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## Electricity Theft - Everyone's Concern



Greg Lee  
IURPA Chairman

**T**heft involving electricity and related materials is a problem all electric utilities face – and it’s a problem for electricity customers, as well as our companies. Compensating for electricity and material theft drives up prices for everyone involved. Theft of electricity puts your personal safety at risk. Tampering with an electric meter can make it unsafe and unstable. When people steal electricity, they put themselves, their neighbors, family and pets all at risk for electric shocks, power surges, sparks and fire from exposed voltage.

Electricity theft can be in the form of meter tampering, stealing by way of illegal connections ahead of the meter, fraudulent applications for service, billing irregularities, and unpaid bills. The evidence shows that theft is increasing in most regions of the world. The financial impacts of theft are reduced income from the sale of electricity which results in the necessity to charge more to consumers.

Electricity theft isn’t isolated to rural areas or to big cities. It’s a problem utilities encounter from agricultural operations to housing complexes to business offices from coast to coast. Although electricity can be easily acquired through a utility, some people are still willing to risk physical damage or loss of life just for the sake of some free kilowatt hours. Stealing electricity is illegal and violates electrical codes.

With the price of salvage copper soaring, electrical wire has become what some thieves perceive as easy pickings. Stealing electrical related materials can pose a significant risk to the culprit, resulting in injury or even death from exposure to high-voltage electricity. If a copper thief chooses an energized wire, the results will be very painful and could be deadly.

*Electricity theft can be in the form of meter tampering, stealing by way of illegal connections ahead of the meter, fraudulent applications for service, billing irregularities, and unpaid bills.*

The dangers of electricity theft are bigger than ever. The criminals are getting smarter and the techniques hard to detect.

Smart metering is an option that recently has attracted much attention. Smart metering promises many benefits and projects in Europe, the USA and other countries show that smart metering is technically feasible. An advanced metering infrastructure offers the possibility for additional energy related services such as demand side management and remote reconnect and disconnect.

Electricity pricing usually peaks at certain predictable times of the day and the season. In particular, if generation is constrained, prices can rise significantly during these times as more expensive sources of power are purchased from other jurisdictions or more costly generation is brought online. Thieves realize this and are using any means available to pay as little as possible.

**Utilities will have the advantage to better monitor lawful use of electricity.** The key word here is ‘lawful’

Smart Metering can also help reduce tampering at the meter, however when it comes to a straight electrical bypass of electricity; **the Smart Meter cannot identify this theft remotely.**

Even with the breakthroughs in technology and all the Smart systems in our industry our success depends on the professionals rolling up our sleeves and going the step beyond; to keep on digging with little or nothing to go on except a hunch.

We as Revenue Protection Professionals have a difficult task ahead. We must manage our time, efforts and knowledge to stay one step ahead of those trying to steal our product. Our companies have placed a great responsibility on us to do a job very few know anything about except the name Revenue Protection.

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**AROUND THE GLOBE**



**Energy Theft in Turkey**

Source: *Turkish Press Scanner* • Saturday, March 22, 2008

**F**inance Minister Kemal Unak'tan announced data regarding theft of electricity, daily *Takvim* reported Friday.

Illegal use of electricity is considered a particular type of theft under Turkish law, and taking action to prevent its illegal use is of great importance to the government. Illegal use of electricity is also an important factor in the rising price of the commodity.

According to the report provided by Unak'tan, YTL 412 million of this amount was collected and criminal complaints were filed against some 340,000 subscribers. The rate of illegal use decreased from 20.86 percent in 2002 to 14.82 percent in 2007 due to precautions taken.

The highest rates of illegal electricity usage were recorded in Mardin, Sirnak and Batman.

**Rockhampton, Australia** --- Ergon Energy is a provider of power to 600,000 customers in Queensland. The company voiced concern over the increase in the number of illegal connections their field personnel are encountering. Utility spokespeople suggest the trend is a result of the increase in electric rates. Competition was introduced in the state in 2007 and tariffs rose by 11 percent. A further increase of at least 7 percent is expected in this year.

Despite state legislation that provides for fines and even prison terms that include a maximum fine of A\$75,000 or up to six months' jail for those caught stealing power, people continue to partake in this activity. It is estimated that as much as A\$30 million (\$28 million) could be lost this year alone as a result of these illegal connections.

Similar to the problems occurring in parts of North America, the indoor cultivation of illegal marijuana accounts for much of the stolen electricity. Ergon Energy says that when suspected, these instances are always reported to the police.

The utility identifies possible cases of theft by noting changes in usage patterns, and also relies on information from honest customers.

**Zimbabwe Serious About Energy Theft**

**Z**imbabwe is getting serious about punishing energy thieves, said the Harare Herald in an editorial. Each year, unscrupulous poachers steal 290 million kilowatt hours of energy—a hefty chunk given that Zimbabwe only produces 6.4 billion kilowatt hours per year. Finally, Parliament is considering an Electricity Bill that stipulates "long mandatory jail terms" for those who steal copper wire from substations or illegally tap into power lines. Once a few people are jailed, others should be deterred. The key, of course, will be catching the poachers in the act. It is far too easy "for anyone to quietly clip a pair of cables" to a neighbor's power line and siphon off free electricity. But "surely it is possible" for the state utility "to audit unauthorized use." If more energy is flowing through a cable than the meter readings of customers would indicate, then someone is stealing from that cable. "If all else fails, a physical check of residences or businesses lit up in the area one evening should quickly identify" who has pilfered the electricity. Energy thieves often don't think of themselves as criminals. But they are. It's time for them to be "hunted down."

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## **WORKING WITH LAW ENFORCEMENT IN THE UK**

By IAN MAIN • UKRPA Scottish Power, Glasgow, Scotland U

**A**s I look and plan for the busy and challenging year ahead, I have also taken the time to reflect on the past year. One of the positives for my Revenue Protection department within Scottish Power is the growing relationship we have with Police Forces throughout the United Kingdom. In particular, the force that stands out is Merseyside Police who covers the city of Liverpool and surrounding areas.

Each year a European city is nominated as the 'Capital of Culture' and Liverpool has been given the honour for 2008. The year kicked off with mass celebrations in the refurbished city centre, headed by ex-Beatle, Ringo Starr and the people of Liverpool put on a spectacular show for the viewing millions. The revitalised structural work is very noticeable, but not quite as noticeable is the work that the Police and external agencies, including Scottish Power, have put in behind the scenes to tackle anti social behaviour within the city.

At the end of 2006, I was invited to a meeting with Merseyside Police to discuss plans they had to clean up the city and in particular to tackle anti-social behaviour. This was a UK Government backed initiative, under the 'Respect Agenda', and the Police were looking to enlist the support of various interested parties, such as Utility Companies, Television Licensing, Customs and excise and Immigration to name but a few. This was definitely something we were interested in, as many of the Police targets were also known to ourselves and over the next few weeks several meetings took place to finalise plans on how proposed exercises would take place. By late February it was all systems go and we took part in our first exercise, yielding great success from a Revenue Protection perspective in front of extensive media coverage. This was the first of many over the course of the year in an attempt to rid this great City of the undesirable element.

Over the next 10 months up until the end of 2007, we accompanied the Police on a further 9 exercises, one of which was especially memorable when we had 19 Revenue Protection Officers on site as the target area was 3 large multi storey buildings in a notorious part of Liverpool. My geographic area covers the south of Scotland as well as north west England and north Wales and arrangements were made for



Ian Main

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*Each year a European city is nominated as the 'Capital of Culture' and Liverpool has been given the honour for 2008. The year kicked off with mass celebrations in the refurbished city centre, headed by ex-Beatle, Ringo Starr.*

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all available staff to be on site, which meant an overnight stay for the staff travelling down from Scotland. My officers were in 2-man teams and were accompanied by a Police Officer at each of the 81 premises we gained access to on the day. In total, meter interference was detected at 32 properties; some resulting in disconnection or equipment being rectified dependent on each individual circumstance and added to this Police arrested 5 householders on illegal abstraction charges. All in all a good days work.

2008 has started in the same vein and whilst the celebrations will continue throughout the year, we will be busily working away with the Police and playing our part to ensure this lovely city has the year it deserves.

Very best wishes are sent from all in the UK and a reminder that the UKRPA Conference will be in Warwickshire England on the 19th and 20th June. Details can be obtained from our website [www.ukrpa.co.uk](http://www.ukrpa.co.uk)

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## IMPRESSIONS FROM THE SARPA 2008 CONVENTION

BY ITZICK MICHAELI, REVENUE PROTECTION MANAGER, ISRAEL ELECTRIC CORPORATION

Two years ago, Jeff Cornelius asked me to go to South Africa, and represent IURPA at the 2006 SARPA convention in Johannesburg.

It was a great experience. I had the opportunity to get in touch and build relationships with many industry colleagues, and learn from close about the revenue protection and debt collection efforts.

Taking a look at the SARPA 2008 convention theme "Getting Our House In Order" aroused my curiosity, and another look the convention program, made it easier for me to make an executive decision, and look for the best airfare offer, use some of my frequent flyer miles and fly into the Southern hemisphere winter season.

I might have left some good impression on Dirk Byker, SARPA's President and other SA colleagues during my last visit, since they managed to put me on the speakers list, and I happily presented an update on Israel's Electric RP efforts progress.

The convention took place at the CSIR Convention Center, a very convenient and impressive venue, and was hosted by the City of Tshwane (Pretoria). More than 200 people were present, and the event was perfectly coordinated. The SARPA secretariat, Jean Venter and Gilian Le Cordeur and her team, managed to organize again a perfect event.

The convention banquet was really special. We arrived at the Pretoria Zoo at 630 PM, and were taken for a night tour, and managed to see some of the Zoo sleepy tenants.

A very nice buffet dinner and a big selection of great South African wines, beer and beverages welcomed us for the rest of this enjoyable evening.

As for the conference content, the variety of the presentations was excellent. South Africa struggles with an increasing energy shortage crisis, and suffers from the impacts of daily heavy load sheds, electricity theft and non-

payment, on the national electricity demand. Most of the presentations were discussing various points of view of the problems and solutions, and "How To Get The House in Order ?" . A panel discussion about "Putting all your Revenue Protection eggs in one basket – How do we get all the roll-players to focus on one goal ?" was a very suitable ending for the convention.



Itzick Michaeli

Before closing of the event, I was asked by Dirk Byker to say a few words, and I did, as follows :

"There are many similarities between Israel and South Africa energy and RP issues and problems. That is one good reason for my second attendance at the SARPA convention. Another reason, that is actually the most important one, is your warm welcome and the opportunity to meet again my South African colleagues, and connect with new ones.

I definitely didn't waste my time here. I listened carefully and wrote notes, collected much information and expanded my knowledge. Sorting and digesting the convention materials, will keep me very busy during the coming weeks, and certain issues will be brought to Israel electric's senior management attention, and to my IURPA colleagues. On behalf of Israel Electric and IURPA, I thank all of you again, and wish you all the best."

South Africa is a very exciting place to visit. This time, I had a great opportunity to go sightseeing with friends I haven't had the chance to meet in yearly 30 years. We traveled around for 6 days, and saw pretty much of the remarkable scenes this great country has to offer. It's worth the effort ! I do hope that all IURPA members will be able to put South Africa on their World travel wish list.



Itzick Michaeli with 2 local RP tools



Rens Bindeman, SARPA Spokesperson;  
Dirk Byker, SARPA President & Itzick Michaeli

## WANTED: COMMITMENT-MINDED PROFESSIONALS FOR LONG-TERM RELATIONSHIP

By JEFF HARRIS • MISSOURI GAS ENERGY

Even though I know that it's going to be hard to believe, for those of you who have actually met or seen me in person, but I have never actually placed a personal ad before, but I figure – hey, it couldn't hurt...right?

*...the goal should be to “leave it in better shape than it was in when you got there” – a task that my predecessors have always been able to achieve and exceed.*

As my time on the META Board comes to an end, I find myself assessing the “State of the Group”. I believe that, as my good friend Kurt Roussell once told me, the goal should be to “leave it in better shape than it was in when you got there” – a task that my predecessors have always been able to achieve and exceed. As I look at the Board Members for 2009, I know that we will be in excellent hands. As for my performance over the past few years, I'll leave that to the well-qualified membership to decide.

The one huge question/challenge that I have not been able to solve is – How do we attract new members and build those long-term, committed relationships?

I personally feel that META has always done an outstanding job in putting together strong, informative, and innovative agendas for its conferences. Hopefully, those of you who were able to attend the 2008 IURPA/META Conference in Kansas City would agree. The agenda for the 2009 Conference, which will be held in the first part of May in Cincinnati, should prove to be no different. The Board is already working on making that a reality. (While we're at it – if you are interested in working on the 2009 Conference, please contact one of the Board Members) Unfortunately, I have also learned that a strong conference agenda doesn't always guarantee a strong attendance.

Part of the problem is that in a time where companies are cutting back on travel budgets (if not cutting them off completely), people are lucky to get approval to attend one training conference a year. They are automatically forced with a choice of attending the joint IURPA Conference, or their regional. Had it not been for the fact that it was META's turn

to partner with IURPA, I would have found myself in that position this year. Most likely, I will find myself in that position next year. For 2009, my plan is to submit the IURPA Conference to my company for funding, and to attend the META conference at my own expense. Unfortunately, I know that not everyone is in a position to be able to do that. Therein lies the quandary. How do you maintain the strength of the group during those “off” years?

I know that some groups have or are looking at partnering with other regional groups for their conferences. Geographically, that may not be an option for everyone. I also know that it falls on each one of us as member to become Ambassadors and Recruiters for the group when we get back home to reach out to other utilities and show them the value of our organization. Beyond that...I'm not too proud to place this personal ad. If you have any ideas, I'd love to hear them.





## THE OL' WATERING HOLE

BY JEFF HARRIS • MISSOURI GAS ENERGY

As most of you who are regulars here at The Ol' Watering Hole know, I'm a firm believer in partnering – whether it be with other area Utilities, Law Enforcement etc. This time around, I'd like to talk about a partnership that we've really worked on the past year and a half or so with the Housing Authority.

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*Federal regulations require that Section 8 Housing residents have all of their utilities on, and also forbids any illegal activity on the premises.*

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As you may (or may not) be aware, Federal regulations require that Section 8 Housing residents have all of their utilities on, and also forbids any illegal activity on the premises. By giving our friends over at the Housing Authority a direct contact person here at the Gas Company where they can easily check the status of their Clients' accounts, we have, in turn, been given direct access to check and see if a particular address is Section 8 and, if so, who the residents are and how long they have been there.

When one of their Clients is found to not have active service, they are typically given a "grace period" to get the service back on. If they fail to do so, they are brought in for a Termination of Benefits Hearing. If it is ruled that they have violated the terms of their contract, their benefits are being terminated for three years. Now that's what I call incentive (or leverage) to pay up!

In the course of my duties as the Loss Prevention Investigator here at Missouri Gas Energy, I often discover an illegal hook up at an address where we haven't had a (legitimate) customer for some time (I know-imagine that!). It's amazing how many times, with a quick phone call or e-mail, I find that a certain person has been living there the entire time receiving not only rent benefits, but also supplemental benefits meant for utility services.

This summer, I discovered a house hooked up illegally and decided, just by chance, to see if it was Section 8. To my surprise (that didn't sound sarcastic...did it?), I found out that, per the Housing Authority, a Jane Doe had been

living there for quite some time. The last customer of record that we had there was a Mary Smith (obviously, the names have been changed to protect the Guilty). They ended up scheduling Jane Doe for a Hearing on her benefits. A week before the Hearing, I went back by the address, and just happened to find another broken lock.

I made contact with the resident this time, who identified herself to me as Mary Smith. When asked about Jane Doe, she told me that she didn't know her, and that she didn't live there.

Fast forward to a week later at the Housing Authority's monthly Hearing Docket. It was time for Jane Doe's Hearing, and I turned to my friend from the Housing Authority and said, "Wouldn't it be funny if the same gal that I talked to last week showed up?" Sure enough, it was my "Mary Smith" that walked into the room for Jane Doe's Hearing! You really had to be there to see the expression on her face when she saw me sitting there to truly appreciate it! As the Hearing got underway, I (innocently enough) said, "I'm a little bit confused here. Didn't you say that this was the Hearing for Jane Doe? 'Cause this young lady told me that her name is Mary Smith". They actually stopped the proceedings and made her show them a picture I.D. Needless to say, her Benefits were terminated.

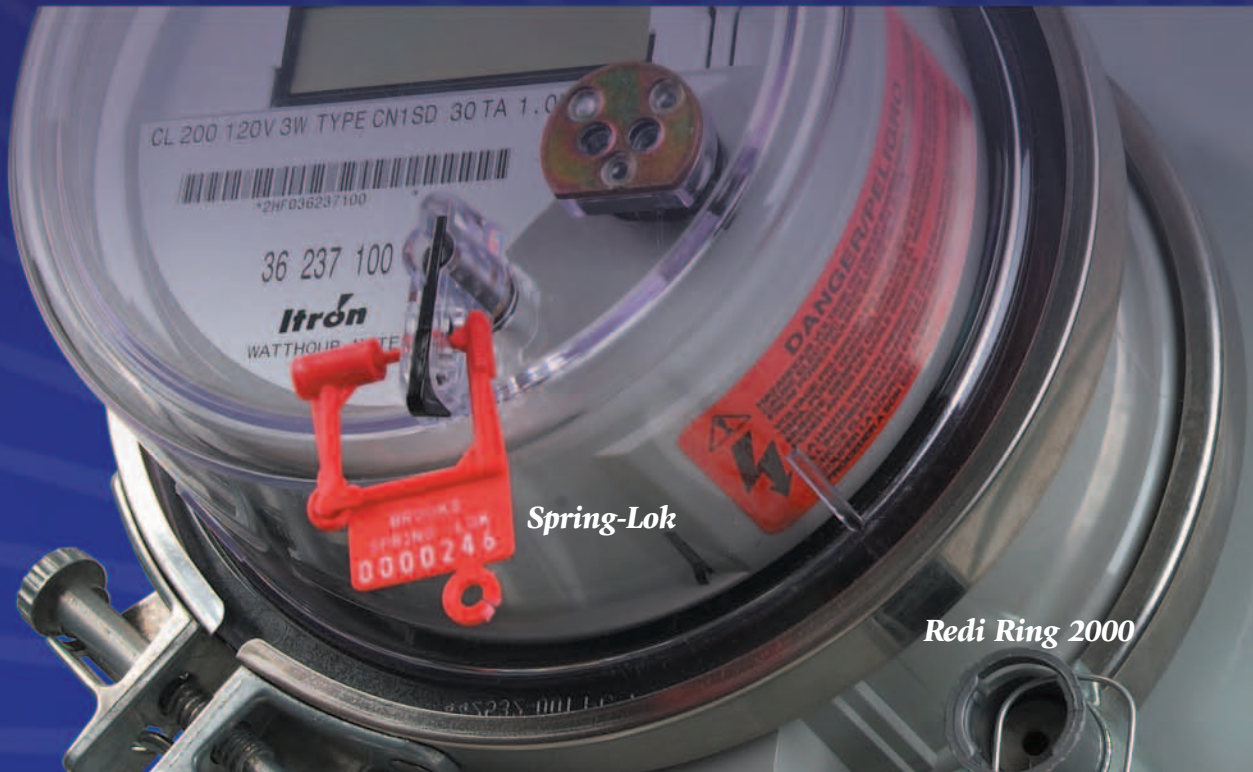
On the bright side, there is a good percentage of these folks who find a way to pay off their bill and get their service restored so that they can retain their Benefits. If you aren't already doing it, I would highly recommend pursuing a partnership with your local Housing Authority folks.

Now for the challenge. I'd really like to have someone (other than me) submit a story of an "outside-the-box" partnership that they have developed, or even just the funniest, or craziest story that you'd be willing to share. Just e-mail it to me at [jeff.harris@sug.com](mailto:jeff.harris@sug.com). Stay safe, and I'll see you back here at The Ol' Watering Hole!



Jeff Harris

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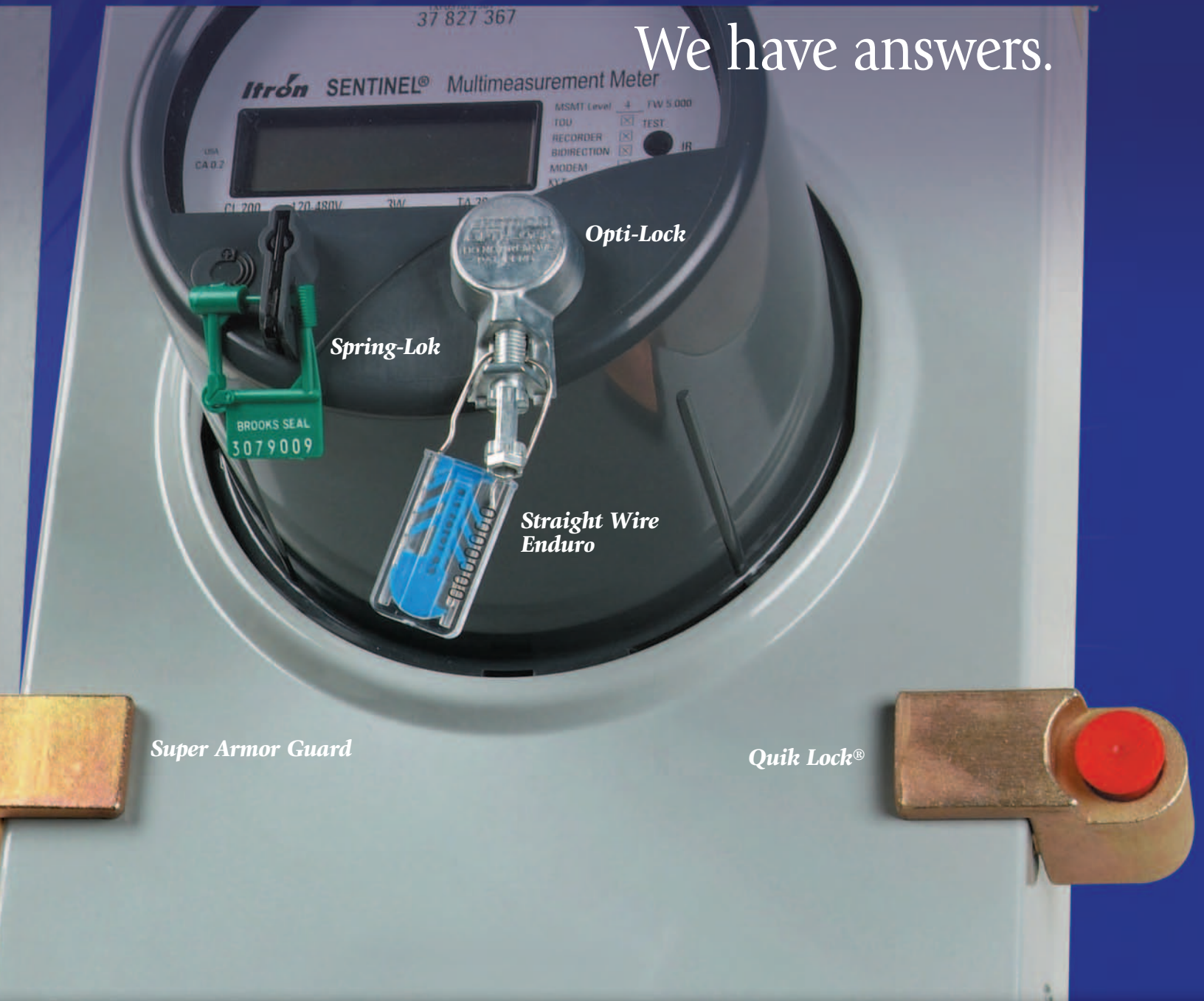
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## REVENUE PROTECTION WORK THE OLD FASHION WAY

BY JOHN L. KRATZINGER \* REVENUE PROTECTION SUPERVISOR, PECO ENERGY

At PECO Energy, the Philadelphia utility in Pennsylvania has a Revenue Protection department, they also have a hot-line phone number for anyone to use and contact the company about utility theft. Our results from this hot line phone number is over 90% of the calls are legitimate hits on individuals stealing energy.

This particular job order came over our hot line phone number; please investigate possible theft at a property that had a fire. The difference with this job was that a person died in the fire and the police and fire company were not sure if this was a homicide or just an electrical fire that an individual was unlucky enough to be at. This particular area of the city is known as Kensington, however the street name is the “bad-lands”. The neighborhood is undergoing a transition from abandon homes and businesses with some industry buildings. These abandon places are ideal for drug trafficking and drug use along with other illegal activities. Squatters will take over an abandon house and do whatever it takes to survive in that environment, which includes stealing electric and gas.

The street in question is one block long with “row” homes or townhouses. There are 58 homes on the block of which PECO is aware of only 37 active accounts.

The senior Revenue Protection Technician, Jim Roscovich, with 39 years with the company of which 28 years in the Revenue Protection department, went to the property with another technician, Henry Negron, who has 32 years with the company of which 18 years are with the Revenue Protection department. Their investigation determined that the fire stated due to illegal connection. It could not be determine however if this was a homicide from our investigation.

Upon returning to the office, Roscovich recommended that the Revenue Protection Team do a sweep of the entire block and eliminate all the electrical hazards, illegal connections and verify what accounts are active and inactive.

When I asked Roscovich if he had ever participated in this type of residential sweep, his response was yes. I thought about it for a few minutes and agreed that would be the best thing to do. The street in question again is in a low-income area, drug usage is an everyday event in this area, either with selling or just individuals using. Some of the homes are abandoned, some just burnt out shells, but there are some homes that are kept up and a few have been rehabbed and these homes looked great.

Preparation for this sweep was a new experience for me and I relied on Roscovich for support. Communication was

essential with various departments both internal and external. Involving our company security department about the sweep and asking for Philadelphia Police force to be on site the day of the sweep was critical for our success. Along with our regulatory, legal and billing department. We also called the Philadelphia Gas Works (PGW) and ask them if they wanted to participate.



John Kratzinger

On the day of the sweep, PECO energy had on the street 7 Revenue Protection technicians, our equipment consisted of 2 bucket trucks to get to the secondary wires and either remove hazards/illegal hook-ups. Due to the electric and gas meters being indoors we had technicians performing inspections of these meter and meter board by entering all the properties we could gain access to. By doing this we could verify the condition of the electric meter and board. The gas company could verify the condition of their gas meter.

Those customers on the block who approached us were curious but once we explained what we were doing, were thrilled that their homes were going to be inspected and the abandon homes were going to have their electricity and gas shut off.

A total of 58 homes were investigated of which 12 were inactive accounts and 9 had no accounts on tape, the other 37 accounts were all active. These accounts were verified of status again prior to going out and performing the sweep.

### Results:

Of the 12 inactive accounts – found 8 with power and cut at the secondary.

Of the 9 No account on tape – found 5 active, took emergency application from one customer and set an AMR meter and removed an old 6 dial non AMR meter, the other 5 properties were cut at the secondaries.

Of the 37 active accounts – found 6 with theft, 3 with switches, one a large magnet, one was jumpered. The one-meter that was very critical to remove was burnt up due to tampering, this meter was very close to causing a fire at the property.

The PGW found three things, one theft of gas service on inactive account, one theft on active account and most importantly shut off gas to an active customer due to a large gas leak in the house.

## REVENUE PROTECTION WORK THE OLD FASHION WAY (CONTINUED)

### Learnings:

We did a lot of right things but we debriefed with the team and came up with a checklist for the next time we do a “sweep”.

Animal control should have been called, we had a lot of dogs, pit bulls to be exact, though they didn’t cause a problem but we should have been prepared for a problem.

License and Inspection department of Philadelphia is another external group that could have supported us.

We did this sweep during a school day and the technicians remarked that in the future we should try and make sure that other seeps are also performed during school days.

Supplies, we could have done a better job with materials and getting them to the technician when they need them.

### Summary:

Revenue Protection departments though out the country are fighting energy theft, whether its, electric, gas or water.

Sometimes approaching these issues could call for some old fashion proven ways to eliminate hazards or illegal connections. Since many of our utilities have going high tech with good results there still is a need to stand back and say, are we doing everything possible to eliminate energy theft.

The team consisted of Jim Roscovich, who did the previous review of the block, Henry Negron, Charvas Walker, Johnnie Poole, Mike King, Jim Plunkett and Herman Morales. All did a great job. PECO security was on scene and responsible for coordinating with Philadelphia Police. PGW was lead by Tim Sullivan, Manager of the PGW Revenue Protection department, special thanks to Jim Roscovich on this suggestion. Revenue Protection back office of Lee Johnson and Darlynn Smith, did prep work and support during the sweep. This was a great example of team work and coordination with various teams and external resources.



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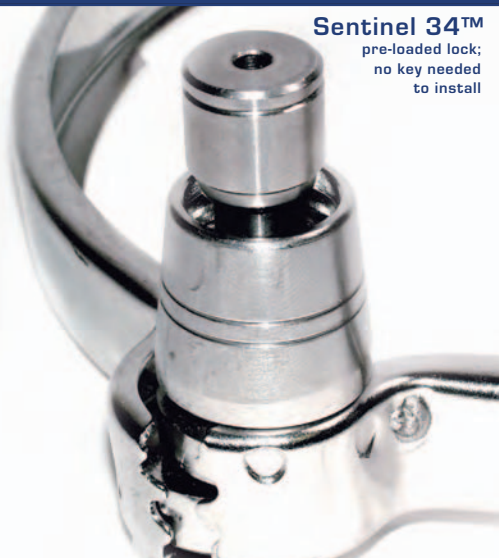


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## DID YOU HEAR ABOUT...?

BY KAYLE MELVILLE • REVENUE ASSURANCE SPECIALIST, NSTAR ELECTRIC & GAS CORPORATION

**D**id you hear about Dave who stole a meter from a house he owned in an adjoining community, serviced by a different utility, and installed it at his home in our territory, swapping it in and out with our meter each month around the scheduled read date? Our meter told us there was something wrong when it showed up on a list created from an analysis of tamper indicators. Dave's brother Frank was home the day a field investigation verified the foreign meter was set in our service. During the interview, Frank threw his brother Dave under the bus by saying Dave had been under emotional duress lately, had to borrow money from their parents to catch up on his bills, and that he was kind of looking out for him. However, when Dave was interviewed, he threw Frank under the bus saying while he had been away working in another state for the last year Frank was taking care of his business. I wonder how their Holiday dinner is going to be this year?

Did you hear about Domingo who owns a body shop and leases space to three other guys? His meter also had tamper indicators. The investigators arrived at the shop and were met by a very large dog with a very large bark at the end of a very large chain. When they told Domingo they wanted to check the electric meter, he told them it was in the other bay at the rear of the building. They found a gas meter in the other bay so returned to the affable Domingo who apologized and said he thought they said they worked for the gas company. He moved his beast to a gated area adjacent to the electric service, where it proceeded to pace back and forth watching...just watching...then he moved a storage cabinet and refrigerator from in front of the meter, as if that area was never accessed. The investigators found the meter socket unsealed. When they removed the meter, they found excessive copper wear on the legs indicating it had been removed from the socket numerous times. They also discovered a wire from the service entrance, bypassing the meter, to a control for an electric heating unit. The meter was exchanged, the heating unit was wired into the metered panel, and the affable Domingo and his not so affable pet were presented with a bill for theft of current.

Did you hear about Michael who owns a nice restaurant in the financial district? An analysis of his account identified low and erratic use. When the field investigators arrived to check his service, he too sent them around the corner to another entrance. Several minutes later he came to the door to let them in. When the meter in question was not identified among those in that meter closet, Michael exclaimed "Oh, you mean the meter for the restaurant!" and took them to the storage room behind the bar. The meter was blocked by many boxes and from a distance appeared to be sealed. After excavating a path closer to the socket, the investigators could see the seal was cut but was hanging in

a way to look like it was intact. A long diagnostic read extracted from the meter verified it had been powered up and down many times, especially around the holiday periods. The most recent power up occurred approximately two minutes after the investigators arrived at the door. Apparently that by-pass handle was getting a lot of use.



Kayle Melville

Did you hear about Bobby who owns a popular pub down by the waterfront? Investigators were sent to check his AMR meter because of some estimated reads. The closet door was locked and Bobby wasn't there so they made an appointment to gain access on another day. When the investigators returned for the appointment, Bobby said he hadn't been able to get the key from the landlord and wanted them to come back another time. They asked for the landlord's name and phone number and explained they would go get the key. Bobby became more cooperative, found a screwdriver, and took the door off the hinges to provide access. The meter was found sealed but the test switch cabinet, although locked with a barrel lock, wasn't sealed. A long diagnostic read extracted from the meter verified methodical monthly power ups and downs so it was only registering use two weeks a month. A closer examination of the test switch blades revealed unusual wear and scratches indicating they had been pulled opened many times. An account analysis showed Bobby's use dropped in half about three months after he applied for service a few years earlier. Assuming Bobby had been tampering even before his mechanical meter was changed to an AMR meter, a bill was created back to the date of the change in use. He chose to pay the substantial back billed amount rather than reveal where he got the barrel lock key and the knowledge to bypass the meter registration. It seems paying the bill was preferable to the consequences of sharing this information.

Did you hear about Anthony and his pizza parlor located in a small strip mall with about six other shops? A reckless driver hit the utility pole out front and the whole mall lost power. After the pole was replaced, the town wiring inspector went to inspect each service to make sure everything was safe. Unfortunately for Anthony, the inspector found the tap he had installed two years prior that ran from the service entrance box, through the bottom of the main disconnect switch, into two un-metered circuit panels. Who said there is no honor among thieves? Anthony chose to plead guilty to a theft of electricity charge and pay restitution rather than divulge the name of his electrician.

Did you hear about.....?

## REVENUE PROTECTION'S ROLE IN WATER WASTE ENFORCEMENT

BY DAVID F. AKIN, ESQ., WSUTA BOARD 1ST VICE PRESIDENT • CITY OF SAN DIEGO, WATER DEPARTMENT, SAN DIEGO, CALIFORNIA

*The purpose of this article is to raise awareness of the new energy crisis. This time it is not energy but water. Preventing and stopping water waste is as important as Water Theft. As a Revenue Protection professional, the reader may be thinking, "Why should I worry about water waste?" Every IURPA reader, even non-water folks need to care. Please read on to see why.*

Several years ago I attended a Western States Utility Theft Association "WSUTA" in Las Vegas. In my spare time, I had an opportunity to visit the Las Vegas Valley Water Authority. While touring their yard, I was struck by the sight of a long row of trucks with "Water Waste Enforcement" painted on the sides of the vehicles. This immediately expanded my vision of Revenue Protection.

Over the next few years, I worked with San Diego's Conservation team. I have been impressed with their many awards for innovation. They offer free water surveys to anyone for the asking. Water conservation, like energy conservation in the past, was not a high priority for water utilities. Water was plentiful and relatively inexpensive. Some water utilities charged a flat rate, and did not even use water meters. The California State Legislature passed laws requiring water utilities to install water meters by a set date and change from flat rate fees to consumption based fees. Paying by the gallon or cubic foot increased the cost for excessive water use. This was not popular with utilities where water was plentiful, but from a State-wide perspective, it made good sense. Since that time, California's State Government has made water conservation and water waste a high priority. There is even more legislation pending.

The situation is changing due to world population growth and global climate change.

Australia for example, has been dealing with water shortages for many years and their water utilities have taken effective measures to reduce water use. Many parts of the United States are no exception. Recently, the Governor of California declared a Water Emergency for the State of California. Water Districts and Cities across the State declared water emergencies and implemented voluntary conservation and even mandatory conservation measures. Mandatory water conservation measures include higher rates

for going over water use targets, watering restrictions and reductions in allocation. That leads to the topic of this article, water waste enforcement.

San Diego's Municipal Code makes it illegal to use water in a wasteful manner. Examples of water waste include:

- Failure to repair leaks
- Washing driveways and side walks
- Washing cars without a hose nozzle
- Over watering landscape (potential storm drain violation)
- Over draining of swimming pools

In San Diego, the Conservation group is charged with educating and promoting the wise use of water. Using education and awareness where possible is the preferable approach to preventing and stopping water waste. Most water wasters are not aware the sprinklers run too long or over spray onto side walks. Customers with leaks repair them when the water bill goes up, but some are difficult to find and costly to repair. When customers continue to waste water after being contacted by the Conservation staff, our Code Enforcement (Revenue Protection) steps in.

One might ask why this is a Revenue Protection job. In places where mandatory conservation is implemented, water users face the challenge of reducing water use (as registered on the meter) and paying higher tier rates. Water theft becomes more attractive under such conditions. The most common method one can expect is removing the meter and replacing it with a "stiff" or "jumper" between meter reads. Feeling the higher tiers and reduction targets are "not fair" an otherwise honest customer may feel justified in stealing just enough water to meet his target or lower tier rate. As any Revenue Protection Professional knows, once a customer steals a little, he/she will find it easier to rationalize stealing more.

When a water waster refuses to stop over watering or to repair a leak, the Code Enforcement Officer or Water Waste Investigator needs to fashion an appropriate response. As with any violation of the San Diego Municipal Code, Code Enforcement Officers have a variety of remedies to get compliance, including:

- Warning letter
- Administrative Citations (\$100, \$250, \$500, \$750, and \$1000)
- Notice of Violation (Civil Penalties up to \$2500 per day per violation)
- Referral to the City Attorney for Civil or Criminal prosecution



DAVID AKIN



## REVENUE PROTECTION'S ROLE IN WATER WASTE ENFORCEMENT (CONTINUED)

Sometimes water waste creates more serious problems than using too much water. Over watering and customer leaks can damage public or private property, such as undermining the foundation of a neighbor's patio or house. In one case, we had a customer leak that was causing an intersection roadway to sink. Water waste can result in runoff going into the storm drain system polluting oceans, lakes and rivers. Over watering and leaks can create liability on public property. In one memorable case, I dealt with a customer who had a leak under his driveway. This resulted in a slow but constant stream of water onto the sidewalk. Algae on the side walk created an unacceptable risk of injury to pedestrians. I sent a letter to the property owner informing him of his obligation under the Municipal Code to repair the leak. The owner, an attorney, sent an angry letter expressing his outrage. As it turned out, he was selling the house and had to disclose the leak to the buyer. Public health can also be impacted by water waste. Pools of water from irrigation are great mosquito swamps. Mosquitoes can carry many unpleasant diseases, such as West Nile Virus.

There are things customers can do to prevent water waste and conserve water and reduce the temptation to steal

water. Low flow appliances, native/drought tolerant plants, artificial grass (trying to get the wife to agree to the backyard putting green is a challenge for me), recycled water for irrigation where available (golf courses as an example) and better irrigation management. Your local water supplier can provide more information on how to save water and prevent waste.

Water Waste Enforcement is here to stay. It is an opportunity for Water Revenue Protection to have an expanded view of its mission. The health and safety risks, like West Nile Virus, can impact employees of all utilities and their families. Watch out for those pools from over irrigation and slippery side walks from leaks and over spray. Report water waste to your water utility. You might get some theft service tips back in return.

*Prior to joining the City of San Diego in February 2001, David worked in Revenue Protection with both Houston Lighting & Power and Southern California Edison. He also worked as an attorney for several years in Southern California.*

The advertisement features a collage of newspaper clippings and a line graph. The main headline reads: "Is Your Utility Protecting its Revenue Stream Adequately?". Other visible headlines include "Theft of Energy on The Rise", "Record Temperatures Pushing Energy Consumption to...", "US Retail Electric Prices, 2003-2005 Nationwide Average", "Gas & Oil Prices Soar", "Major energy theft uncovered", and "Signal". The line graph shows a fluctuating upward trend in electricity prices from 2003 to 2005.

**US Retail Electric Prices, 2003-2005 Nationwide Average**

Year	Price per kWh (Approximate)
2003	\$0.15
2004	\$0.25
2005	\$0.45

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## MARIJUANA GROW HOUSES: FLORIDA'S HIDDEN EPIDEMIC

PROVIDED BY SANDY LANGDALE • DISTRICT OFFICE SUPERVISOR, GLADES ELECTRIC COOPERATIVE, FLORIDA

**G**lades Electric Cooperative has formed a multi-department task force to quantify the terrible economic impact of marijuana grow houses on the cooperative and its members. Marijuana grow houses are best described as converted single-family dwellings that appear normal on the outside, but have been extensively modified on the inside to facilitate the 24/7 growing and distribution of marijuana. In many cases, every internal wall that is not load bearing has been removed, insulation panels are fastened to the remaining walls, irrigation and lighting systems are put into place and crop after crop of this illegal drug is grown and harvested. These houses are hidden “in plain sight” in neighborhoods and housing developments as well as rural settings.

Apart from the social implications of these drug operations, and the criminals they employ being present in our communities, the negative economic impact on the cooperative and its members can be devastating. Thus far in 2008, local law enforcement has identified and dismantled approximately 20 grow houses on Glades Electric Cooperative lines! The thieves setting up these operations have become extremely sophisticated in their methods of bypassing the electric meters and stealing the power to run their “business” and avoid detection.

The Glades Electric task force receives information on the type of equipment that is confiscated from the dwelling, calculates the amount of power it would require to operate

the equipment, and compares it to the actual power reported through the meter. The estimate of stolen power and revenue through first of August 2008 is in excess of 5 million kWh's at a cost of over \$690,000.00. Remember, they are stealing YOUR power. Glades Electric Cooperative pays for this electricity transmitted from our provider, Seminole Electric. However, as the meters are bypassed, no revenue is collected by Glades. The houses are usually financed beyond their actual value, so no equity can be seized via liens. The extra costs are borne by the honest and hard working members on our lines!

Help support your local law enforcement agencies in their efforts to locate and eradicate these illegal operations that are draining the economy of our friends and neighbors.

Tips for identifying “grow houses”:

- Lights at dwelling seldom, if ever, on
- Windows always covered
- No people seen during the day (a common camouflage is children's toys in the yard that are never moved or played with)
- Increased late night traffic in and out of the area
- Numerous “blinks” and “flickers” in your own electrical service that can't be attributed to inclement weather
- Utility workers seen working on poles and lines that are NOT familiar marked vehicles and crews

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