

Evaluation of Partnership Opportunities for Future Corrosion Control of Existing Steel Structures at GENCO

The purpose of this paper is to present results concerning the three possible partnership options between GENCO and the coating industry and to identify the partnership options that would be most cost-effective and low-risk to GENCO and the LCRA. The results indicated that the most advantageous partnership option would be between GENCO and a competitively selected paint manufacturer.

Background:

GENCO identified a need to explore opportunities to provide cost-effective corrosion control of existing steel structures with a limited and declining maintenance budget. The need for GENCO to explore these opportunities is consistent with key action strategies outlined in the FY 1996 GENCO business plan. On October 24, 1995, a team of individuals from GENCO, Environmental Services, and Safety met and determined that partnering with representatives of the coatings industry could be cost-effective. The team identified three possible partnership options:

1. GENCO and a paint manufacturer
2. GENCO and a paint contractor
3. GENCO and both a paint manufacturer and paint contractor

Following the October meeting, it was uncertain which of the three partnership arrangements would be the most advantageous to GENCO. To help solve this issue, Environmental Services researched other industries and utilities which are currently under partnership agreements, and interviewed personnel experienced with current LCRA paint coating and corrosion control activities. The interview questions were designed to uncover the partnership option offering the most value-added services to GENCO at the lowest cost.

Method of Evaluation for Partnership Options:

The first step of the evaluation involved researching other industries and utilities currently involved in partnership arrangements. The second step involved the development of 14 interview questions that were designed to identify the most favorable partnership option. The questions allowed each representative to respond openly and offer opinions that were supported by logical explanations. The third and final step of the evaluation was to identify the most favorable partnership option that would result in value added services, be cost-effective for GENCO, and have a low-risk of failure. GENCO's estimated budget for the next five years is \$3,400,000.00 for maintenance painting activities. Our research indicates that 94% of the cost associated with maintenance coating work is with the paint contractor, and 16% of the cost is with the coating manufacture (Wirtz moisture cured urethane was only 10% of the project cost). Based on these projected percentages a partnership with a paint contractor would cost LCRA approximately \$3,196,000.00, while a partnership with a paint manufacture would cost LCRA approximately \$544,000.00 for five years. This information points out that a coating manufactures cost is substantially lower although their risk is substantially greater due to the life expectancy of the coating and their limited market share. The information from the research and responses from the interviewees are highlighted below which support the following recommendation.

Evaluation of Partnership Options:

The results of the partnership evaluation are presented in order of preference and include the reasoning and logic behind the outcomes.

Recommended option: GENCO and a paint manufacturer.

Based on the results of the research and evaluation, the most advantageous partnership for GENCO would be between GENCO and a paint manufacture. The majority of interviews indicated this approach had the greatest potential to increase value-added services at the lowest cost and risk. The interview also indicated that if a combined partnership (GENCO, a paint manufacturer and paint contractor) was chosen, the partnership should first be developed with the paint manufacturer. It

should also be noted that a partnership approach with a manufacturer of a product is not new to the LCRA. A partnership with a major oil manufacturer is currently saving the LCRA more than \$56,000 per year in used oil recycling charges, one of several value-added services that were made part of the partnership agreement.

Listed below is significant value added services that are expected to be provided by a paint manufacturer:

- ? Pre-qualification of paint contractors: The paint manufacturer could assist GENCO in pre-qualifying paint contractors. These pre-qualified paint contractors would bid competitively on various coatings projects or lead surveys as needed.
- ? Use of innovative products and technology: The interviews indicated that a partnership with a paint manufacturer would allow GENCO to capitalize on innovative coating systems and utilize existing relationships between the paint manufacturers and paint contractors to seek out new and innovative technologies.
- ? Improved warranties: The partnership would strengthen warranty requirements as the manufacturer would have some ownership in the product application and could help develop and enforce specifications for surface preparation and coating applications. In developing this partnership, it is essential that the agreement be structured to ensure that unrealistic surface preparation requirements are not being required to ensure warranty issues.
- ? Assessing and surveying existing coating systems: Most major paint manufactures have the technical expertise in-house to provide recommendations identifying the most cost-effective approach for GENCO regarding corrosion prevention and control of existing steel structures.
- ? Direct Purchase: The LCRA could purchase and return unused materials to the manufacturer. It is also possible that materials could be purchased in bulk. The purchase of materials directly from the manufacturer could reduce coating costs by 10-15% by reducing the paint contractor markup.

It is expected that value-added services will reduce GENCO's costs, especially with projects that involve removal or surface preparation of lead-based primers on existing steel.

In return for the value-added services, GENCO could provide an opportunity for the paint manufacturer to develop their product line within LCRA. It will also provide an industrial environment where the manufacturers' coatings could be exhibited, and allow pilot tests to be conducted for new coating systems. The manufacturer will also benefit in receiving LCRA's recommendation for their products and will be able to possibly sell the partnership concept to other electric utilities.

A concern was raised that the paint manufacturer might not be able to provide a wide range of products. A preliminary review of major paint manufacturers indicated this should not be an issue, as most large manufacturers offer a wide selection of industrial coatings and to some extent can offer various specialty coatings. To ensure that GENCO will benefit from innovative coatings, the paint manufacturer must demonstrate that significant investments in research and development have been made. According to a National Association of Corrosion Engineers "NACE" International article, the paint coatings industry world wide is directing approximately \$25 to \$50 billion in research to develop innovative and regulatory compliant coating systems.

A paint manufacturer has more at risk due to the application of the coating system which has a direct impact on the life expectancy of the coating. Therefore, a partnership with a paint manufacture would benefit GENCO along with the paint manufacture. Through a partnership a paint manufacture would be able to assess the proper coating systems, and surface preparation requirements for a job. They would also have direct oversight regarding the application of their product. This ensures their

coatings are applied in a manner which extends their coatings life, and is a tool which allows a paint manufacture to seek reoccurring business. GENCO benefits would be from the paint manufacture having ownership in the product application, which would support their commitment toward improved warranties.

Therefore, the paint manufacture partnership is recommended as offering the most value due to the vested interest associated with the application of their coatings, progressive industry wide commitment toward research and development of innovative coating systems, utilize informal alliances between a paint manufacture and paint contractors which would allow LCRA to capitalize on innovative surface preparation technologies, and utilize innovative coating systems within GENCO.

Second Option: GENCO and both a paint manufacturer and paint contractor.

The results indicated similar value-added benefits could be obtained from a combined partnership (paint manufacture and a paint contractor). Overall industry has not elected to pursue a combined partnership approach. This is primarily due to the fact that an informal alliance already exists between most paint manufacturers and paint contractors. Paint manufactures deal with contractors on a daily basis and have developed relationships with contractors that perform quality work using their products. It is common for a paint manufacturer to also provide technical assistance regarding coating systems and help troubleshoot problems during application. A majority of industry relies upon the paint contractors to select a coating system and typically specifies several paint manufacturers (LCRA usually gives contractors a choice of manufacturers in bid specifications). The paint contractor will usually select the manufacturer that provides the best price, quality, and service. Industry felt that a combined partnership approach would become more complicated regarding administrative requirements, a potential for coercion of bids would exist, and the use of one paint contractor would limit innovative surface preparation and lead abatement technology. The combined partnership could reduce the competitiveness associated with the bids and could bring about a higher cost for GENCO.

The only additional value-added services identified that the combined partnership could offer are listed below:

- ? Lead Surveys: Paint contractors who work with lead-based primers are required to have personnel trained to identify and monitor lead. The contractor could provide this service to assist GENCO in identifying areas that would require worker protection.
- ? Extended warranties: The combined partnership could lower GENCO's risk regarding the extended warranty (application and the life of the coating), due to the fact the paint contractor and paint manufacture would be jointly responsible and would share cost for rework. This could minimize "finger pointing" although if this developed administrative issues could make the contract ineffective. The joint partnership may provide opportunities for extended warranties depending upon the partnership arrangements. The contractor and paint manufacturer approached the Wirtz Dam project as partners and this resulted in an extended (five years) warranty at no additional cost to the LCRA.

The evaluation did indicate that if a partnership with both parties were to occur LCRA should evaluate and select a paint manufacturer first and then select a contractor based on the recommendations of the paint manufacturer. In evaluating the respondent's comments and researching the current partnership practices, it is recommended that GENCO not consider the combined partnership as the primary option.

Third Option: GENCO and a paint contractor.

The results indicated there was less value-added benefit from a paint contractor partnership than any other partnership option evaluated. In researching this approach, Industry had initially begun to develop partnerships with the paint contractors. This approach was primarily focused on surface preparation and coatings applications.

The Tennessee Valley Authority (TVA) entered a partnership with a paint contractor more than one year ago. The contractor continues to perform a large percentage of the work; however, TVA representatives indicated that an increasing number of projects are being bid outside of the partnership agreement in an attempt to reduce costs and keep the partnership relationship competitive.

Work performed under a partnership approach with a paint contractor would probably be billed to GENCO based on a pre-approved cost-plus fee schedule that could also incorporate standard unit costs per square foot. Industry indicated that a substantial portion of time is spent in tracking and verifying contractor costs charged to individual projects. Consequently, a cost-plus partnership would probably not be a cost-effective approach.

The survey indicated that the use of one contractor may also restrict the use of alternative surface preparation technologies. An article from the Steel Structures Painting Council (SSPC) indicated that every cost factor except coating materials have seen at least a 40% increase, with the highest being 1,000% for surface preparation. If paint contractors were chosen as partners, the added risk to LCRA is that the paint contractor could go out of business prior to the warranty expiration.

Paint contractors on an average will consume 94% of the dollars associated with the painting activities. These costs are primarily for surface preparation and coatings applications. Industry comments indicated that most paint contractor partnerships were limited primarily toward surface preparation and coating applications, and did not offer various other benefits. Industry also indicated that a partnership did not result in extended warranties and although a standard warranty of one to two years was common. Industry also felt that the commitment from a paint company was limited by contract terms and warranties. Industry also indicated that a partnership with the paint contractor was being about the most cost effective services and could limit the use of innovative technology. Therefore, the results indicate that the surface preparation and coating applications should always remain competitive in a partnership option and the third option should not be considered in a partnership arrangement.

Conclusions and Recommendations:

The most advantageous partnership option lies with the paint manufacturer. The option has the potential to provide GENCO with the most value-added services, allows GENCO to capitalize on the partner's research and development of innovative coating systems, gain the benefits of the informal alliances between a paint manufacturer and paint contractors in which innovative surface preparation technologies can be explored, and GENCO would benefit from the paint manufacturer having ownership regarding how the product was applied and comfort associated with establishing extended warranties. Therefore, the results recommend a partnership approach with the paint manufacture and the in the best interest of GENCO to keep the surface preparation and coating applications should be as competitive as possible and not form a paint contractor.

The following steps are recommended:

- ? Develop minimum requirements and specifications for paint manufactures to be considered in a partnership agreement.
- ? Research and develop a list of potential paint manufacturers that could meet minimum GENCO

requirements.

- ? Send a letter of intent to selected paint manufactures.
- ? Invite interested paint manufacturers to tour GENCO facilities to determine condition of existing coatings, prioritize GENCO's painting needs, discuss with various paint manufactures their services and coating capabilities.
- ? Draft a partnership agreement that is suitable for GENCO and a paint manufacturer which can be competitively bid.

INTERVIEW QUESTIONS AND RESPONSE SUMMARY

Questions	SGP - Larry Hendrix	TCF - Gary Crownover	FPP - John Mccullough Darryl Zbranek	ES/Safety - Mark Johnson, Ken Ronsonette, John Messick	Comments
Would a partnership relationship be beneficial to GENCO?	Yes	Yes	Yes - with caution	Yes	At a previous meeting all stakeholders agreed but were unsure of who would be the best partner
Which partnership relationship would work best for GENCO?	LCRA & paint manufacturer	LCRA & a combination of both paint manufacturer and contractor	LCRA and paint contractor	LCRA and paint manufacturer	TVA partnership with a paint contractor - results indicate high costs for service
Advantages of a partnership?	Fewer warranty issues Reduced costs Keeps partnership simple	Reduced warranty issues Use of new products Use of new technology	Allows LCRA to pre-qualify contractors Control of costs Develop relationships	Long term commitments Allows competitive bid from contractors Direct supply of materials Cost savings	Try to keep it simple
Disadvantages of the other remaining partnership options?	No institutional controls on contractors Limited technology Cost issues	Paint manufacturer could spec unrealistic surface prep Warranty issues	Contractual issues Stuck with one brand of paint Specialty work will need specialty coatings	Combination may bring increased administrative burden High risk/cost associated with contractor Limit of technology No cost controls	Contractors amount to more than 85% of project cost Paint amounts to less than 15% of project costs (source SSPC)
Ideal contract length for partnership?	3 years (like to see longer)	3-5 years (5 yr extension)	3-5 year with option to extend	5 year with option to extend 5 years Trial period of 1 year with additional 2 years	Legal said 5 years okay - include language that states warranty survives contract
What services would you like to see from a paint contractor other than removal/application?	Maintenance inspections every six months Recognize and address problems	Intervals of inspection after application Coating company specs paint Extended warranties Familiar with all types of technology	None - other than removal and application	Assessment of coatings Lead surveys Spec writing Prioritization of work Technical assistance	FPP did not see any additional value-added services from a contractor partnership.

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What can LCRA offer a paint contractor in return for extra services?	Place to exhibit/test new technologies Pilot tests Good public relations	Monetary benefits of secured work Work load projections Sell partnership service to other utilities Help schedule workload Develop budget requirements	Gain LCRA's business Receive a good recommendation	Guaranteed work scheduling Place to exhibit/test new technologies Recognition within the utility industry	
What services would you like to see from a paint manufacturer other than providing paint?	Inspections every six months Extended warranties	Recommendation and follow through on QA/QC Spec writing for surface prep and coating application Extended warranty Annual inspections Standard costs per sq ft covered. Lead survey/materials	Help with specifying surface prep Troubleshoot problems Wide selection of coatings	Help LCRA pre-qualify contractors Assessment/survey of coating systems Lead survey (heavy metals) Guaranteed best technology and cost Innovative coatings Wide selection of coatings Fixed material costs Use of cost prohibitive coatings at no cost in pilot tests Technical assistance	Legal - "most favorable nation" pricing clause with right to audit will keep prices low Put incentives into contracts will keep things honest
What can LCRA offer a paint manufacturer in return for extra services?	Place to exhibit/test new coatings Pilot tests Good public relations	Sale of product Promotion of new products	LCRA's recommendation Sale of paint	Sale of paint Development of product line within LCRA's other lines of business Sell partnership concept to other industries	What services would you like to see from a paint manufacturer other than providing paint?
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What are the minimum requirements that a paint manufacturer or paint contractor will need to meet for partnership consideration?	Lots of industrial experience Financially stable Investment in R& D Familiar with LCRA's geographic region Use of innovative technology Familiar with environmental regs Similar work references	Past history & performance of coatings List of customers Industry oriented with industrial division Use of innovative technology - case studies Investment in R & D Good safety and environmental record Frequency of warranty issues	Full service coating supplier Wide range of products Coatings must have proven track record 5 years power plant experience Use of products in harsh environments SSPC approval QP1/QP2 certified	Financially sound Wide range of VOC compliant coatings Familiar with innovative technology SSPC certified 5 yr industry experience Investment in R& D Meet all OSHA/EPA regs Good safety & environmental record Internal training programs	
How can contractor cost be pre-determined for partnership bid evaluations?	Not sure - cost plus?	Set a standard cost per job	Cost plus fee schedule Cost per square foot	Cost plus fee schedule	TVA has had bad experiences with cost plus partnership with contractors
If a combination of paint manufacture and contractor is the best partnership how would you select?	Let paint manufacturer select contractor for LCRA approval	Look at paint manufacturer first Select contractor based on paint manufacturer list	Let contractor select coating company that LCRA would like to see	Look at paint manufacturer first Select 3-4 contractors based on paint manufacturer list	Partnerships may already exist between paint manufacturers and contractors.
What is your facilities budget over the next five years?	\$800,000	\$100,000	\$2,500,000	N/A	Using SSPC estimates a partnership with a paint contractor would cost \$3,196,000.00. A partnership with a paint manufacturer would cost \$544,000.

