Note From President

Well it’s the end of April, I don’t know where the first three months went! If you are like me, you are behind in doing the checks and tweaks to your equipment that will allow you to survive our hot Texas summer. Check filters, lubricate major parts, check coolant leaks, and make sure your back up cooling solutions are in place.

I want to thank James Matchett, of Melink, for his talk on Demand Ventilation Controls.

Please plan to join us this month for tour of Webberville Solar Farm in Manor, TX. Further details included in this month’s newsletter.

Have a great month.

Frank Richards
Chapter President

April Field Trip

Webberville Solar Farm
18580 FM 969, Manor, TX 78633
in Manor, TX
SITE OVERVIEW

The Project site is generally flat and slopes in a southeasterly direction. The site conveys stormwater runoff from several watersheds located on and adjacent to the site, as well as overflow from a larger stream located to the northwest. Stormwater detention areas are installed to attenuate peak flows to limit discharges from the site to pre-developed conditions. The inverter pads have a minimum elevation along with 100-year water surface elevations (WSEs) based on the floodplain analysis cross-sections. Panel heights also considered the 100-year WSEs. The topsoil consists primarily of Smithville-Ships-Bergstrom sandy, silty clay loam. Soil borings presented in the geotechnical report divides the Project site into two sections – the southwest section can be generalized as 4 to 7 feet of fat clays and lean clays with high plasticity underlain by low to medium-plasticity lean clays and sands; the northeast section can be generalized as over 10 feet of fat clays with high plasticity underlain by lean clays and sands. Existing grade was maintained with slight earthwork for the installation of roads, maintenance facilities and foundation construction. Most pre-and post-construction stormwater flows to the southeasterly site boundary. The installation of solar panels allows precipitation to continue to fall to the ground and the ground will remain in its natural condition. The construction of access roads modified the overland flow slightly, but the roads were not paved, and the gravel base allows some infiltration. Detention facilities were installed to limit the post-development outflow rate to pre-development conditions. Soil erosion and sediment control (SESC) were established along the entire site perimeter. Rock check dams were placed in areas where stormwater flow velocities needed to be reduced. A stabilized construction entrance was provided at the FM 969 approach. Continuous silt fence was placed around the project perimeter. The restorative vegetation consists of low-growing ( < 3 ft) grasses that should not cause shading onto the solar array.

Project Overview

The Webberville solar project is a 35-megawatt direct current (DC) photovoltaic system located on a 380-acre site owned by the City of Austin. FRV AE Solar, LLC leases the property and utilize approximately 280 acres for the solar facility. The site is located one mile from Austin Energy’s Austrop substation, which minimizes the additional transmission infrastructure required to deliver power generated to the electricity grid. This solar facility utilizes solar Photovoltaic panel technology that is mounted on horizontal-axis trackers that rotates in the East-West direction with the sun’s position in the sky in order to optimize electricity production. FRV AE Solar, LLC will generate emission-free solar power that will be sold to Austin Energy (AE) under a 25-year Power Purchase Agreement (PPA) and contribute to AE’s fulfillment of its 30% renewable energy goal. The system will produce over 50,000 MWh of solar power annually, enough energy to power 5,000 homes.

Photovoltaic (PV) modules convert sunlight directly to DC electricity. Large numbers of modules are connected together in series and parallel to form an array. Arrays are mounted on sun-tracking structures that provide mechanical support along with convenient mechanical and electrical grouping geometries. DC power is usually aggregated via combiner boxes at regular intervals in the array field, with corresponding increases in wire size to carry the larger amounts of current toward the inverter. The inverter converts the DC (direct current) electricity from the Photovoltaic array into AC (Alternating current) power for delivery to the electricity grid, with multiple inverters used in parallel for typical MW-scale utility scale project. There are transformers at the output of the inverter that step the voltage up to the utility level.
Additional Field Trip Information

Webberville Solar Farm

WHERE:
18580 FM 969
Manor, TX (East Side of Austin)

WHEN:
Tuesday April 30, 2013 @ 11:30 AM

WEB LINK:
http://www.webbervillesolar.com/

REQUIRED:
1) Waiver Form - Go to Webberville Solar Farm website and complete form. ...Bring Signed form with you!!
WebbervilleSolarFarmVisitorReleaseForm2012v5.pdf
2) Photo ID
3) Appropriate Dress - Long pants and closed toe shoes
4) BBQ at Don’s? - Contact Linda Rickard at Linda.Rickard@AustinEnergy.com or 512-680-8837 if you plan on joining in on lunch after the tour

ENJOY THE TOUR:
1) ARRIVE ON TIME - Tour will start promptly at 11:30AM. Plan travel time to site accordingly
2) NO ON SITE RESTROOM FACILITIES - Make that necessary “Pit Stop” prior to arrival
3) Bringing a Camera? Please share any photos with Newsletter editor @ badschuden@gmail.com. ...selected photos to be published next month in “On The Scene”...THANKS!!

Waiver Form Example

Directions Coming from Austin: From I-35, or from US Hwy 183, head east on MLK Blvd. (which is also FM 969). Pass Johnny Morris Rd, Pass Decker Lane, Pass Donn’s BBQ, Pass TX45 Toll Road. From TX45 Toll Road travel east on FM 969 for 5.6 miles. The Webberville Solar Farm is on the left side of the road at 18580 FM 969. Make a left turn at the entrance and follow the dirt road into the field.

Directions Coming from San Antonio: From I-35 traveling north to Austin, take Exit 223A for TX45 E. Merge onto TX45 Toll E. Go 20.1 miles. Take #444 for FM-969. Turn right onto FM 969 E / Webberville Rd. Go 5.6 miles. Turn left into the Webberville Solar Farm at 18580 FM 969. Follow the dirt road into the field.

Interested in Carpooling? Please contact Linda Rickard at Linda.Rickard@AustinEnergy.com or 512-680-8837 (cell)
A mathematician and an engineer are sitting next to each other on a long flight. The mathematician leans over to the engineer and asks if he would like to play a fun game. The engineer just wants to take a nap, so he politely declines and rolls over to the window to catch a few winks.

The mathematician persists and explains that the game is really easy and lots of fun. He explains, "I ask you a question, and if you don't know the answer, you pay me $5. Then you ask me a question, and if I don't know the answer, I'll pay you $5." Again, the engineer politely declines and tries to get to sleep. The mathematician, now somewhat agitated, says, "Okay, if you don't know the answer, you pay me $5, and if I don't know the answer, I'll pay you $50!"

This catches the engineer's attention, and he sees no end to this torment unless he plays, so he agrees to the game. The mathematician asks the first question. "What's the distance from the earth to the moon?"

The engineer doesn't say a word, but reaches into his wallet, pulls out a five-dollar bill and hands it to the mathematician. Now, it's the engineer's turn. He asks the mathematician "What goes up a hill with three legs and comes down on four?"

The mathematician looks up at him with a puzzled look. He takes out his laptop computer and searches all of his references. He taps into the air phone with his modem and searches the net and the Library of Congress. Frustrated, he sends e-mail to his co-workers all to no avail.

After about an hour, he wakes the engineer and hands him $50. The engineer politely takes the $50 and turns away to try to get back to sleep.

The mathematician then hits the engineer, saying, "What goes up a hill with three legs, and comes down on four?" The engineer calmly pulls out his wallet, hands the mathematician five bucks, and goes back to sleep.
2013 Officers

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frank Richards</td>
<td>President/Past President</td>
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</tr>
<tr>
<td>Karma Nilsson</td>
<td>Treasurer</td>
<td><a href="mailto:klnilsson@cps-satx.com">klnilsson@cps-satx.com</a></td>
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<td>Linda Rickard</td>
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<td>Historian/Photographer</td>
<td><a href="mailto:miles99@gmail.com">miles99@gmail.com</a></td>
</tr>
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Our Mission:

◊ Advance the professional careers and the common purposes of its members. Facilitate networking, social exchange and training.

◊ Present and discuss energy, environmental topics, and members’ ideas. Stay abreast of fast changing developments. Anticipate their future.

◊ Disseminate information to the trade and to the general public via meetings, publications, trade shows and presentations.

◊ Build an exciting, expanding chapter

◊ Cooperate with other AEE chapters and related organizations.

◊ Promote energy efficiency.

Join Us at Our Next Meeting!

Date: 30 April 2013

Time: 11:30 - 12:30

Location:

Tour - Webberville Solar Farm
18580 FM 969
Manor, TX 78663

We’re On The Web!!
MEMBERSHIP INVOICE
Austin/San Antonio Chapter of the Association of Energy Engineers
http://www.txaee.org

___________________
Date

Local Chapter Dues for 2013 $ 30.00

☐ New Member ☐ Renewal ☐ Discount AEE International
(Attach Coupon to this Form)

Please fill out the following information.

Name: ____________________________________________

Company: _________________________________________

Address: _________________________________________

City/State/Zip: ____________________________________

Business Phone: _________________________________

FAX: ____________________________________________

E-mail Address: _________________________________

Suggested Speaker Topic or Tour: _______________________

Chapter meetings typically are held the 4th Tuesday of each month at 11:30 a.m. Location for the meetings is posted on the Austin/San Antonio AEE Web Site http://www.txaee.org/calendar.htm. Look forward to informative, professional, and educational presentations in the energy field, plus field trips to various locations in Austin and San Antonio.

Remit to: Austin AEE
PMB 287
815-A Brazos Street
Austin, TX  78701-2509

For inquiries regarding this invoice please contact:
Karma Nilsson at 210-353-2815 or knilsson@cpsenergy.com

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Check Number ____________________________
Payment received by ____________________________

Name ____________________________ Date ____________