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Jean Jewell

From: Ed Howell
Sent: Sunday, April 23, 2006 10:19 PM
To: Jean Jewell; Ed Howell; Gene Fadness; Tonya Clark
Subject: Comment acknowledgement

WWW Form Submission:

Sunday, April 23, 2006
9:18:37 PM

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Comment_description: BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE) CASE NO. IPC- E-06-01
REVIEW OF IDAHO POWER)
COMPANY'S PHASE ONE)
IMPLEMENTATION STATUS)

COMMENTS OF DISTRIBUTION CONTROL SYSTEMS, INC

Distribution Control Systems, Inc. (DCSI) is pleased to have this opportunity to provide comments in this proceeding. DCSI was pleased to be chosen by Idaho Power to provide an advanced metering system through its "Two-way Automatic Communication" the TWACS® system.

As noted in its Final Report, IPC was very successful in reading its meters, to wit IPC has a near 100 percent success rate in collecting daily reads through the TWACS® system. It has an approximately 98 percent success rate in collecting hourly usage information. P.4

DCSI found Idaho Power to be knowledgeable and motivated and can state it was a pleasure to work with the dedicated team charged with implementing the AMR program.

DCSI provides the additional clarifications and corrections. The format will be to paste an IPC statement with our commentary in bold.

IPC Statement: "The meter modules used in Phase One have a 24-hour memory that is used in 8-hour blocks. Any problems with the electrical system, phone lines, software or the servers can usually be resolved in time to capture the daily readings that are stored in the meter for 24 hours. To ensure accurate data collection, it is necessary to communicate with the meter in no greater than 16 hours timeframes prior to the data being over-written in the memory. Individual meter failures or problems that cannot be fixed within 16 hours are rare, but do result in the loss of daily readings and hourly data."

DCSI Response: This is correct, however DCSI has now released to the market extended memory ("XM") modules that, in conjunction with new software, allows retrieval of hourly intervals and daily readings for up to 7 days. This greatly mitigates the, albeit rare, chance of loss of data. IPC plans to investigate the use of XM modules, but XMs were unavailable during Phase One.

IPC Statement: "This limitation presently exists at the substation equipment level in which the equipment is not able to listen to multiple substation bus, feeder, and phase

configurations."

DCSI Response: DCSI has now released its Multiple Input Receiver Assembly (MIRA) which directly addresses this issue. The MIRA board was unavailable for IPC during Phase One, but has since been installed in one IPC substation for evaluation.

IPC Statement: "The system does have limitations in its bandwidth capabilities."

DCSI Response: IPC has verified to DCSI that IPC did not experience any bandwidth limitations related to retrieval of hourly/daily reads or implementation of customer load control under "normal" operations. The recently installed MIRA receiver has greatly increased the bandwidth for inbound messaging which aids the meter search process during the meter deployment phase.

IPC Statement: "For the Phase One Project, IPC placed an emphasis on collecting the meter usage information at the hourly level, which required IPC to contact each meter a minimum of three times daily to obtain the information in the 8-hour time blocks. The bandwidth limitation causes concern when other services may be used on top of meter data collection, such as load control signaling or polling for outage verification, in which the communication network may become over burdened creating conflicts in functionality."

DCSI Response: DCSI is confident that the specific concerns do not pose a bandwidth problem (e.g. load control) and that software and hardware enhancements by DCSI in the past few years have dramatically increased bandwidth capability.

DCSI is confident that it can

- Collect hourly intervals for residential and C&I customers (Phase One)
- Time synchronization of all meters 4 times an hour. (Phase One)
- Collect 15-minute intervals for C&I customers (DCSI has meters and transponders currently capable of this, but this was not a part of Phase One,).
- provide load control with verification (Phase One)
- collect gas and water meter readings (via its short hop RF solutions) (DCSI has meters and transponders currently capable of this, but such meter/transponders were not sold to IPC nor were they a part of Phase One. DCSI points out that the short hop RF is currently only with the Orion Badger® system).
- send signals to an In-Home Display (DCSI's In Home Display is still in beta testing)
- send signals to Programmable Thermostat (DCSI is in discussion with thermostat makers, and design plans have been created, but no PCT is currently available)
- perform 30 minute status/outage polling of every endpoint (This capability was not available Phase One, but IPC has indicated a desire to investigate the DCSI Oasys outage assessment software .

The above applies for all of IPC's customers on the most congested automated substations without incurring a bandwidth limitation during normal operations.

IPC Statement: "On November 18, 2005, IPC received a service announcement from DCSI to immediately discontinue the use of 480-volt meter operation and installations due to safety concerns of thermal overheating."

Response: A follow-up Service Advisory to resolve the 480V CMT-SX resistive element issue was officially released by DCSI on January 6th, once testing of the re-designed element was completed and materials availability was verified. The first field replacements were installed at Idaho on February 7th and replacement elements have been shipped for the balance of IPC's 480V meters. IPC will continue to evaluate the efficacy of DCSI's solution for this issue. Although issues of this type can arise on relatively new products, they are not necessarily indicative of the maturity of a technology.

IPC Statement: "IPC consistently experienced meter failures on irrigation pump locations using variable speed drives (VSD)."

Response: Three units with the new element design were installed at 480 Volt service locations with Variable Speed Drive loads on February 7th. DCSI is not assured this corrective action will be sufficient since DCSI has not determined a cause of the failures from measurements taken to date. DCSI is currently evaluating more specialized measurement techniques and equipment that will better capture the anomalies found at these service points. DCSI will then return to the site to continue the investigation.

IPC Statement: (In re the load control devices) all indications from industry and vendor sources are that the AMR technology and LCTs can effectively conduct load control of appliances using on-demand technology.

DCSI Response: DCSI simply wishes to reiterate that the failure of the LCT was due to a misunderstanding between IPC and their contractor regarding which of the two relays was operational and said failure should not be attributed to the TWACS® technology.

IPC Statement: "TWACS® AMR System Projected Cost
Installed Cost of Meters, Substation, Software, Servers, including labor \$5,855,144"

DCSI Response: DCSI provided subsequent pricing figures for a full system-wide implementation. IPC did not use the full rollout prices, only its actual Phase One costs. Suffice it to say that upon review of nation-wide pilots versus system-wide implementation the differences between pilot costs and full scale deployment cost can be dramatically different,.. The technology, functions and capabilities of the TWACS® system and the costs may vary based on what functionalities IPC wishes to procure, however DCSI believes that a full scale rollout would result in a substantially less "per point" cost than what IPC experienced in Phase One.

Respectfully submitted by Distribution Control Systems, Inc.

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