



## AMR: Make It Pay for Itself

March 7, 2005 — Brad Powers has four residential water systems populated with rather new meters with a growing number of AMR (Automatic Meter Reading) meters joining on a continuing, regular basis. How Blue Ridge Rural Water Company (BRRWC) has managed to do that is the real story.

When Mr. Powers came to his present position, there was an existing new AMR system in place using a radio that was connected to the water meter by wires. The water pit box had been changed out and a hole cut in the lid to accommodate the meter, radio system with an antenna attached from the bottom of the lid in the drilled out hole. Doing that again would mean more money and labor in addition to cost of the meter and radio system. Plus there was the concern of having the wires cut, lost reads and there was the possible box being changed out and certainly a modification of the lid, attaching the antenna, making sure the separate radio and the wire were in a safe place and the pit.

First of all the cost of converting to AMR Drive-by was expensive and hard to prove how cost effective with meters in the system that could be used for a few more years, so Mr. Powers had to find a way that was reasonable, as well as cost effective for the BRRWC. His solution was inventive. He raised the price for new services as they needed them during growth expansions. Half for the work they did to stub in the service and the other half was for the cost of the new AMR system meters. That made the BRRWC happy to find a way to fund without drastic measures.

The growth in the community is at a rate of 1000 new customers per year which would fund about 3000 meters. So far there are 3000 3G meters in the system and based on the 8500 or so originally required, the system will be complete and paid for in just a few years.

It was time to do some extensive system research. Mr. Powers and his staff asked all the major meter and radio manufacturers and integrators to submit a meter for testing that wouldn't be returned. When the meters arrived they were tested to see how they worked, connected to the radios, installed in pits and overall what everyone felt was the best solution for BRRWC.

Three finalists were tested for a month head to head. They were installed in pits measured for distance of signal reception from the pits and marked it. They even tested for how fast they could drive-by (up to the speed limit) and pick up the read. They filled pits with water and tested for signal and water penetration. The soil around Greer is mostly clay, so add water and you have a real mess in the pit. They looked for any flaws in product, operation or installation.

Master Meter's DIALOG 3G Wireless RF AMR Drive-by System was their clear choice. The 3G was the only competitor that had the RF radio, antenna and water register sealed together under the glass of the register. The technology to do that also proved that it was simple to install with no wiring, no special holes in the box lid, no antenna to attach to the lid and no issues with cut or damaged wiring after the installation. The 3G self-activates when the water starts to flow.

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Mr. Powers says, "We do our own change outs on Saturdays. I pay our people \$5 per meter change-out." He further made the comparison of cost per read was seventy cents and now with 3G it is in the teens. The savings are from the rate of the collection of the reads by drive-by along with the accuracy, no human read and recording errors and being able to gather the reads during any type of weather and doing it in a safe manner for the meter reader.

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