00, Soft Costs: $2.00, Hardware Costs: $2.00
- 2016: $3.00, Soft Costs: $1.00, Hardware Costs: $2.00
- 2018: $2.00, Soft Costs: $1.00, Hardware Costs: $1.00
- 2020: $1.00, Soft Costs: $1.00, Hardware Costs: $0.00
Less time ➔ Lower cost ➔ More solar

1. Local governments can reduce solar costs by streamlining
2. Excess costs slow solar market growth
3. There is substantial room for improvement
No-Cost Technical Assistance

- All communities pursuing SolSmart designation are eligible for no-cost technical assistance from national solar experts.

- Technical assistance helps governments reduce solar costs, spur the local solar market, and achieve SolSmart designation.

Technical Assistance Topics

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<td>Construction Codes</td>
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SolSmart Advisors

- **Program-funded temporary staff** to help communities achieve SolSmart designation.
- Advisors **help governments apply industry leading best practices**.
- SolSmart Advisors assist communities through **engagements lasting six months**.
- Competitive application. **No cost** to those communities selected as hosts.
SolSmart Designation

- Communities can earn **Bronze, Silver, or Gold**.
- SolSmart provides abundant **opportunity for national recognition** – online, press releases, events, and more.
- SolSmart Designees join an **elite cohort** of solar leaders.
- **Designation is within reach** – technical assistance is available to help!
SolSmart Designation

SEVEN NEW COMMUNITIES RECEIVED SOLSMART DESIGNATIONS IN NOVEMBER
SolSmart Designees

LEARN MORE ABOUT SOLSMART COMMUNITIES ON THE SOLSMART DESIGNEES PAGE
Reducing the cost of solar for 300 communities throughout the country

Technical Assistance
• Online, by phone, or in-person
• Opportunity to receive a fully-funded solar expert on staff for 6-months (SolSmart Advisor)
• Free of cost to participating communities!

Rewards and Recognition
• Nationally recognized award for leading solar communities
• Three levels: Bronze, Silver, Gold
Mayor Pro Tem Lissa Smith of Plano, TX accepts SolSmart Bronze designation.

Presenter:
Yarcus Lewis
City of Plano
Why SolSmart?

- 2015 - STAR Communities Program Certified 4 ★★★★★
- Climate & Energy category was a challenge.
- Solar was a strength but wanted to benchmark.
- 2016 - SolSmart Early Adopter Status Awarded
- 2017 - SolSmart Bronze Designation Awarded
- 2018 - Resubmit for Gold Designation
Notable Solar Related Achievements

- Plano Solar Advocates (Residential Co-op)
- Smart Energy Loan Program (Residents Only)
- Great Update Rebate Program (Residents Only)
- Green Business Certification Program
- Toyota USA - North American Headquarters
  *Largest PV installation in TX at 8.9MW

Thank You!
Denton Municipal Electric (DME) has been owned by the residents of Denton since 1905. DME is a national leader in public power, providing 40 percent wind energy to every customer while maintaining competitive and reliable rates. DME is currently pursuing the Renewable Denton Plan, an industry leading initiative to increase renewable power from 40 to a minimum of 88 percent by 2019.

https://www.cityofdenton.com/government/departments/denton-municipal-electric
Recognition and Awards

- DOE Wind Power Award
- APPA Reliable Public Power Award
- APPA Community Service Award
- EPA Green Power Partner
- USCM Mayors’ Climate Protection Award
The City of Denton isSolar Friendly

The City of Denton is pursuing the Silver Designation to accomplish the following:

- Enhance the solar application process
- Train and educate the Utility, Permitting and Fire Departments
- Reduce application and rebate processing time
Enhance Solar PV Application Process

We believe that an enhanced application process, that combines DME’s Solar PV application with the Building Permit application will cut down on processing time, paperwork and confusion for the customer.
Increased Solar PV Rebate Funds

The City of Denton revised its EnergySave Rebate Program, which included all energy efficient upgrades, into the GreenSense Incentive Program in 2009. In doing so, the Solar PV Incentive was budgeted separately which allowed more rebate funds to be awarded for solar; thus resulting in more installations.
Advice for Other Cities

- Get all Departments On Board
- Communicate the vision and plan.
- This will help move your city towards accomplishing your goals of becoming more solar friendly.
Where Opportunities Grow Naturally

Fort Worth  Dallas  Cedar Hill
Cedar Hill by the Numbers

- Population: 46,500
- Established: 1846
- Elevation: 880 ft
- Green Space: 18% (20% goal)
- Tree Canopy: 7,938 acres
- Number of Parks: 19
Cedar Hill is Diverse
Cedar Hill’s Philosophy

- Value of green space
- Preserve natural beauty for future generations
- Believe that we are borrowing from future generations, rather than inheriting from our ancestors

Collaboration through partnerships
- Dogwood Canyon Audubon Center
- Cedar Hill State Park

Joe Pool Lake & Cedar Hill State Park
Solar Panel System

**Solar: part of City’s green initiative**

You can’t see them from the ground, but the solar panels installed on the roof of the Government Center will soon start cutting the City’s electric bill by $21,000 a year.

The solar panels are strategically located at the most prominent facility in Cedar Hill for maximum energy production and awareness to those living in and visiting the City.

Asst. City Manager Melissa Stephens began submitting grant applications in August, 2009 to fund most of this project. It will cost over $300,000 to install the system and bring it online.

Federal, state and an Oncor grant covered all but $52,000.

The City expects to save about $21,000 a year in electricity costs at the Government Center. It will take just over a year to recover the City’s portion of the cost.

The panels will provide about 8% of the electricity for the Government Center. And they will enhance local awareness of alternative energy uses.

An interactive video in the lobby will show visitors exactly how much energy the solar panels are producing at any point in the day.

Cedar Hill is adopting an aggressive “green” strategy, encouraging residents and businesses to take action. The City expects to be a leader in reducing energy consumption.

**Grant funding**

- $952,000 SECO funds
- $164,500 Oncor program
- $26,000 City

**Cedar Hill - The City of Cedar Hill got a little greener this month when the much anticipated solar panels finally arrived and are being installed this week and next on the 152.64 kW system.**

You can’t see them from the ground, but the solar panels installed on the roof of the Government Center will soon start cutting the City’s electric bill by $21,000 a year.

**Stephens says too that the kilowatts per hour this will be generated by the solar panels is approximately eight percent of the Government Center’s average consumption on a daily basis.**

In the months since the summer of 2010, the City received the grant for the project from SECO back in January.

According to Stephens, the Texas Renewable Energy Conservation Office (SRECO) is specifically designated to award solar panel projects to local governments in the area just like this one.

The project actually began when the...
Wind Turbine

- 4.335 kW vertical axis

Government Center Renewable Energy Systems

- Complement solar project as hybrid solution to cost of electricity
- 100% funded project
  - $50,000 SECO funds
  - 20% match required ($12,500 budgeted)
- $1,500 Oncor Incentive
### Solar Permitting

- **Accessory use:** We allow it across the board!
- **Primary use:** Requires CUP

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<th>Authorized Uses</th>
<th>Residential Districts</th>
<th>Nonresidential Districts</th>
<th>Parking Group</th>
<th>Supplemental Regulations</th>
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<td></td>
<td>RR</td>
<td>SF-E</td>
<td>SF-22</td>
<td>SF-15</td>
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<tr>
<td>Solar panel system (primary use)</td>
<td>C</td>
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- **P** - Designates use is permitted within district
- **E** - Designates nonconforming uses which may be replaced if destroyed.
- **- Designates use prohibited in district indicated**
- **N/A** - Means "not applicable", no parking requirement.
- **C** - Designates use may be approved as conditional use permit.
- *** - See section for definition.**
SolSmart Designation

- Pursuing GOLD Designation
- Identifies Cedar Hill as a leader in environmental sustainability
- Leverage SolSmart requirements and compare with other designated Cities to improve policies
- Incorporate into Sustainability Plan
City of Kennedale
Rachel Roberts

Small first-tier suburb of Fort Worth
Small in land area and population

Permits & Planning Department:

Just one inspector/plan reviewer

www.cityofkennedale.com/297/Permits
Why is participating important to us?

- Easy access to solar
- Best practices and safety
- Staying informed
- Kennedale is pursuing SILVER designation
What makes us SolSmart-happy?

- Expert review of existing regulations
- Ensuring simplicity
- Spreading the word!
Greatest accomplishment so far?

Two achievements we’re most proud of:

- Permitting by right
- Simple and fast
Tips for other cities

🎯 Coordinate with fire department (and other departments who work with and/or around solar)

🌞 Know your community’s aesthetic concerns and have a plan to address them
NCTCOG Main Roles

- Assist with application materials and submission
- Evaluate existing solar policies and processes
- Host trainings to help cities meet SolSmart criteria
SolSmart is a national community designation program, funded by the U.S. Department of Energy, designed to recognize communities that take steps to make it easier for businesses and residents to go solar. Communities committed to pursuing SolSmart designation will be eligible for no-cost technical assistance from a team of national solar and local government experts.

Participating cities can earn SolSmart designation—at the bronze, silver, or gold level—by completing criteria that fall into eight categories: 1) Permitting; 2) Planning, Zoning, and Development; 3) Inspection; 4) Construction Codes; 5) Solar Rights; 6) Utility Engagement; 7) Community Engagement; and 8) Market Development and Finance. For more information on SolSmart, view the SolSmart Program Guide. The resources to the right hand side include regional guidance and best practices for each category. For additional examples and best practices of new cities across the country, explore the following pages.
Click each city to view the number of kilowatts (kW) installed as well as the number of installations (INSTALLS).

Visit the GoSolar Texas SolSmart page for more information!
Permitting is one of the foundational categories for the SolSmart designation program. To achieve a **Bronze** designation, a city must complete **P-1** and earn at least 20 **points** in this category. To achieve a **Gold** designation, a city must also complete **P-2**. Below is a list of regional guidance and best practice documents. When regional examples are not available, national examples are available through SolSmart resources.

**P-1**
Create and make available an online checklist detailing the steps of your community's solar PV permitting process (required for Bronze).

**P-5**

**P-8**

**P-11**

**P-2**

**P-6**

**P-9**

**P-12**

**P-3**

**P-7**

**P-10**

**P-13**

**Resources & Best Practices**
Create a Permitting Checklist (BMP Resources)

**Samples**
City of Plano Solar PV Checklist
Create and make available an online checklist detailing the steps of your community's solar PV permitting process (required for Bronze).

**Resources & Best Practices**
Create a Permitting Checklist (BMP Resources)

**Samples**
City of Plano Solar PV Checklist
NCTCOG Solar PV System Permit Application Checklist

Provide a streamlined permitting pathway for small solar PV systems with turn-around time of no more than 3 days (20 points, required for Gold)

**Resources & Best Practices**
Develop Criteria for Expedited Processes (BMP Resources)

**Samples**
NCTCOG Solar PV Expedited Permit Checklist

Distinguish between systems qualifying for streamlined or standard review (5 points).

**Resources & Best Practices**
Develop Criteria for Expedited Processes (BMP Resource)

Require no more than one application form for a residential rooftop PV project (5 points).

**Samples**
City of Plano Miscellaneous Simple Permit Application
City of Denton Building Inspections Universal Application
Solar Basics

The following resources are an introduction to the basics of solar energy, the potential for solar in Texas, the current state of solar energy in Texas, and important solar terminology.

Solar 101
If you are interested in going solar these resources will help educate you on the basics of solar energy, solar as an energy source, solar equipment, and key solar terminology.

The Case for Solar in Texas
Due to abundance of solar radiance and land availability, Texas is poised to lead the country in solar. Already, Texas is well on its way.

The State of Solar in Texas
These resources give an overview of the current state of solar energy in Texas.

Solar Glossary
Local Governments

The success of solar is largely dependent on local government support. Decisions about planning, permitting, zoning, codes, etc. are made at the local level and can dictate how solar friendly, or unfriendly, a municipality is. This portal provides resources and examples for Texas local government staff.

Best Management Practices
These resources are meant to assist cities with planning and soft cost reduction so that homeowners, businesses, schools, and other entities interested in solar energy have an easier path to getting solar up and running.

SolSmart Designation
SolSmart is a national community designation program, funded by the U.S. Department of Energy, designed to recognize communities that take steps to make it easier for businesses and residents to go solar. Communities committed to pursuing SolSmart designation will be eligible for no-cost technical assistance from a team of national solar and local government experts.

Incentivizing and Financing Solar
One of the most critical steps a local government can take in supporting solar is to create local solar incentives and to demonstrate the viability of solar power themselves through installations on municipal properties.

Cost-Benefit Analysis
These documents, developed by Frontier Associates, present information and analysis about five model solar applications likely to be of interest to local government officials. Frontier produced a detailed report, 2-page fact sheets, and Microsoft Excel-based financial pro forma templates that can be customized and applied to specific projects under consideration.

Community Solar
Community solar is one way to improve citizens' accessibility to solar energy. These resources provide an overview of community solar, its benefits, and current community solar programs in Texas.

Local Government Solar Initiatives
Want to find out how other jurisdictions are making solar work for them? These are the projects, programs, and policies from Texas solar leaders.

Inspectors, Firefighters, & Code Officials
These resources are meant to educate and assist inspectors, firefighters, and code officials to the relevant issues surrounding solar PV systems.

Frequently Asked Questions

Additional State and National Resources
Link to Our Page!

http://gosolartexas.org/solsmart
Solar Rights-1 (SR-1)

- Conduct review of state policies related to protecting rights of property owners to install solar and solar system owners’ right to sunlight on their property. Make this information available to residents.
HB-362: Amended Texas Property Code Section 202.010 to include the following

- HOAs and POAs cannot restrict solar devices outright
- Homeowners must still follow normal HOA procedures for seeking improvements.
- HOAs can prohibit solar panels under certain conditions
- HOAs can designate where solar panels may be placed on the roof unless homeowner can prove an alternate location would increase production by more than 10% using PVWatts Calculator

Visit gosolartexas.org/solar-rights-regulations for more information!
SB-1626: Developers can prohibit solar panel installation on homes in residential subdivisions during the development period only if the development consists of 50 or fewer units.

Visit gosolartexas.org/solar-rights-regulations for more information!
Market Development and Finance-1 (MDF-1)

- Provide resources on active solar installers and/or local incentives for solar PV and/or thermal.

Visit [gosolartexas.org/market-development-and-finance#MDF1](gosolartexas.org/market-development-and-finance#MDF1) for more information!
Active Solar Installers

- **North American Board of Certified Energy Practitioners (NABCEP) Certified Locator**
  - “Gold standard” certification for solar professionals

- **Oncor’s Take a Load Off, Texas Provider Search**
  - Companies who have completed paperwork and have been vetted by Oncor to take advantage of their solar incentives

Visit [gosolartexas.org/4-choosing-a-retail-electric-provider-and-certified-installer](gosolartexas.org/4-choosing-a-retail-electric-provider-and-certified-installer) for more information!
State Incentives

- **Property Tax Exemption**
  - Allows a property tax exemption for solar installations
  - Solar will likely increase property value for prospective buyers, but property taxes will not increase

- **Solar Energy Devices Franchise Tax Exemption**
  - Businesses can deduct the cost of a solar energy device from franchise taxes

Visit [gosolartexas.org/available-incentives](gosolartexas.org/available-incentives) for more information!
MDF-3

Provide information to consumers about different solar PV financing options, including commercial options, such as Property Assessed Clean Energy (PACE) financing.

Visit gosolartexas.org/market-development-and-finance#MDF3 for more information!
Financing Options

- Purchase, lease, or power purchase agreement (PPA)
- PACE Financing
- Solarize - Group Purchasing
- Helpful Webinars:
  - Financing Solar in Texas (NCTCOG, SECO, USDA, & Plano Solar Advocates)
  - Financing Solar Energy Systems (NCTCOG)
  - PACE Financing (Texas PACE Authority & City of Houston)

Visit gosolartexas.org/payment-options for more information!
Community Engagement-5a (CE-5a)

- Host a solar workshop open to the general public and/or local government staff explaining solar PV opportunities and policies

Visit [http://gosolartexas.org/community-groups](http://gosolartexas.org/community-groups) for more information!
CE-5b

Create and distribute educational materials at relevant community events and through local government channels

Contact NCTCOG staff for available outreach items
Upcoming Trainings

- Cross Training for Permitting and Inspection Staff, including planning and zoning best practices
  - Will Satisfy the PZD-9 and I1 Criteria
- Solar PV for Fire and Safety Staff
  - Will Satisfy the P-9 Criteria
Contacts & Thank You!

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