

# The opposition to smart meters in Arizona

*An insider's view of the Arizona smart meter opposition, 2011-2015*



**This is the story of how a few activists in Arizona were able to get attention and concessions from a giant utility that basically owns their regulators. It is also the story of a captured agency that has too cozy a relationship with the industry it regulates.**

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## **The new meters**

The new meters showed up on our radar during the summer of 2010, when the Arizona Public Service (APS) utility installed a new electrical meter on a local woman's house, and she suddenly experienced sleep disturbances and other problems.

Her new meter transmitted wireless signals round the clock. Once a month the utility sends a truck through the neighborhood with a special radio receiver that picks up the signals from the meters. The rest of the time this electrosmog serves no purpose.

The utility was experimenting with this type of meter which was installed on just a few houses that were hard to reach by their meter reader. In this case, the house had a locked gate and a long, winding driveway.

The lady living there was eventually able to get her old mechanical (analog) meter back, but it took many complaints to the utility. The woman was fine again, once the offending meter was removed.

The following spring a friend who spends his winters in Arizona went to his rural summer home in eastern Washington State. He no longer felt well there. He thought a cell tower had been erected nearby, while he was away for the winter, as he was very sensitive to that sort of radiation, but he was unable to find any tower. After a few days, he gave up and drove back to Arizona.

He later learned from a neighbor that the local utility company had changed all the meters during the winter. He had a picture taken of the new meter and sent to me. Looking up the manufacturer's information, we found out this meter was not wireless, but used what is called Power Line Carrier, PLC. The meter communicated by making very short spikes (transients) in the electricity, which travelled along the power lines to the nearest substation, where it was received. Another term for this is "dirty electricity." The problem with dirty electricity is that it unintentionally turns the electrical wires into giant "long-wave" antennas which radiate the frequencies contained in the dirty electricity transients. Some PLC systems radiate frequencies that can interfere with HAM radios. A few people are also sensitive to this radiation, such as my friend.

Since the radiation came from the power line along the road, it was no wonder my friend reported problems anywhere near his house, while he felt fine when away from any house or road with power poles.

Getting his old meter back would not solve the problem, even assuming the utility was willing to do it, so he gave up and moved away.

Soon after, we heard from a woman living in Phoenix who could no longer sleep in her house after a wireless smart meter was installed. This was a “mesh” type meter, which transmits about every second. The utility refused to help her until a local TV station broadcast her story. Then the utility was at her house the very next day to help her out.

We started to hear more such stories, especially from California.



*Wireless smart meter communication hub on a lamp post in downtown Phoenix.*

### **The first call**

An electrically sensitive woman from our Snowflake environmental illness community called our utility’s Customer Care line to ask about the new meters.

She especially wanted to know about plans for installing them on the houses in our area.

The customer care specialist said they did not inform about their plans in advance, and then asked several personal questions about the caller's health issues. She then stated that once the smart meter was installed, a technician could come and measure the EMF emissions and observe for any neurological difficulties, seizures or other medical problems.

This was not exactly a courteous response, and it is interesting that their service technicians are qualified to make such medical determinations!

### **Starting the resistance**

By spring 2011 there was already very active resistance to the new meters in California and Maine, and it was clear that we had to resist them, too. It is always easier to fight something before it is in place, whether it is a pig farm, nuclear power plant or smart meters. It is much harder after the fact.

Developers know this, so they sometimes try to be as quiet about their plans as possible. I once saw this in action, when a developer got a rezoning through without resistance, because they "forgot" to notify the neighbors, as required by law. By the time the issue was brought before a judge, construction was in full swing and the judge could only award a few concessions, such as a big fence.

We heard that once the smart meters became controversial in California, one of the big utilities there responded by stepping up its roll-out of the new meters.

We decided to create a neighborhood group to oppose the smart meters before they were installed in our area. We eventually named our group the Safer Utilities Network, or SUN for short (a clear nod to our sunny state).

Our local utility, APS, is the largest in Arizona. It has customers in eleven out of the 15 Arizona counties, including the cities of Prescott, Sedona, Flagstaff, Bisbee, Payson, Ajo, Yuma and parts of Phoenix. We were trying to get the attention of a goliath, but if we could get them to take us seriously, it could set a precedent for the other Arizona utilities.

A handful of people in our group sent letters to APS pointing out the problem. The replies didn't really say anything beyond "the health and safety of our customers is a top priority."

### **A lucky break**

In the spring of 2011 there was a public meeting in Snowflake about a local power plant. An APS vice president attended this meeting. There were not many people in the audience and three people were able to corner the vice president on the smart meters. He was well aware of the rising resistance in California and seemed eager to work on a resolution. He promised to set up a meeting with managers from their smart meter program.

Two APS smart meter managers and three activists (including myself) met by teleconference on May 27, 2011. The meeting was cordial and a lot of information was exchanged then and by e-mail over the following weeks.

We told them about electrical hypersensitivity and the living situation of the most sensitive people, who need to use various low-EMF technologies and live in specially built homes in rural areas. Most also live on a limited income, so relocation or expensive technical fixes are not realistic. We also told them that we estimated 500 people in Arizona were so sensitive that a smart meter would produce acute symptoms, so it was simply not possible for them to live with a smart meter. Since the general population seemed unconcerned about cell towers and cell phones, we didn't expect smart meters to be a concern for more people. (What we failed to realize was that people are more willing to take a risk with something useful, such as a car or a cell phone, than something imposed on them that has little benefit.)

The two APS managers explained that they were currently focused on installing wireless mesh smart meters in the larger cities in Arizona. They were not sure this meter technology would work well in rural areas and had not yet decided what technology to use in sparsely populated areas, such as ours.



*APS headquarters in downtown Phoenix.*

We looked into the various technologies that they might use in rural areas. One common technology was PLC, like the one that forced my friend in rural Washington to move out of his house. We strongly doubted that keeping an analog meter and filtering the incoming electricity could work, so we told the APS managers that we thought PLC was probably the worst technology they could choose.

They voiced the idea that people having problems with smart meters could use off-grid solar, but we had a lot of experience in that area and told them there were technical issues and it was not realistic for a lot of people. (We later estimated that it would cost about \$30,000 to convert a specific house to be off the grid. The cost was so high because a whole new heating system had to be installed with the boiler in a separate outbuilding. A simple gas or wood heating system was not possible since the owner also had chemical sensitivities.)

They said they were looking into some sort of opt-out for us, but they could not make any promises. We suggested that people could mail in a postcard with the numbers on the meter every month, but they did not like that idea.

## **The interim opt-out**

Twelve days after the meeting, a stand off was about to happen in Prescott Valley. The residents in a neighborhood had received notices that the smart meters were coming, so they stood outside their homes to protest when the APS crew arrived. The crew chief stepped out of his truck and told the protestors he just that morning had received an e-mail from his management that he should leave the old meters in place if there were any objections. If they found a note of objection taped to any meter, they were instructed to leave it alone. This was welcome news.

About a month later, a woman with EHS moved into a house she had rented near Flagstaff. She discovered the house had a smart meter, so she called APS. The call operator knew all about the issue and cheerfully sent out a technician to swap the meter with a mechanical one.

APS's opt-out procedure eventually became so streamlined that people could call and be put on an opt-out list before a neighborhood was converted to smart meters. Their meters were then marked with a blue tag, so the crew passed it by when they swapped all the meters.

People who called were sent a special letter which told them how soon their area would be converted to smart meters. By late summer, APS published two colorful information sheets about smart meters that were included with any reply letter. The sheets were titled "Smart Meters: Myth vs. Fact" and "Smart Meter and Radio Frequency." They were little more than propaganda pieces.

APS did not charge anything for re-installing the old meters or continuing to send out meter readers. We were very happy about this, but our APS contacts made it clear to us that this was just temporary until APS decided on a long-term solution. We were not guaranteed opt-outs forever, and they intended to eventually demand fees. We were also told that their goal was to totally get rid of the analog meters, even for people who opted out of smart meters.



*A blue hang-tag instructed the crew to leave the mechanical meter alone.*

Meanwhile, we started to see protests elsewhere in Arizona. One woman in Tucson arranged a public meeting where two representatives from Tucson Electric Power answered questions. A physicist from New Mexico was invited to provide an opposing viewpoint.

Not everyone who called APS got the same friendly response, but we were pretty happy with the current situation.

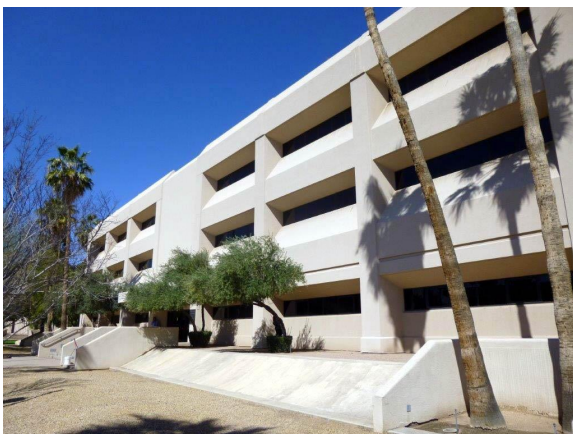
### **The Corporation Commission**

Despite our somewhat friendly relationship with APS, we were concerned that all decisions were made by them and we were keenly aware that the relationship could quickly sour. We needed some democracy.

The newspaper *The Arizona Republic* reported on June 1<sup>st</sup> that APS was seeking permission from the Arizona Corporation Commission to increase the price they charged for electricity. The article mentioned public hearings and that customers could file comments.



After mulling this over, we decided to see if we could get some help from the Corporation Commission, which regulates the utilities in Arizona, as public utility commissions do in other states.



*The Arizona Corporation Commission building in downtown Phoenix.*

One person from our community group travelled to Phoenix in late July to attend the first Corporation Commission hearing on the APS rate hike request. The purpose of this field trip was to learn how the system worked and see how safe the meeting room was for people with MCS/EHS (not very). She talked to various staff members, who told her how to submit comments to the docket, how to become an “intervenor,” how people could make comments at hearings (by phone or in person), how long people were allowed to speak, etc.

Despite the public access, it was clear that the Commission was basically a club for lawyers. When asked how to get the Commission to investigate smart meters, the answer was that it required opening a docket for that purpose, and it was totally impossible for mere mortals to get a docket opened. The best they could suggest was for people to submit complaints to the APS rate hike docket.

It was clear that the way forward was to get the Commission involved, even though it seemed impossible. We encouraged anyone across the state to call or write the Commission about smart meters. They got a lot of calls! When I called them to ask a question, the operator immediately asked if it was about the smart meters. We then knew we had gotten their attention.

A handful of activists from around the state, including one from our community group, were able to get a meeting with commissioner Paul Newman, so he could hear our concerns.

### **The first hearing**

The Commission suddenly acted swiftly. They opened a smart meter docket (E-00000C-11-0328) on August 29, 2011 and held a hearing on September 8. The hearing was announced less than two weeks in advance, which is not a lot of time to prepare when disabled and unable to use a computer. We could not operate at Internet speeds. At the time we were circulating a petition by postal mail, which we rushed into the new docket before the hearing. It had 86 signatures. More arrived later, but we couldn't wait for them. Petitions do not count for much in the eyes of politicians, but at this early stage we needed whatever we could muster.



*The Arizona Corporation Commission at the first smart meter hearing.*

The hearing went rather well. Several people from Phoenix and Tucson showed up in person and about ten people attended by phone.

The meeting started with Arizona Public Service and UniSource/Tucson Electric each presenting for twenty minutes. APS had hired an epidemiologist, Leeka Kheifets, to be their expert witness and say that wireless smart meters and cell phones pose no health risks. She spoke for twenty minutes and presented a set of slides, which were also handed out to people in the room. One slide showed Dr. Kheifets with her head close to a bank of smart meters to demonstrate how safe she thought they were.

Dr. Kheifets acknowledged that people with electrical hypersensitivities had legitimate health problems, but she claimed they were not caused by electromagnetic radiation.

Dr. Kheifets has a long history of financial ties to the industry. Various companies in America and Europe have hired her as an expert witness and she previously worked for EPRI, which is an industry-sponsored research center that has actively opposed the existence of electrical hypersensitivity. The website *Microwave News* provides a wealth of information on Dr. Kheifets.



*Dr. Leeka Kheifets (lower left) testifies before the Arizona Corporation Commission.*

Dr. Kheifets was asked a couple questions by the commissioners. One was after a person calling in mentioned that there was research showing that industry-funded science tended to say what the industry wanted to hear. She replied that there was only one peer-reviewed study showing that (which is only technically true, since *Microwave News* also documented this effect and many many studies document this for other industries).

It is quite expensive to hire someone like Dr. Kheifets. She probably commands fees in the \$500-per-hour range, both for attending the meeting and for preparation time, besides the cost of the airfare, hotel, etc. Flying her in was not a friendly gesture from APS, and our informal contacts with them also ended around this time.

A representative from the utility Salt River Project (SRP) stated that they were a federal entity and thus not regulated by the Commission, but they intended to abide by whatever the Commission decided about smart meters.

The rest of the hearing was open to public comments, either by phone or in person. About fifteen people asked for an opt-out on medical grounds, while some also told their personal stories of trouble with the new meters.

One person called from Oracle. One of the commissioners told him that his utility was owned by the Apache tribe and not regulated by the Commission.

A few speakers were more concerned with the privacy issues. One woman didn't want a smart meter to report when she used a vibrator, which generated some chuckles.

At the end, some of the commissioners made various comments. One said that since the meters were already installed on so many homes, at great cost, it was not possible to demand they all be taken down. They also said some positive words about an opt-out on medical grounds. Since it was expected that only five hundred people would need it, this seemed acceptable to everyone.

It was a long meeting, which lasted for six hours.

The cooperative utilities were apparently not represented at the hearing, but their common association filed a lengthy comment in the docket after the hearing (on October 24, 2011). They stated that allowing customers to opt-out would be an unreasonable burden, and dismissed the health concerns with statements such as:

*PLC technology cannot pose health risks*

*RF communication . . . pose no health risks to customers that are greater than any home appliances or cell phones.*

A month after the hearing, a member of our group called chairman Pierce's office to hear what would happen next. We were told that the Commission recently met with APS and requested that APS develop an opt-out policy. It was a request, not an order. An order is legally binding and can only be issued through a long, legal process. They suggested APS consider the public comments in the docket when they designed the policy, and that it was best if anyone could opt-out.

At a staff meeting in late October, the Commission staff was directed to come up with a general opt-out proposal as well.

### **SRP allows opt-outs**

Another large utility, Salt River Project, decided in November to do the right thing, even though the Commission had no jurisdiction over them. They instituted a permanent opt-out policy that charged their customers \$20 a month to retain their analog meters. The fee was high, but it was seen as a win at the time.

Then it was quiet for about a year. APS and SRP allowed anyone to opt-out while everybody watched the battles in California, that could set a precedent for Arizona.

### **UniSource plans for opt-outs**

Buried deep in a massive rate-case document, UniSource announced they intended to allow opt-outs. The document was filed December 31<sup>st</sup>, 2012, in a separate docket (E-04204A-12-0504). There was no public announcement – it took two years before we found out about it.

### **Hiring a lawyer**

A new hearing was scheduled for January 22<sup>nd</sup>, 2013. The main agenda item was a presentation by someone from the Lawrence Berkeley National Laboratory, which appeared to be a big promoter of smart meters. Fortunately, the hearing was cancelled.

A new smart meter hearing was later scheduled for March 23<sup>rd</sup>, but without any invited speakers.

The opt-out issue was not even listed on the agenda, which focused on the privacy issue. The meeting notice just said: “Based on the comments and discussion received at the upcoming workshop, Staff may develop an opt-out proposal for consideration by the Commission.”

Apparently, the opt-out issue had faded from their radar or they intended to let it fade. We called their staff and were told that we could bring up our concerns under the “other issues” agenda item.

Our group was determined not to be swatted away like a fly, but we were all too sick to travel to Phoenix and sit in the meeting room to protest. We had to send somebody that could get the commissioner's attention, so we looked into hiring a lawyer or an expert witness. Both are costly, and we were not sure we could raise enough money for even one of them.

We looked at who had published research in this field in the United States and came up with a list of seven names. We contacted the one who seemed the most impressive and he said he needed \$500 an hour, plus expenses. That seemed to be the going rate. We estimated it would cost at least \$7,000 to do this.

Meanwhile, another member of our group was looking for a lawyer. It seemed that any law firm he found with experience dealing with the Corporation Commission was retained by one of the utilities, and they could not work for both sides. He then called a lawyer referral service asking for a lawyer with experience in disability law and found one with the needed experience that way.

We decided to hire the lawyer and were able to raise the \$4,500 through our local community.

The lawyer's first job was to look into whether we had any legal standing under the Americans with Disabilities Act (ADA), the Fair Housing Act or any of the Arizona state laws. He also checked whether we could learn anything useful from the action in California, Nevada or Maine, which were the three states that were ahead of Arizona in the process.

We hoped the Americans with Disabilities Act could help us, but the lawyer did not think it could. More than two years later, California judge Amy Yip-Kikugawa came to the same conclusion (Agenda ID #13414).

None of the states gave any credence to electrical hypersensitivities, so we didn't have any useful precedents.

The second job for the lawyer was to attend the hearing in Phoenix. We sent him some of our materials and briefed him over the phone. We discussed at length what message he should present and decided he should ask for a medical opt-out for anyone who could produce a doctor's note. We didn't ask for a broader opt-out, since we didn't think the Commission was sympathetic to us, and hoped they might grant it for a limited number of people with a documented need.

The lawyer also agreed to file our written comments in the docket. We hoped having a lawyer file them would get the Commission staff to actually read our filings, but they still ignored what we said, even though we used a respectful tone and presented well-researched material with references.

Filing through the lawyer also added a week's delay, which made some deadlines very tight.

### **The second hearing**

The March 23<sup>rd</sup> hearing did not go as the Commission had planned. It was scheduled to last two hours, with opt-outs on the back burner, but the meeting lasted all day and opt-outs became the main issue.

The utilities showed up in force — both the large utilities and several of the cooperatives were present. The cooperatives' umbrella organization, Grand Canyon State Cooperative Association, also attended.

APS said they had received 3,700 opt-out requests. They claimed mechanical meters were no longer manufactured in the United States, so they repaired and stockpiled the mechanical meters they removed when installing the new smart meters.

The large utilities were notably muted at this hearing. They did not bring anyone to testify, and it was clear that they accepted the opt-outs as inevitable. APS said they just wanted to cover their costs and not punish anyone.

Perhaps they decided it was safer that way, rather than chance massive lawsuits later on, if any harm was proven.

The cooperative utilities were there to fight against any opt-outs. They said it was a big burden to send meter readers out to a few customers scattered over a large area.

Three of the coops (TRICO, Mohave Electric and Sulphur Springs Valley) used PLC meters, and they were indignant that anyone thought they were harmful.

The spokesperson for Navopache told the commission that they had received only 15 complaints from their 40,000 customers. He didn't find it reasonable to do something special for so few people. He complained that the Commission had

mandated they use these meters. This brought a sharp rebuke from a commissioner, who said that they had not mandated any particular technology.

The utilities tried to downplay how often their meters transmit. One rural utility stated they only receive data 14 times a day, which is deceptive. Many smart meters transmit about 10,000 times a day, some even 190,000 times. It's just that most of these transmissions do not contain billing information from the meter. We knew this because California judge Yip-Kikugawa ordered the utilities there to tell the whole truth. But, we were not able to bring this up at the meeting (we later did in a written comment, and an activist even documented it on a YouTube video).

Several people in the audience asked for an opt-out on medical grounds. There were also several people who attended by phone, who spoke about how their health was affected by wireless technologies.

One speaker was a retired judge, who likened the opt-out fees to a mafia protection racket. He reminded the commission that its job was to protect the citizens of Arizona and not to do the power companies' bidding.

There was also a group in the audience who were not concerned about the health issues, but spoke about the privacy issues which they thought were a violation of the United States Constitution. Some of these people were snickering when they heard some of the people testifying that wireless technologies hurt them, but as one person after the other told similar stories, the snickering subsided.

A Corporation Commission staff member said he had used a gaussmeter to measure the radiation from a smart meter and didn't find any. A gaussmeter does not measure microwaves, only power line frequencies, so his result was no surprise. This illustrates how difficult it is for political bodies to make decisions about complex technical issues.





The lawyer our community sent to the hearing made sure he was late on the speaker list, so he could gauge the mood in the meeting room before he spoke. When it was his turn, he spoke briefly and calmly about the community he represented and their need for a medical opt-out. The effect was quite noticeable. The tone of the commissioners and the utility lawyers changed, with many of them then referring to the lawyer or Snowflake in their remarks. Sending a lawyer gives a lot of instant credibility. It showed our community was serious enough to raise the money it took. It is very sad that having the truth on your side does not count for much if there is no big stick to back it up, but that is how it is.

Our greatest supporter was commissioner Newman, who said everybody should be allowed to opt-out. Commissioner Brenda Burns said a member of her family heard a buzzing sound in her head whenever entering stores with a certain security system, so she believed certain people could be affected by wireless devices.

### **Summer and fall of 2012**

In the following months after the hearing, many people submitted written comments to the docket, and we also heard directly from other activists.

It was clear that our request for a medical opt-out aimed too low — people should be allowed to opt-out for any reason and without a doctor’s note. Getting a doctor’s note was too big a burden, since many doctors are still skeptical about EHS. The cost was unreasonable for people on a low income, and how often would it have to be renewed?

People who wanted to avoid future health problems and privacy intrusions should also be allowed the freedom to choose.

The Commission and the utilities never mentioned a medical opt-out after the hearing. We can only speculate why, but presumably because it would be a de facto acceptance of EHS, and that could cause them all sorts of problems.

A second problem was that it violates the Americans with Disabilities Act to charge disabled people for accommodations. If the opt-out was only for disabled people, it would be discrimination to charge a fee. Charging a fee for a general opt-out does not single out any group of people (see ruling by judge Amy Yip-Kikugawa, California agenda 13414).

We had not thought of any of those things when our group made the proposal, and the idea was left to die. The hearing was the turning point and our cause now seemed to have some momentum, but it was much too early to become complacent.

Our group submitted a comment that an opt-out was not an undue burden on the rural coop utilities, as they could simply let people self-read their meters and send in a postcard. Rural utilities have used this method for decades. It was important that everybody in Arizona be allowed to opt-out, not just people in some areas.

The Commission staff posted a “Meter Guidelines” proposal in October. It was two brief pages and unacceptable. It only allowed people to opt-out from wireless meters and it allowed a utility to use PLC meters as the opt-out technology. In another nod to the co-ops, the document exempted PLC meters from a requirement to use encryption. The wording of the critical parts was copied verbatim from a comment sent by APS in August.

The proposal was savagely attacked by commenters and simply died.

The November election ousted two of the commissioners, including Paul Newman, who was sympathetic to us. That left Brenda Burns and Gary Pierce, who seemed more supportive now.

### **The APS opt-out proposal**

It took nearly two years before APS came out with a proposal. It was entered into a new docket (E-01345A-13-0069) on March 25, 2013. We would not have known about it if it wasn't for a friendly insider who tipped us off. (The insider was then told not to talk to us any more. Their cozy relations with APS continued, as was revealed later.)

APS stated that the smart meter concerns "have proven unfounded," according to their hired expert, and that people "forfeit benefits" without a smart meter.

They also tried to say that the Commission had mandated they use smart meters, by quoting the Commission's Decision 69736 from July 30, 2007. However, the quote was edited to change the meaning. (See the original wording on page 7, line 10 of Decision 69736. The doctored version is on page 2, line 7 of the APS proposal.)

The presented opt-out plan, called "Service Schedule 17," proposed to charge all opt-out customers a \$75 initial fee and \$30 per month. This is a very high cost, which would be a real burden on people living on a fixed income. There were no discounts available.

The plan defined a non-automated meter as analog and not wireless, which left the door open for the older type analog PLC meters. It also stated that opt-out customers assume all liabilities for using the meters.

And, it stated, a customer who changes to a smart meter cannot change back for twelve months, which could be a real "gotcha" if a customer is sold on one of the rate plans that requires a smart meter (such as any time-of-use plans) and is not told the meter will be changed.



The proposal generated a lot of written comments. Some people used words like “punitive” and “extortion.” Was it even reasonable to charge people who just wanted to be out of harm’s way? The fees requested were very high compared to California, Nevada and Maine, where the monthly charges ranged from \$9 to \$14. The SRP utility in Arizona charged \$20.

One filing mentioned a disabled woman on an income so low that the \$30 fee comprised 4.1% of her income. Others pointed out that some people with close neighbors may have to pay multiple opt-out fees. And why charge an initial fee for people who already had an analog meter and no need for a service visit to change it?

The \$30 fee also seemed unrelated to the true cost, as six years earlier, APS reported that it costs them \$0.90 to read a mechanical meter (Corporation Commission Decision 69736, July 30, 2007, docket E-00000A-06-0038). Of course it costs more to read a few meters that are distributed over a wide area, but probably not 33 times as much.

APS had stated the new smart meters saved them a lot of money, so why not use some of that savings to help disabled people?

It was clearly in APS’s interest to charge as high a fee as possible, both for the direct monetary gain and also to discourage people from opting out. With fewer people, the cost per customer goes up, so the fees go up, creating a cost spiral that eventually would force all customers to accept a smart meter.

The *Arizona Republic* covered the new proposal under the headline “APS to analog users: Pay up”. Like their other articles about this issue, it was wholly unsympathetic to people who needed to opt-out.

### **Tucson Electric follows suit**

The *Arizona Daily Star* reported in May (“Utility ‘smart meters’ raise health, expense concerns”) that Tucson Electric Power (TEP) was instigating an opt-out program where the customers paid \$10 a month to have their meter read manually, and only \$5 if they read it themselves. This was much cheaper than what APS wanted.

The article quoted a physician, a college teacher and an activist about the need for sensitive people to avoid the smart meters. Commissioner Susan Bitter Smith was quoted saying that it’s not for the Commission to weigh all the conflicting claims about the effects of the radio waves coming off the meters, but how much the utilities can charge customers who want to opt-out.

Tucson Electric’s parent company, UniSource, did not announce their own plans for allowing people to opt out.



### **The opposition spreads**

The year 2013 saw the resistance spread further into the mainstream. There were by then many other problems under debate, such as the cost and lack of benefits to those paying for the meters, the possibility for hackers to leave entire cities in the

dark, and using the meters to spy on people. Three attorneys general (Connecticut, Illinois and Michigan) as well as the federal Government Accounting Office (GAO) issued critical statements. The grass-roots resistance had spread to many states cross the country.

In Arizona, several local politicians contacted the Corporation Commission after hearing from many concerned citizens.

The issue was debated by some of the town councils. The towns of Sedona, Bisbee, Jerome and Oak Creek sent letters to the Corporation Commission asking for free opt-outs.

Sedona had become the center of resistance with activists organizing screenings of the movie *Take Back Your Power*, where they also sold more than a hundred copies of the DVD.

The Sedona City Council organized a hearing on June 19, 2013, where both APS and the activists were allowed equal time to present. The Council then sent a protest to the Corporation Commission. The protest stated that APS had told them at the hearing that it cost them \$1.86 to read a mechanical meter, so the Council found it “exorbitant” that APS wanted \$30 a month to do it. Sedona also asked to be able to have the entire city opt-out.

As we shall see, Sedona later became further involved in the matter.



*Sedona City Council during their smart meter hearing on June 19, 2013.*

We know of one Sedona activist who built a steel cage around his electrical meter, so it could not be removed without the use of serious tools. He was then unofficially told that APS asked one of the commissioners how they should

respond to such a challenge. The commissioner's suggestion was to leave it be, presumably to avoid a confrontation and media circus.

### **The Arizona study**

It appears that Commissioner Brenda Burns took some action to help the smart meter issue along. In May the Commission issued a press release that they were looking into the concerns. In an August 5<sup>th</sup> meeting, they decided to request the Arizona Department of Health Services to conduct a study. The official wording of the request was never made public, but it appears that they asked for an evaluation of the health risks and whether the meters violated the federal radiation guidelines.

Four states had already produced reports about the health impacts of the smart meters: Maine, Vermont, Texas and California. None was supportive of the concerns, but they were not very thorough, either. The California report relied heavily on information from the industry's EPRI center. The Texas report was written by someone who specialized in cyber security and was so blatantly biased and full of personal attacks that it was surprising the Texas PUC put its name on it.

The new Arizona study was expected to take a year to complete. We didn't expect it would support us, but we thought time was on our side and at least we'd get another year of free opt-outs. The commissioners avoided making a decision for another year.

### **Intervenors**

The Corporation Commission operates with the concept of "intervenors," which are people the Commission recognizes as third-parties in a hearing. Intervenors are often given more time to speak, and may be allowed to speak more than once during a hearing. Intervenors are placed on a service list, and whenever an intervenor files a document, it is expected that a copy is sent to the others on the list.

The Corporation Commission expected all intervenors to be lawyers. It is understandable that the Commission wanted to deal only with people who understood the law, to avoid wasting time. Some of the protestors were also not very courteous to the commissioners, calling them "bumbling bureaucrats," "liars," "incompetent" and just about anything else short of baby killers. One activist

repeatedly referred to APS as “American Power Supply,” even though the full name is Arizona Public Service.

Hiring a lawyer is very costly. We were the only group who had been able to do it, but it was on a shoestring budget and we were not confident we could continue shouldering the cost.

In March 2014, the City of Sedona hired the attorneys David Pennartz and Landon Loveland from the law firm Gust Rosenfeld to represent the citizens of Sedona at the Corporation Commission.

The Commission eventually allowed a few activists to be intervenors, but it was not easy and took four months for the first to be allowed inside the club, which first happened in May 2014.

Sedona’s lawyer tried to link the smart meter dockets, so when discussing APS’s opt-out fee request in one docket, all the material in the general smart meter docket could be referenced. APS’s lawyers objected, saying that “much of the voluminous material . . . is wholly irrelevant” to the fee request.

### **More people opt-out than expected**

The *Arizona Republic* reported on August 28, 2014 that 19,000 APS customers had opted out of the smart meters. That is 1.7% of their customers. Later we learned that 1,600 customers in Sedona, about 10% of the households, had opted out. Many people in the Prescott area and other parts of northern Arizona had opted out as well.

The utilities later commented that the opt-outs were concentrated in these areas, which they saw as the effect of activists stirring up people. To us, it was not surprising that there was this concentration, as we already knew that people with severe environmental sensitivities were clustered in those areas.

### **Buying the elections**

Two Corporation Commission seats were open for the 2014 election. These campaigns are normally calm, low budget and receive little media coverage. The 2014 Corporation Commission election received a lot of media attention, as a lot of money was spent on ads supporting the candidates Tom Forese and Doug Little in both the primary and general election.



The *Arizona Republic* covered the money trail and got APS to admit it had spent \$4 million to support the three commissioners who won the seats in the 2012 election, but APS refused to acknowledge or deny their involvement in the 2014 campaign. The paper claimed a total of \$3.2 million was spent on the 2014 Forese and Little campaigns – an extreme amount for seats on the Corporation Commission.

Columnist Laurie Roberts stated in the *Arizona Republic* that

*Somebody really, really, really wants to see that Republicans Tom Forese and Doug Little are installed on the all-Republican commission*

and said about APS:

*For a company dedicated to providing light, these people seem awfully comfortable operating in the darkness.*

It was not the smart meter issue, but rooftop solar systems that prompted APS to meddle in the election. It had become popular in Arizona to put solar panels on the roofs of homes and to sell any surplus electricity to the utility — a practice APS now wanted to restrict. (“Solar Wars,” *Scientific American*, Nov. 2014)

The *Arizona Republic* reported that Democratic candidates, Jim Holway and Sandra Kennedy, promised to subpoena APS to disclose its political spending, but they both lost the election. By New Year’s Day, the Commission consisted of five people, who all were elected with the help of APS.

Three months after the election, a highly placed whistleblower at the Corporation Commission went public through the Phoenix TV program *12 News* with several allegations. One of the allegations was that commissioner Gary Pierce met secretly fourteen times with the CEO of APS.

Others tried to dig deeper into the issue. In June 2015 the *Arizona Republic* published the article *Surprise surprise, Corp comm messages to APS are gone*. Logs showed that chairman Bob Stump had sent hundreds of messages to Forese, Little and an APS executive. When the Corporation Commission was asked to make the messages public, they replied they had all been deleted.

There is little doubt that the Corporation Commission is a "captured agency," largely controlled by APS.

### **The Arizona smart meter study finally arrives**

Some of the few remaining meter readers at APS were glad to be keeping their jobs and sometimes chatted with their customers. In October 2014, one meter reader told someone that APS would start charging their opt-out customers in a month or so. We took that to mean that the Commission would soon act, and that they had given their buddies at APS advance warning.

The person who monitored the docket for our group started checking it daily, so we got as much lead time as possible. The wait was short, as The Arizona Department of Health Services (ADHS) report appeared in the docket on November 4. It had taken them fifteen months to make the report, and then it was made official on election day. We assumed the Commission would soon hold a hearing, so we moved fast on dissecting and commenting on the report, which others did as well.

The report was the expected whitewash. The ADHS did not charge for the report, but did it as a courtesy, so the staff fitted the work into their schedule as they were able. It didn't look like they spent much time to become familiar with the topic, as there were many technical errors. They didn't understand the concept of pulsed microwaves, or the frequency bands used by PLC meters, for instance.

The report completely bowed to the federal radiation guidelines and cited a lot of sources that supported them — even the blatantly biased Texas PUC report. None of the prominent sources questioning the current guidelines were mentioned, except a brief mention of the AAEM, which was dismissed with an excuse originating from a private website focused on discrediting all forms of alternative health treatments. The BioInitiative report was not mentioned at all.

The overall impression of the ADHS report was that it was focused on shoring up current dogma by dismissing as much dissenting evidence as possible, using questionable excuses.

The report did admit that there were several recent studies concluding that low levels of radio-frequency exposures cause a number of health effects, but then dismissed them all as "unconvincing."

The existence of electrical hypersensitivity was trivialized by claiming it affects only a few individuals per million, which is by far the lowest estimate available.

ADHS asked the Arizona Radiation Regulatory Agency (ARRA) to measure the radiation from the smart meters. ARRA's measurements were not done by professionals. They used a cheap instrument that was not suitable. It was not able to adequately measure pulsed microwaves, and the radio frequencies radiated from the PLC smart meters were outside the instrument's frequency band. The people at ARRA also didn't read the instruction manual, which says the instrument doesn't work correctly when used as close to the radiation source as they did (it works only in the "far field").

There are too many problems and omissions in the ADHS report to list here. For a comprehensive list, see the various comments filed in the docket in November and December of 2014.

It may seem surprising that such a low-quality report was produced by two state agencies entrusted with the public health. In the case of ARRA, they are also involved in overseeing the safety of APS's giant nuclear power plant outside Phoenix.

It would have been very surprising if the ADHS report was critical of the smart meters. Government agencies are frequently the last to question things, as that quickly becomes a political problem. There are examples where an agency's own scientists have been overruled by political considerations. It would take a lot of courage to step outside the current echo chamber, which is rarely a good career move.

The ADHS report was claimed to be independent, with no influence from the Corporation Commission. An activist in Sedona filed a Freedom of Information request which unearthed internal e-mails that gave a different view. Corporation Commission staff met multiple times with ADHS staff, which was mentioned in a draft of the report but then removed from the final version.

## **December 2014**

The Corporation Commission staff had asked APS for a breakdown of the cost of using analog meters for their opt-out customers. APS responded that since they now had more than 19,000 customers with analog meters, the cost per customer had dropped to \$21 per month.

That was another example of their unofficial communication, since APS's statement was dated December 1<sup>st</sup>, the same day the Corporation Commission staff docketed their counterproposal citing APS's \$21 figure. Here the staff proposed giving opt-out customers three choices:

- APS reads the meter monthly (\$20/month fee)
- The customer self-reads each month (\$5/month fee)
- APS bills equally each month and reads annually (\$2/month fee)

In each of the cases there was also a one-time \$75 fee.

To address APS's concerns about self-reading customers trying to defraud the utility, the plan allowed APS to switch problem customers to the \$20 option.

Sedona's attorney filed a challenge to APS's proposed fees. He pointed out that the Commission itself (in its 2007 Decision 69736) had found it cost APS \$0.90 to read a meter, so a \$20 or \$30 fee was unreasonable.

A week later the Commission chairman issued his own proposal. It made just slight modifications to the wording of APS's original proposal, but set the monthly fee to \$5 instead of the \$30 (and later \$21). The \$75 initial fee was kept in place. This proposal was docketed two days before the hearing.

### **The third hearing**

We hoped the next hearing would happen before the new year, as the two commissioners sympathetic to us would then be replaced by two people APS had spent so much money to get elected.

We were in luck. The third hearing took place on December 12, 2014, five weeks after the ADHS report was made public. Some of the activist intervenors asked for an evidentiary hearing, where the speakers are under oath and can be questioned by the intervenors, but the Commission did not allow it.

The hearing was divided into three sections:

- the ADHS report
- the privacy issues
- the APS opt-out plan

Each of these sections had its own docket and was considered separately by the Commission.

The hearing started with a very brief presentation of the ADHS report by one of the authors. She was flanked by someone from ARRA, who said very little, and another guy who didn't speak at all. The woman seemed rather young and uncomfortable in the limelight. She claimed they had reviewed over a hundred reports on the issue and said little beyond that.

The commissioners asked a few very soft questions, none of which addressed the serious criticism of the report that had been raised by multiple filers in the docket. Nobody else was allowed to ask questions.

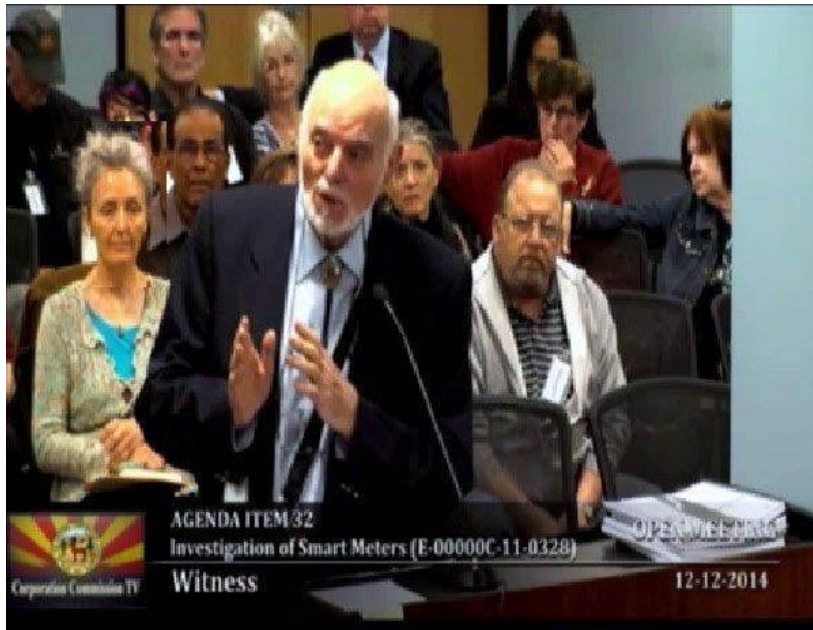


*Jennifer Botsford of the Arizona Department of Health Services testifies before the Arizona Corporation Commission.*

Three activists had flown in Dr. Martin Blank as an expert witness. He donated his time, while they covered his travel expenses. Dr. Blank had extensive experience as a scientist at Columbia University, where he had researched biological effects of EMF for many years. He was an excellent choice.

Dr. Blank spoke for 20 minutes about DNA acting as fractal antennas, DNA breakup, cerebral spinal fluid, blood-brain barrier, cellular stress responses, etc. The commissioners asked questions for another twenty minutes. It was clear that

the presentation had gone far above their heads. The questions were not softball this time. One commissioner asked if Dr. Blank had used “unreasonable high levels” of EMF in his studies. The chairman made much out of Dr. Blank using Wi-Fi in his home, even though Dr. Blank said he turned it off when not needed and he used it by choice. When asked about people who wanted a smart meter, Dr. Blank simply compared it to people who like to drive above the speed limit. He wasn’t fazed by the barbs thrown at him.



*Dr. Martin Blank of Columbia University testifies.*

A large number of people then spoke before the Commission. Intervenors were given ten minutes each, while ordinary citizens had three minutes.

A councilman from Sedona said that he had first thought the whole issue was loony, but he got convinced by people he respected and by looking at the evidence. “The evidence against smart meters is pretty overwhelming” he said.

Other people spoke about their personal experiences with the meters, while some savagely attacked the ADHS report. About thirty people spoke against smart meters, none spoke for them.

Commissioner Brenda Burns said she had opted out herself to see how that worked. APS botched it and installed a smart meter on her home anyway. She also said she had ten grandchildren, whom she thought of when considering these smart meters.

Commissioner Gary Pierce said he made sure all his grandkids did not sleep near any smart meter.

The agenda listed: “discussion, consideration and possible vote concerning the [ADHS report],” but there was no vote. Presumably the vote was whether to accept the report or not, and not having a vote was a tactful way to not endorse it.

The agenda item about the privacy issue was quickly over. Then it was on to the APS opt-out proposal. APS showed up with seven or nine people, most of whom never said a word.

Sedona’s attorney, David Pennartz, restated his challenge to APS’s opt-out fees, including that the Commission itself had found that it only cost APS \$0.90 to read a meter manually, so charging \$20 or \$30 was unreasonable. He also pointed out that APS’s proposal moved some liabilities over upon the customers.

Other speakers said much the same, but it was clear that the commissioners and their staff paid much closer attention when an attorney said it. They said they had not given the liability issue “much thought,” despite Pennartz’s filing a week before (and our group pointing it out in a filing more than a year earlier). This again shows that written comments are easily overlooked, while personal appearance at a hearing is all-important.

The chairman’s proposal made only slight modifications to the APS proposal. This was used as a template by the commissioners, who moved so fast nobody else in the room knew what the result was until it was posted six days later as Decision 74871.

The result was basically that people who already had a mechanical meter did not have to pay the one-time fee. People who needed the meter changed had to pay \$50. The monthly opt-out fee was \$5.

The liability issue was resolved by adding a few words.

It was now after hours, so the commissioners were in a hurry to get home. Many people had already left, but all the important parts took place in the last hour.

## **Comments on the decision**

The result of this process was a compromise. Smart meters were not outlawed in Arizona, as some people asked for. That was never a realistic goal. No politician will order a powerful corporation to take down what is already in place — it simply does not happen. A gradual phase-out was also unrealistic at this point. Even the EPA had not been able to restrict anything new for 25 years, due to political pressure.

The Commission would be in big trouble if they ruled that smart meters were dangerous. Surely, APS itself and the entire wireless industry would mount a well-financed legal attack on the Commission. There might also be other types of pressure, as the cell phone industry did to the City of San Francisco, when it wanted cell phone sales displays to be labeled with the phones' radiation levels (SAR value). The industry applied so much pressure the city eventually removed the requirement.

Very few politicians are willing to take a stand in the face of well-armed opposition. The commission avoided commenting and deciding on the entire health issue, and absolved itself of any culpability in its Decision by referring to the FCC guidelines:

*While we understand that some commenters believe that the FCC guidelines are inadequate or out-of-date, it is not within our purview to stray from those federally mandated guidelines.*

The FCC guidelines do not appear to be “mandated” and there is no federal preemption of state's rights to set more restrictive radiation standards, so the Commission could probably have put restrictions on smart meters if it wanted to. And the FCC guidelines were themselves basically worthless, produced by yet another agency captured by the industry it supposedly regulates.

We had hoped to get a right to opt-out for everybody living in Arizona, regardless of the type of meter (wireless, PLC, more-or-less “smart”), but we got none of that. It was still up to each utility whether they would allow it. The larger utilities were savvy enough to realize that allowing people to opt-out can protect them against future lawsuits once the science is firmer and generally accepted. The co-ops did not see it that way.



It was unfortunate that the Corporation Commission steered the whole issue to be a question of what an opt-out should cost, which had to be dealt with piecemeal in rate-hearings with each utility and not a state-wide decision. These could later be increased dramatically, since as we entered 2015 all five of the commissioners got their seats with APS funding. The Commission was also not interested in including wireless gas and water meters in the discussions, and there was still no relief for the rural co-op customers.

The APS opt-out plan still had a “gotcha” in it. If an opt-out customer switches to a smart meter, he or she can’t go back to an analog meter for twelve months. As most people don’t know that switching to a time-of-use rate plan means they’ll get a smart meter, we may see some people trapped inadvertently.

Paying to avoid harm is extortion, as many people pointed out. It is also against the spirit of the Americans with Disabilities Act, but politics is always about compromise when there is strength on both sides of an issue. What was accomplished was that four of the largest utilities in Arizona allow opt-outs, and three of them at some of the lowest costs in the country. That was, after all, a pretty good result.

### **The appeal**

Two of the activist intervenors each filed an appeal of the Commission’s decision. The appeals were considered at the Commission staff meeting on April 13, 2015, which was closed to the public so the commissioners could discuss the issue in private with their lawyer (called “executive session”).

When the audience (and recording device) was allowed back, the commissioners seemed unusually somber when they made their few comments for the public record. It was stated that they could choose between three options:

- grant relief by rescinding their December decision
- hold more hearings
- deny the appeals

Surprisingly, nobody said anything about denying the appeals. That topic was obviously settled during the closed meeting. A clue to their reasoning might be the few words commissioner Doug Little said about the importance of due process if the matter went before a court.

Nobody wanted more hearings. Little said he didn't like any of the options. The commissioners then voted unanimously to rescind their December decision.

The *Arizona Republic* called the result "a small victory," and it was.

The actual decision was published in the docket two weeks later as Decision 75047. It stated that APS will need to file a general rate case, which is a more comprehensive process, but we were not really told why this decision was made. It might simply be another stalling tactic.

The Decision essentially ordered APS to provide analog meters to their customers until a new decision is made, which is the first time there is such a provision. More interesting is that APS was ordered to provide:

*A comparative analysis of the costs and benefits of smart meters as opposed to the costs and benefits of analog meters.*

That would be very interesting, as the utilities have not published such information before, and several independent analyses have stated smart meters are not worth the cost.

Meanwhile, APS still cannot charge an opt-out fee, but they may be allowed to recoup their costs later on.

### **UniSource's stealth opt-out**

UniSource kept their opt-out plans quiet. There were no announcements to the media or on the company website (as of May 2015). I first heard about it when UniSource replaced analog meters in an area north of Kingman in the spring of 2015. People there who complained to the company were told they could keep their old analog meter without any hassle.

UniSource serves much of Mohave and Santa Cruz counties, including Kingman, Lake Havasu City and Nogales.

### **The ridicule**

There were a few incidents where people with electrical sensitivities were ridiculed. One occurrence was during the second hearing, where a group of utility attorneys were overheard making snide remarks in the men's room.

We also heard that a security guard in the building referred to us as “kooks.”

During the third hearing, Ryan Randazzo of the *Arizona Republic* took a picture of one of the smart meter opponents, who wore a bicycle helmet with protective RF shielding material. He sent the picture out with a tweet.

The Commission chairman, Bob Stump, retweeted the picture. He later sent another tweet with a link to the woman’s videotaped testimony and the comment “bicycle helmet covered in aluminum combats smart meters.” Bob Stump did not single anyone else out for such attention, which looked a lot like ridicule.

### **Afterword**

This story is compiled from many sources, including myself, the attorney we hired and other members of our local activist group. Stories from people outside our group has been used to a limited extent to show the breath of the resistance.

From the first docket was opened by the Corporation Commission, the story is primarily based on documents filed there, including proposals, decisions, announcements, reports, letters and statements. I was unable to attend any of the hearings in person, but listened in by phone and later used the recordings to create this story.

The controversy was covered by some newspapers, especially the *Arizona Republic's* Ryan Randazzo, who was the only journalist regularly covering the Corporation Commission. Newspaper articles are quoted a few places, but the only section of the story that relies on them is the part about APS pouring money into the elections.

This is the story as seen from the perspective of one activist group. There were other groups and individuals who made important contributions as well. Some people have been very visible on the podium in Phoenix while others have done equally important work out of the limelight. Some have done both.

Several people who were involved prefer to be anonymous. This includes myself and is also why this story is posted without an author name. Three people each donated about \$1,000 for the lawyer and our other expenses (thank you!), and they all want to be anonymous.

People's reasons to prefer obscurity vary. Some of us can still be proud of what we did without wanting the world to know.

Given that some of the important people cannot be mentioned by name, I have chosen to make all activists anonymous. That also makes my task easier, since some people might get fussy about what I write about them.

I have added my own comments throughout the narrative. Those opinions are not necessarily shared by others.

The Corporation Commission dockets (E-00000C-11-0328, E-01345A-13-0069 and RU-00000A-14-0014), audio and video recordings are available on the Arizona Corporation Commission website.

*July 2015 (updated 2016)*