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Brent Applegate Speaks about Solar



Brent Applegate, an Oakland native, lives near Shelby with his family. Brent, an ISU Agriculture Engineering graduate, is Chief Engineer in his family's business, Mix-Mate.

Brent is a self-proclaimed tinkerer and is curious about the theories of green energy so he put

in his own solar system on his farm as an experiment to see if it is justifiable. He and his family live in an old farm house built in 1918 that has boiler heat with radiators. There is insulation in just some parts of the house so it is leaky and only 30% efficient.

Brent's solar system utilizes 36 - 300 watt panels which are approximately 1x2 meters each which gives him 10,800 kwh (kilowatts per hour) of power. He doesn't use that much. He has 32 batteries, the size of car batteries, in the basement. They run on 48 volts which runs to a 120 v inverter. A separate circuit panel runs everything solar on 120 v. He felt it would save the most money to just run solar on 120 v. His average usage is 60 kwh per day throughout the year. 126 kwh is the high and 35 kwh is the low. Brent gets a read out on his phone.

With the 10.8 kwh panels, on a perfect clear summer day he might get 75% usage during the middle of the day. A couple years ago it was below zero degrees outside and lots of snow and sunshine and he got 120%. Applegate said he can let water run on the panels to help. Yes, doing that can cost, but he has his own well. He stated he saves \$230 savings/mo. on electricity.

In the winter time he takes half of the panels and a special circuit and runs four 120 v. space heaters in the house, wired separately. Fans in the summer don't like variable voltage.

Doing this has saved 700 gal./year of propane in the winter which is expensive right now.

Regarding the 32 battery pack, Brent stated that is not even close to handling surges. He also stated an air conditioner or compressor can drop voltage so fast and the battery can't hold the surge. Batteries are a big investment at \$150 each. He's hopeful the life will be six years.

Applegate has \$13,000 in his system before rebates. Using old poles that REA discarded and tearing down an old barn to build the structure also saved him money. He also purchased 120 panels from a guy's roof (left over from a hail claim) and extracted them. Only twenty were broken so he has a surplus for the future. The panels are on a steep bank and was in a hard to mow area. Right now it is break even because the rebate paid for half of this.

He said researching how to burn energy and how to deal with power surges took the most time, but he had it up and running in a couple weeks.

Clouds really hinder the output. Brent has caps on things that shut down. With a power surge he thought he could shut everything off. He's learning how to harness that before hitting the hard limits. A generator is utilized if everything is dead.

Brent said he would do it the same way if doing it again, but not do the grid tie with REA, but with Mid-American Energy because they offer more networking. With Mid America you can push back during the day and have energy available to come back to you and you would get more efficient use of solar energy.

Conclusion: He likes it, but sometimes it is a pain. Doing it again depends on who the supplier of energy is. If your utility bill is less than \$200/mo., he wouldn't do it.

Next week's speaker will be:

To Be Announced

All are welcome!

Meetings are from 8-9 AM, Saturdays
Treynor Community Building

Meeting Minutes

Jordan Campbell, our new President, called the meeting to order. Present were 16 members and guests Dick Fox and Tom Trede.

Jordan stated that on this day in 1975 Muhammad Ali and Joe Frazier boxed. Also five years ago was the shooting into a Las Vegas concert. 864 people were injured.

Jordan led the Pledge of Allegiance and Gary Gutttau gave the opening prayer.

Ken Graham, Steve Chambers, and Dale Willenborg shared jokes.

50/50 was won by Gary Gutttau. Josh Gutttau was unable to claim the attendance drawing,

Birthdays/Anniversaries:

Dick Fox announced Georgia Denton's birthday. Jordan Campbell stated that Julie Andrews on this day is 86 and Jimmy Carter is 98.

Bragging Rights: (\$ are used for youth activities)

- Jerry Hempel gave kudos to Gary Funkhouser for being inducted into the Riverside Hall of Fame and was honored at their homecoming parade and a reception plus he also addressed the students and attendees. Other members also gave dollars to honor Gary.
- Dick Fox announced his granddaughter's volleyball team in Gothenburg, NE defeated Minden in five sets, whereas Minden, NE had beaten them three days before. Gothenburg is #3 in Class C and Minden dropped to #6.
- Dale Willenborg announced Teammates had their get together which was fun.
- Gary Gutttau paid to state the millipedes continue to invade. He spilled some oil in the shop which resulted in a pile of dead "pedes". He recalled the cinch bugs of the 30's. Many remembered their dads' stories of making a furrow and pouring in creosote to kill the bugs.

- Dennis White bragged on his grandson, who runs cross country for Shenandoah and was second at Glenwood recently and had his personal best.
- Gary Funkhouser paid to announce all his kids were home recently.

Auction Items: NONE

Football Pool: Ken Graham won.

Business:

- Can Kennel sorting took place with John Klein, Steve Chambers and Chad Gutttau helping. Obtaining larger bags is a goal.
- Gary Gutttau announced dues are due.
- Gary Gutttau gave a Treasurer's report.
- Dale Willenborg gave a Can Kennel applications report.

Community:

- Tom Trede announced that October is Breast Cancer Awareness Month. In an effort to "Squash Cancer" he and his wife Sue are selling squash at events for a donation to go to fight Breast Cancer. Next Thursday is the pink out volleyball game and they will be there with squash. This is also close to Tom's heart as his daughter Teresa found out in June she has it and has had her first ten treatments.
- Fritz Holtz's funeral will be Oct. 9 at 2 PM at Zion. He is a former Treynor Optimist President.
- John Klein announced that at 9:00 the CB Library opens and if you have a library card (free) you can be in line to receive the fall allocation of a one day pass to the zoo, good for 2 adults and six kids. It is a first come, first serve offering. Zoo passes are about \$25.
- Jordan Campbell expanded on the additional passes that can be received for free throughout the year to various places such as the Fontanelle Forest.

Gary Gutttau stated that next week's speaker is not finalized but Jeff Jorgensen may get a group of supervisor candidates to debate. The following week George Volz will discuss Optimist issues. On the fourth Saturday Shelly Gutttau will discuss homeschooling.

The meeting was closed with reciting of the Optimist Creed.

HUMOR

Hunting dog for sale



Calendar

Events

Oct 7-8 1st Qtr District Optimist Conference –
Stoney Creek Hotel, Johnston

Birthdays

Oct 17 Marsha Underwood
Oct 29 Bill Vorthmann

Anniversaries

Oct 13 Dale & Dianne Willenborg
Oct 17 Dennis & Kay White

Programs

Oct Gary Guttau
Nov Jerry Hempel
Dec Linda Danker (First 2 Saturdays)
Mick Guttau (Third Saturday)

Speakers

Oct 8 TBA
Oct 15 George Volz about Optimist issues
Oct 22 Shelly Guttau, Homeschooling
Oct 29 TBA

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