

Confidential AMI Project Short List Bidder Summary

May 6, 2005

Bidder: Itron

Offer: A 1-way radio network solution and a drive by solution were offered in the RFP.

Recommendation: Deselect, because the 1way proposal did not provide the best solution for PG&E based on risk, functionality and price criteria. *and the drive by solution could not function*

Risk: In the Team's opinion Itron's offering featured these ^{side} unacceptable risks: *that rendered their offering unworkable* *Must be functionally specified by the client.*

- a. system maturity – proposed system is entirely different than any previous commercially deployed system and Itron proposed new network technology options during the due diligence process undermining the team's belief that Itron has a solution
- b. network infrastructure requirements – very high number of network nodes resulting in higher CapEx, OpEx and potential CEQA issues. Itron proposal required the most data collectors (approximately 110,000) with the next highest proposed population being 25,000 and the selected vendor having less than 650.
- c. battery life – based on the information provided by Itron, gas a network based gas module battery life was 15 years. Reports from other users placed gas module battery life at 15+ year life for drive by operation but only a 13 year life for network operation. Any of these life expectancies would require a module/battery change during the 20 year business case period, where the selected solution does not
- d. radio communication – uses unlicensed radio between the modules and the collectors – creates potential risk due to interference - Itron is trying to get this frequency band re-regulated by the FCC to address Itron's public concerns about potential future interference
- e. coverage – Itron's proposal was for less than 100% of either the electric or gas customers (approximately 86%) requiring PG&E to purchase and deploy at least one other technology system for both the unaddressed electric and unaddressed gas customers

Functionality: In the Team's opinion Itron's offering does not clearly meet present all regulatory specifications as well as offers less functionality (e.g. no load control option, no direct meter communication or status) than the recommended solution while being very close to the PVRR of the recommended bidder's proposal. *the few of modules on basic benefits*

Price: The PVRR for Itron's lowest price, which is not the preferred solution, was approximately 4% lower than the PVRR of the recommended bidder's.

Corroboration: Because the proposed Itron system has not been commercially deployed, it was not possible to do a site visit on the system Itron was proposing. However the Team reviewed all of the proposal materials submitted by Itron and Itron's responses to PG&E's submitted clarification questions as well as met with them on three separate occasions to ensure we clearly understood their proposal and the key issues discussed *above our first cost*

Because of the reduced functional needs

The lowest cost of the standalone gas drive by solution was not selected because it did not provide a better business case for PG&E and though the drive by solution was not selected

the few of modules on basic benefits result from the gas drive by solution would significantly less than those provided by the selected as per 1.

Confidential AMI Project Short List Bidder Summary

May 5, 2005

Bidder: Hexagram

Offer: Both a 1-way solution and 2-way solution were offered for electric and gas use, where the 2-way solution was priced significantly higher.

Recommendation: Select the gas network solution in the 1-way configuration [2-way modules can be selectively added at a later date as required] but Deselect the electric solution. The gas proposal provided the best solution for PG&E based on risk, functionality and price criteria. The electric solution proposal did not provide the best solution for PG&E based on risk, functionality and price criteria as that product has not been deployed in volume anywhere. The combination of DCSI and Hexagram provides the same PVRR result as other single vendor and other combinations of two technologies but at lower risk and greater functionality.

Risk: In the Team's opinion, Hexagram's offering featured these ~~risks~~ *risks / profits!*

- a. system maturity – proposed system is identical to previously deployed systems totaling about 1 million installed units
- b. network infrastructure requirements – the second smallest network node population of 5,000 sites compared to other proposals that required networks ranging from 20,000 to 100,000 sites. As a result Hexagram minimizes the ~~CapEx~~ CapEx, OpEx and potential CEQA issues. *Collector*
- c. battery life – based on reports from the company and other users, gas module batteries have a 20 year life that may eliminate the need for battery replacements over the system's operational life. Hexagram has also offered a warranty that provides coverage including full unit replacement for premature battery exhaustion. *Superior*
- d. radio communication – uses licensed radio channels between the modules and the collectors which provides PG&E with an owned asset in the channel itself and FCC protection in the event another party interferes with the channels operation. No other proposal provided this reliability guarantee. *business case and full failure coverage included*
- e. coverage – proposal was for 100% of either the gas customers eliminating the overlay of other gas technologies. *certainty*

Functionality: In the Team's opinion Hexagram's low cost offering clearly meets present regulatory specifications as well as offering equal or greater functionality than the other solutions. In addition Hexagram offers a two-way gas module that can operate in the same network so if PG&E should ever require such a device it can be seamlessly added into the existing network. *PG&E need and*

Price: The PVRR for Hexagram's lowest price was slightly higher than that of the lowest PVRR gap firm but the higher functionality and lower risk were deemed to compensate for the less than 5% difference in PVRR between the two offerings. *lowest of just all other firms*

Corroboration: We conducted a site visit to WPS that has been using Hexagram for two years.

*complex as to
PG&E with the
one or more additional*

Confidential AMI Project Short List Bidder Summary

May 5, 2005

- Bidder:** DCSI
- Offer:** A 2-way solution was offered with the option of one-way outbound communication for load control and smart thermostats. This was coupled with a hybrid concept involving Badger Meter's one-way radio technology for gas.
- Recommendation:** Select the electric proposal and Deselect the gas proposal. The DCSI proposal provides the best solution for PG&E based on risk, functionality and price criteria. The gas proposal did not provide a good solution based on price and risk. The recommended gas solution is Hexagram. The combination of DCSI and Hexagram provides the same PVRR result as other single vendor and other combinations of two technologies but at lower risk and greater functionality.
- Risk:** In the Team's opinion DCSI's offering featured these manageable risks:
- a. system maturity – proposed system is an incremental evolution from the prior system except that DCSI proposed an unproven hybrid radio gas add on system from a third party and this was judged as not sufficiently mature to warrant further consideration.
 - b. network infrastructure requirements – offers the fewest network nodes at approximately 630 as compared to others requiring from 25,000 to 100,000 and there are no expected CEQA issues
 - c. battery life – no batteries are required for any DCSI products
 - d. radio communication – does not use radio, instead messaging is on PG&E's power lines in accordance with FCC regulations offering PG&E the highest degree of protection in the continued use of the network.
 - e. coverage – proposal was for 100% of the electric and gas customers but PG&E determined the third party gas solution was too risky. The electric solution is suitable for virtually 100% of PG&E's electric customers. A separate gas solution has been recommended.
- Functionality:** In the Team's opinion, DCSI's low cost offering clearly meets present regulatory specifications for electric metering as well as offering the most functionality of any proposed solutions and the lowest cost offering. While proven, it may produce acceptable results and also produce the smallest PVRR gap.
- Price:** The PVRR for DCSI's lowest price, which is the preferred solution, was judged to be the base price and it was within 4% of the next best bid. However, DCSI's preferred solution created a much smaller PVRR business case gap than the other solutions and it was judged to be a less risky solution.
- Corroboration:** Because the proposed DCSI system has been commercially deployed, it was possible to complete several site visits to WPS and PPL installations including a visit to the WPS beta site where testing is being conducted for the new system. The Team reviewed all proposal materials submitted by DCSI and DCSI's responses to PG&E's submitted clarification questions as well as met with them on three separate occasions to ensure we clearly understood their proposal and the key issues discussed above.

Confidential AMI Project Short List Bidder Summary

April 29, 2005

- Bidder:** Cellnet
- Offer:** Both a 1-way solution and 2-way solution were offered, where the 2-way solution was priced significantly higher.
- Recommendation:** Deselect, because both the 1way and the 2-way proposals did not provide the best solution for PG&E based on risk, functionality and price criteria.
- Risk:** In the Team's opinion Cellnet's offering featured these ^{significant} unacceptable risks; ^{overall offering was desirable:} ^{reducing}
- a. system maturity – no experience with proposed system because system is entirely different than any previous commercially deployed Cellnet system
 - b. network infrastructure requirements – high number of network nodes resulting in higher CapEx, OpEx and potential CEQA issues
 - c. battery life – based on reports from other users, gas module batteries have a shorter life and may require up to three battery changes during the study period
 - d. radio communication – uses unlicensed radio between the modules and the collectors - Cellnet is trying to get this frequency band re-regulated by the FCC to address Cellnet's public concerns about potential future interference
 - e. coverage – proposal was for less than 100% of either the electric or gas customers requiring the overlay of at least one other technology system for both the unaddressed electric and unaddressed gas customers
- Functionality:** In the Team's opinion Cellnet's low cost offering does not clearly meet present regulatory specifications as well as offering less functionality than the recommended solution and the higher cost offering, while unproven may produce acceptable results, however, would also produce the largest PVRR gap. While a regulatory change or attempting to prove the 1-way solution could meet regulatory requirements may be possible, but these alternatives are risky, would delay the project and the resulting system would offer less overall functionality than the recommended alternative.
- Price:** The PVRR for Cellnet's ^{lower solution (1way)} lowest price, which is not the preferred solution, ^{preferred by PG&E} was slightly lower than the recommended bidder's while Cellnet's ^{preferred} preferred solution created a much larger PVRR business case gap than the recommended solution. ^(2way)
- Corroboration:** Because the ^{proposed} proposed Cellnet system has not been commercially deployed, it was not possible to do a site visit on the system Cellnet was proposing. However the Team reviewed all of the proposal materials submitted by Cellnet and Cellnet's responses to PG&E's submitted clarification questions as well as met with them on three separate occasions to ensure we clearly understood their proposal and the key issues discussed above. ^{to PG&E}