

Gulf Power Interviews 1-25-16 and 1-26-16

Metering 8:30 Norman Smith and Mike Wernicke

All AMI except for around 130 refusals and 100 industrial customers. Started in 2008 with a pilot, full swing in 2009 and completed by 2012. Industrial are digital meters with communications. Sensus is the largest. 450k Sensus, around 30K Elster and 10K Landis and Gyr.

Sensus meters have an 8 year warranty. The biggest failure is communications failure. Follow Mil standard 414 (Ansi version). 9 year cycle for demand and 12 year cycle for non-demand (periodic testing for industrials).

Metering accessories are in the main 370 meter account (along with sockets and cabinets). There was a larger level AEM accessory retirement/replacements during the AMI process. 370 may be exhibiting shorter than expected life characteristics due to some clean-up retirements of AEM accessories.

A 15 year life is reasonable. They see various failure modes for AMI meters. The electronics are sensitive to surges (e.g. lighting). This is a high lightning area.

Use standard-costing process for installation and removal. Capitalized on purchase. There should be no gross salvage on meters going forward. There are special disposal requirements for meters. May see a slight negative NS.

May want to look at some of the assets in 370 (main) to see if there are some assets that need to move to AMI.

Line Transformers – Mark Dreadin

Transformer process – Buy transformers from factory (OH are capitalized on purchase, labor standard cost installation booked on purchase). Transformers are retired only if unrepairable as determined by the transformer shop. Will rebuild transformers if repairable. UG transformers have one minor difference - have some UG on consignment in the shop.

Will get decision path on repair/replace and failure modes for transformers. OH/UG mix, Stainless steel/mild steel. All stainless in coastal areas. Salt is a problem with transformers.

Generation – Alan McLane, Robert ...

Smith – coal closing down. CT and CC left. Salt water cooling tower – significant issue with assets around it.

Crist – Units 4 and 5 (both 80 MW)– next outage is in 2017 (then 2020). Will do tube samples and replace as samples suggest. Run time governs capital replacements. Runtime projections are variable.

Crist – Units 6 (320MW) and 7 (520MW) – next outage (2016 Unit 7, 2017 Unit 6). A lot of boiler work in 2010 and 2012 (6 and 7, respectively). Scrubber maintenance will cause the entire plant to be shut

down this fall. Turbine Water Protection system (\$2M per unit for 4, 5, and 6) will be the largest capital project.

Smith – CT (39MW total) – 2 P&W diesel engines discharging to one generator) – (2014, sent 1 engine off, 2015 sent the other). May rewind generator next year (evaluating next year). Aero-derivative engines.

Smith – CC (562MW – 2 on 1 GE 7FA) – New LTSA in November 2016 – replacing existing one. LTSA only covers turbine and generator. Even though LTSA, company will split payment between capital replacements and O&M. Will have interim replacement patterns for those accounts. Plan to replace some modules on the HRSGs. Balance of Plant – no major things planned. Replace some cells, pumps, motors (salt water for cooling tower creates issues with corrosion). Boiler feed pump motor – last sent off in 2010 – will start the cycle again soon. Looking at the condition of the boiler feed pump this year (have never replaced). Since 2002, had several turbine blade failures in early years. Refurbished circulators in 2010 and again soon. In 2010, added salt removal system on air intake.

With the closure of the coal units, will move all common equipment to a new general location for assets that are common to the CT and CC. Some upgrades and costs to keep the CT and CC running.

Transmission Lines – Chris Wilbert 8:30

Transmission Towers 354 – steel poles are also in the tower account. Most of recent tower replacements in the last few years are due to NERC clearance issues. Also a few relocation projects. Some issues with foundations. A lot of towers are aluminum. The design of many of the towers are good (Guide WYE - pin-type) but don't lend themselves to modifications. Steel poles rust faster here than in some other areas of the country. Galvanization sometimes disappears faster in this environment.

Transmission Poles 355 – A lot of wet conditions and woodpeckers would create a shorter life for wood poles – maybe 30 years or slightly more. Concrete poles would have a much longer life. There have been a number of rebuild projects where the poles and conductor had to be replaced for capacity reasons. The Company has spent \$200 million or more in the last few years in transmission projects. The poles purchased today don't last as long as those in the past. The Company is replacing all wooden cross arms on Transmission by 2017 with steel based on Commission storm hardening rules (along with adding storm guys to wooden H-Frames). The Company has replaced over 200 wood cross arms each year since around 2008. May be affecting the life and the removal cost. Moved from creosote to CCA in the 1980s. Under 40 years is reasonable for poles 35-38 years). Poles have to be cut to 8 foot sections to dispose of them. Estimating system will determine the time for each task and the appropriate portion of the project is charged to removal cost.

Transmission Conductor 356 – Would expect conductor to last longer than poles. Would expect conductor to last nearly as long as towers. Galvanized shield wire is getting to the end of their lives and have the shortest life of any conductor (maybe on half of the system). Mostly have 115kV and 230kV lines. Some deterioration and some capacity increases drive replacements. Insulators have the most

problem of any conductor assets. Suspended insulators are rusting out much earlier than you would think. The pin under the shed holds salt but doesn't get washed off – especially closer to the coast. Would expect polymer insulators would last much less ceramic or glass. 50 year average is reasonable for the transmission conductor account overall in this environment.

Transmission RC – Environmental restrictions are increasing costs. Much of the cost increases are laying mats to get to the location (e.g. \$10K in work may require \$6-\$7K to get the workers there). It gets a little more stringent each year. The company has had to adjust capital budgets to reflect that additional cost for matting. Just on one project, the company had to pay over \$100K per month just in mat rental.

Requested a couple “standard” non-cross arm only projects to see where more normal removal cost percentage levels are. He – Chris will respond within a week.

Underground conduit/Conductor – only have submarine cable. 2 – 115kV lines and a little 46kV.

Substations – Tracy Judson

Transmission Structures and Improvements – 352 Some reconfiguring of the station can be affecting the life. More so on transmission but some on distribution.

Transmission Station equipment – 353 – Breakers – moving from oil circuit breakers (easily see 50 years) to SF6 (expect 35-40 year life). Mostly SF6 on system. The remaining oil are being replaced due to end of life. Moved to SF6 in the 1990s. Relays – electromechanical used to use last 50 years or more. Electronic relays (expected life is 25 years). All electromechanical (maybe a couple exceptions) replaced now. Transformers – older transformers had more margin or safety factor. Newer transformers have a smaller margin and will get less life. Some of the older transformers may get a 70 year life but the newer ones will not last as long. Transformers are run “harder” now also. The company will load the transformer higher than in the past and will allow the transformers to run over name plate when necessary. Transformers – older transformers had more margin or safety factor. Newer transformers have a smaller margin and will get less life. Some of the older transformers may get a 70 year life but the newer ones will not last as long. Transformers are run “harder” now also. The company will load the transformer higher than in the past and will allow the transformers to run over name plate when necessary. The environment (heavy salt and coastal) will reduce the life of assets in substations. Storms will bring in more salt exposure. Lightning – have a high lightning incident rate. Would expect a 40 year life for the composite transmission substation account (36 years a little short).

Distribution Structures and Improvements – 361 Some reconfiguring of the station can be affecting the life. More so on transmission but some on distribution.

Distribution Station equipment 362 – Vacuum circuit breakers is considerably shorter than oil (30 years versus 45). Will replaced a vacuum breaker if 25 years or older if a project in the sub. On the second round of vacuum circuit breakers – are already having some reach the end of their lives. Relays – electromechanical used to use last 50 years or more. Electronic relays (expected life is 25 years). Majority of electromechanical (maybe a couple exceptions) replaced. Transformers – older

transformers had more margin or safety factor. Newer transformers have a smaller margin and will get less life. Some of the older transformers may get a 70 year life but the newer ones will not last as long. Transformers are run “harder” now also. The company will load the transformer higher than in the past and will allow the transformers to run over name plate when necessary. Transformers – older transformers had more margin or safety factor. Newer transformers have a smaller margin and will get less life. Some of the older transformers may get a 70 year life but the newer ones will not last as long. Transformers are run “harder” now also. The company will load the transformer higher than in the past and will allow the transformers to run over name plate when necessary. There is some equipment in a distribution sub that won’t last as long as in transmission (e.g. circuit breakers and regulators). Would expect a 35-38 year life for the composite distribution substation assets.

Substation RC – Environmental permitting is increasingly expensive when expanding or rebuilding substations. Expanding substations has happened a number of times based on the system configuration. Distribution equipment is smaller and can be transported more easily and easier to handle. SF6 gas removal will increase removal cost compared to vacuum breakers. Much more oil in transmission oil breakers than distribution. Most equipment in a distribution sub can be removed with a pole truck. For transmission, cranes are more normally needed.

Project Site Visit – Nine Mile Road reconductor project. Replacing poles and conductor, etc... Standards have changed – increasing height of poles and new conductor. 2-phase and 3-phase to all 3-phase line. Moving from 4/0 to 795 ACSR. Storm hardening also a factor. Moving from Grade C construction to Grade B construction.

Distribution Poles 364 Mark

With old-style poles, would expect a slightly shorter life. The top of CCA poles are more prone to a fire than other treatments. Marginally more concrete than in the past. Have subtropical, wet environment. One of the wettest areas and very high temperature in the summer decreases the life of poles.

Distribution Conductor 365

Standardized on 3 sizes plus neutral in the mid-1980s. Older conductor was more environmentally sensitive - cores of older conductor were likely to rust or deteriorate. A longer life would not be unreasonable but should be stabilized going forward. Moving from 40 years to 45 years would not be unreasonable for a one time move.

UG Conduit and Conductor

Would expect UG conductor life to go longer. Are putting conductor in conduit many years ago. Also, moving to the newer, better conductor. Around a 40 year life for conductor is reasonable. Conduit is in the Network.

Services 369

UG in ducts since the late 1980s. OH longer and UG lower life does not seem reasonable due to physical characteristics. Company does not believe anything should have changed enough to create the change we are seeing.

Distribution RC – JETS system used – time and motion based by activity. More safety related requirements are required than in the past. Labor costs have increased over time. Travel and other loadings have increased over time also.

IT – William (Bart) Siders

Scope is transport, wireless, data networks, voice networks, pc networks and servers

Almost all products are now living 5-7 years

Transport gear – Fiber can have a fairly long life (20-30 years) – most is in static wire of transmission (OPGW). Electronic transport gear (e.g. coax, microwave equipment, DWDM (Dense Wavelength Division Multiplexing) – fiber equipment is in 397 depreciated - may have a 15-17 year life. Companies own its transport equipment. Also, some radio equipment in this account. Power Systems (e.g. DC battery banks – may last 15 years or more). A 15-17 year life for the average of the account is reasonable. Transport gear is moving to shorter lives as technology changes.

7 year amortized account – hope to get 7 years out of the wireless, data networks and voice networks. WAPs – 7 years not unreasonable. Routers/data switches – 7 year life cycle is reasonable. Phones – May last a little longer than 7 years. 7 years is very reasonable for the mix of assets in this account.

5 year amortized account – pcs and servers – the bulk of the investment is in servers (5 year life cycle). PCs are leased on a 3 year (laptop) and 4 year (pc) term. Need to discuss whether to add Laptop (3 year) and PC (4 year) subaccount for if purchases start happening. 5 year life for this account (absent starting to capitalize PCs and Laptops).

General Facilities – Bob Cordes

Structures 390 – About 38 different building on 15 campuses. Corp office is the largest (around 250000 ft square) – built in 1986. Average age of building (square foot weighted) is around 30 years old – may be shorter if dollar weighted. Oldest building is around 60 years old and showing its age. Parts of some warehouses are older and some additions are newer. Second time to replace the roof on the Corporate office. Average life of roof is 17-20 years. Roof replacements are capitalized. Chiller 3 will be replaced in 2016, others rebuilt in the past (some capital?). Will replace a generator at times (may get 20-25 year life). Replacing (budgeting) blinds in the full Corp Office building in 2016 – capital replacement. Have rebuilt a number of parking lots. If just resurfacing, will be O&M. Tear out and replace is capital. A 45 year life is reasonable for this account.

RC – Sale of buildings are treated as a gain/loss and not put in the depreciation reserve. 2008 had a sale of the Pace Blvd building – proceeds went as a gain. Company asks contractors to break out removal cost from construction costs (e.g. roof tear-off versus new roof). 2011 RC was high – will check on it. May be a large roof replacement.

Furniture 391.1 – Order of PUC – use 7 year amortization for furniture. Capitalization threshold for general plant is \$1000. Use Steelcase furniture. A lot of panels are original to the Corp Office Building.

Transportation – James (Buster) Burris

Lives are moving out in the analysis (from 2009, to 2012 to 2014). Repair costs and condition will determine if a vehicle needs to retire. The projected lives are reasonable. The best trucks will go to the plants first.

Salvage – Heavy trucks - Over the last couple year, the market for used equipment has been up. Company believes the market will hold fairly steady for the next few years. Moving the sales to an outside firm seems to be generating more sales proceeds than when company personnel performed the sales (maybe due to the larger market the outside firm can access). For light trucks, the residual value is very small (with 200K miles). A 10 year old F150 with 200K miles that cost \$20K to purchase will only generate \$1K at sale based on a 5% salvage. The third party sales company will take some of the proceeds as their commission. Company thinks that the 5% is right on target. The best trucks will go to the plants first.

396 – the 2014 sale was an early sale of Hydrotrec (amphibious vehicle) – atypical. Use the existing NS and the life as analyzed is appropriate.