Wildwood Living from an Old Timer by Delbert Bills Article 17, Feb. 2010

A History of Power Development in Wildwood-Commercial Power (continued)

This is the third and last article in a series in which I will share with you our Wildwood electrical experience over a period of 28 years. You will recall that I had planned ahead for eventual commercial power and installed a 6500 watt generator in 1987 (article 15) and subsequently a large photo voltaic system in 1991 (article 16), in a manner that would allow an easy transition when we would eventually get commercial power. I will cover in this article the extensive work and involvement that culminated in an IREA power line extension through the heart of filing 1 and 2 and making it economically feasible for many residents to obtain commercial power. We were anxious to get commercial power someday even though we had a very good photo voltaic and generator power plant.

There has been a lot of interest in renewable energy sources for years. The hype is generally mum on a number of disadvantages. There is no question that solar power generation is expensive along with many inconveniences. However, it is an excellent substitute if commercial power is not available. Some disadvantages with photo voltaic systems are:

- A good solar system requires considerable electronic equipment which is not fail proof. It requires additional technical knowledge beyond the capability of laymen. It also introduces unique maintenance and expense factors. Skilled installation/repair labor is expensive.
- Photo voltaic system operations are complicated to the extent that we couldn't just let our home be used by family without our being there. Everyone is familiar with commercial power and how to re-energize a breaker. This is not true for an electronic system.
- You have to learn to live differently with the unique characteristics of solar. Company is unfamiliar with it. For example, mom is toasting bread for breakfast; granddaughter plugs in her curling iron; mom needs a glass of water and the water pump comes on. Immediately the overload pops a fuse somewhere in the electronic equipment.
- Deep cycle batteries require continual charge monitoring, frequent watering, and maintenance.
- Large shop tools, washers, vacuums and any heating element, present large electrical loads.

The IREA commercial power line had been extended in 1981 to filing 1, lot 162. I contacted IREA in 1989 and explored the feasibility of extending the power line on through filing 1 and into filing 2. I was quoted a general figure of $5-6 per foot but would be highly dependent on the terrain, soil, rocks etcetera. It would have cost about $60,000 to extend the line to my home. I could not generate any interest, so was not economically feasible at the time.

As president of the Association in 1992, I received very critical letter from a Wildwood property owner (along Saguaro road) who lived in California. She had been trying to sell her property for some time without success. She claimed that if we would get more *progressive;* "*float a bond*;" and make power available, that we would increase our property values and improve resale opportunities. It was difficult for her to understand that other owners of vacant

property around her had no interest at all in anything that would increase their cost or tax burden as was demonstrated in 1989. However, the lady was on target that commercial power would improve her property value and most likely improve sales opportunities as well.

Several things were beginning to change by the spring of 1994. Seth White had bought lot 75, filing 1, at the intersection of Saguaro and Superstition roads and was planning to build a home. Al Sandavol (filing 2, lot 259 on Zion Court), was our Wildwood caretaker at the time and was talking of installing a modular home just east of us. Garrett and Soda along Muir Woods Trail had built homes. McCutchen (filing 2, lot 261) just southeast of Faye and I at filing 2, lot 274, had just sold his home to Allen's. He also had sold his small solar system to a neighbor in filing 4. Adamcyk (filing 2, lot 287), ¼ mile north of was using a generator. Frank Henning (filing2, lot 221) was talking of building in the future. Tom Patton had a home on lot 026, filing 1. I felt that several of these homes could use commercial power and three homes were facing initial capital costs in the order of $15,000 or more for good solar/generator systems.

I believed that it was now economically feasible and timly for us to initiate an effort to get a power line extension. I wrote a letter dated April 7, 1994 to the above owners, as well as several others (11 in all) along the potential route that I thought may be interested in commercial power, and solicited their interest in joining together in this effort. I expressed an earnest interest in organizing and heading up a project to accomplish that goal. I could not foresee at that time how extensive and involved this effort would become. Also just as an aside, it has always been my practice from long time engineering experience, to approach most projects in considerable detail supported by written notes and minutes. This is standing me in good stead today in writing this article as I still posses many pages of detailed notes, letters, and minutes regarding this project.

I made an initial and several follow up contacts with Mr. Bergman, Field engineer at Woodland Park, during the summer of 1994. Design fees were required from each individual before we could proceed. IREA could not handle designing for a group as I will explain in more detail. So we were stymied from the start. I met with Mr. Bergman again in October and got him to walk through the proposed project with me. I was promised an estimate by the end of November. It didn't happen. I obtained a new commitment of January 6 and notified our group on December 21, 1994 that our project was faltering. Winter set in and interest was lost.

I tackled the project with renewed vigor the next spring. I met with the IREA engineer in Woodland Park on March 10 and again on April 4, 1995, and obtained a lot of information about IREA power rate structure and construction costs as well as a new ball park estimate (without engineering) of $6.00 per foot. Subsequently, five interested owners (Allen, Bills, Patton, Sandavol, and White) met on my deck on April 14, 1995 for the initial meeting of the "Wildwood Power Line Extension Group" as we dubbed it. There were many questions regarding procedural, legal, construction, rates and many other issues were raised. The most

significant issue was how to form a legal entity that had the authority to plan and contract for the group that would meet IREA's policies and regulations. We reached an agreement as a group that it may be economically feasible for us to "share and share alike" in the total cost which would be approximately $10,000 each.

IREA rules do not accommodate working with a group. The engineer at Woodland Park, upon recognizing the scope of our situation and size of the proposed project, provided me a contact at the IREA headquarters engineering department at Sedalia. A preliminary trip and meeting at Sedalia on April 13, 1995, resulted in another higher level meeting the following week. I met with the Assistant General Manager of Operations and Engineering and the Director of Engineering on April 20, 1995. This was just the beginning of a monumental effort that was to require many hours, many trips and meetings with the headquarters engineers, meeting with our attorney for legal advice, as well as analyzing IREA opinions from their legal department, and then meeting with our power line extension group to consider our options.

As an engineer with Mt. Bell and AT&T, I understood that a company under constraint to the Public Utilities Corporation (PUC) was locked into many rules and regulations with no tolerance for deviations. Their regulations and procedures lean heavily toward working with individuals rather than with groups. By June 25, it became evident that only 4 options were available: (1) Joint venture partnership; (2) Limited liability company; (3) Form a separate homeowner association; or (4) Disband as a group and proceed as individuals.

We as a small group were under individual financial constraints and timing was urgent. It was evident that initial capital investment had to be funded up front contingent upon acceptance of the detailed engineering design. This fee would be $.25 per foot and estimated to be about $3000 if we acted as a group. We were facing two major hurdles as a group:

1. Procedural agreement on how the group would interface with IREA on signing the construction contract, paying the detailed design fee, payment of the construction capital up front, and how IREA would distribute prorated shares from potential future line taps. IREA policy required them to deal and contract with a single entity with power of attorney representing the group.
2. Procedural agreement on how IREA would calculate future prorated shares as rebates back to the original five customers who provided the initial capital within the ten year period after a signed contract.

The above is only a brief summary and covers only a small part the details that we had to consider. This had all been reviewed by IREA's Legal Counsel. Our attorney quoted us a figure of $3000 to draw up the necessary legal documents depending on our final decision. By this time the entire situation had become so complicated that we could not agree as a group to all of the requirements.

The project was at a standstill and essentially dead. The only option left was to revert back to the standard IREA procedure wherein a single subscriber would apply for power; pay

the entire construction cost up front; gamble on the potential of future subscribers tapping onto the first subscriber's line; and recouping his investment over a ten year period. Anyone tapping onto the line for a period of ten years would pay a proportionate cost of the line back to the original point of origin. That payment would then be prorated back to the current owners of the line. This is clearly laid out in IREA's Extension regulations, page 71, 4th revised.

Several other factors were obvious. Back on March 10, 1995, I had been given a "rough" bid of $63,839 to my house. Also on June 23, Al Sandavol had given notice that he was not going to renew his caretaker contract and would be moving into his house in September. Both he and Seth White were facing a decision on what to do for power. An immediate decision was required if we were to get commercial power. I also felt that there was good potential that future taps within ten years would further reduce the risk of our initial investments.

Considering the above, I roughly calculated that it would still be economically feasible for the three of us to act individually so as to meet IREA requirements but coordinate the timing so as to be almost working as a group. So I contacted Al privately and got a verbal gentleman's agreement that if I built the line to my house, he would immediately apply for a two pole extension of my line. That would reimburse me for half of my estimated $63,000 cost. Then I met with Seth on June 28 and got a gentleman's agreement that if I paid for up front and had the initial line built, that he would immediately apply for a line tap at pole 16, which would then split the cost of the first 16 poles among the three of us. This sequence would be a huge capital outlay up front for me but would minimize their initial capital requirements.

I contacted IREA on June 28, 1995 and officially requested a line extension and paid for a detailed engineering design. Seth applied for a design of a line tap the same day. Al applied for his two pole extension design within a few days. I informed the extension group on June 29 of our three-way agreement to assume the risk and proceed with the power line extension.

The project was engineered by August 31. Faye and I drove to Woodland Park and signed our contract and work order on September 1, 1995. IREA could not guarantee finish by winter. However, we had worked so long and diligently with engineers at the management engineering level at headquarters in Sedalia that I'm sure a lot of leverage was applied.

I immediately sent a letter to Jack Ormsby who was the Wildwood Board president as follows: "…A small group of homeowners have been working for over a year and a half to get power extended to several homes that have been built in filings one and two. Delbert Bills, Seth White and Al Sandavol have now contracted with IREA Power Company to provide service in the October time frame. The line will extend east and south along Muir Woods Trail from Yellowstone Road in filing one to Seguaro Road; then east to Superstition Trail; then southeast to Olympic Circle where it will enter filing two. The line will then extend east then north on Olympic circle to Zion Court and then east to the end of Zion Court… This will be a significant benefit to Owners in proximity to the above described route. Anyone who is interested in

tapping onto this power line should contact: IREA, P.O. Box 78, Woodland Park, CO 80865…" This information was passed on to the general association membership.

The final primary line extension cost to my home came in at $57,000 including two secondary poles and a 10 KVA transformer on my property. Construction started October 1st and we had power by October 11, 1995. Tap fees paid by Seth and Al reduced my capital outlay by year end to $20,782. Tap fees by July 1997 from Standsfield, Moran and Hertz reduced my investment to $17, 348. Twelve houses were built along the line and within 10 years our Bills-White-Sandavol group had been reimbursed for nearly all of our initial investments. Meanwhile, I sold my solar/generator power plant to a neighbor in the buffalo, re-engineered the system and helped him install it. In the end it was a win-win situation for all of us.

In summary, this effort resulted in making power available and economically feasible to a substantial number of property owners in filings 1 and 2. About half of our Wildwood homes now have commercial power. Some who tapped into our original line has had others tap into their own branch lines. That in turn helped offset their initial investments. This has also increased the power line availability to many others which In turn has helped increase both property and property resale values over a fairly widespread area of filings 1 and 2.

P.S. Some have asked me about re-selling solar power. As of 5/5/09, there is considerable push and hype to install renewable energy sources such as solar and wind generators. Both are expensive and have a lot of hidden costs. Some power companies are paying the customer for excess generated power. For example, Black Hills Energy, serving Pueblo, Colorado, will pay a subscriber $4.50 per watt to install a solar plant for this purpose. A 4500 watt system is recommended for a family to live comfortably at full time occupancy. The typical engineered and installed cost of this system is $35,000. So the power company would pay you $20,250 (4500x$4.50) or about 58% of your cost. Your individual out-of- pocket system cost, without batteries for nighttime and cloudy day use, is $14,750. You can typically save about 60-70% of your annual power bill. You can also get a $1000 or so tax incentive. For example, an annual power bill of $1000 would yield a savings of $600 per year. $14,750-$1000 divided by $600 equals 23 years to re-coop your capital investment. And you have to experience the inconveniences that I have addressed elsewhere. You would have to apply the above principle to your own situation. IREA is still considering this issue as of this time.

Breakthroughs in battery and other technologies will hopefully make this more economically feasible in the future. It is not here yet.

Del Bills is a 28 year Wildwood resident; past Board president; liaison with the state water engineer and district water commissioner; was instrumental in extending power through filings 1 & 2; and an electrical engineer. You can e-mail him at: www. delbertrbills@msn.com.