

Advantages of Single Source Contracting In-Plant CCR Services

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Abstract

When considering options for various in-plant CCR services, typically, there are two methods used: separate contractors for each aspect (e.g., marketing, ash management, landfill construction) or a single contractor for all services (e.g., marketing and ash management). While initially it may appear that use of multiple contractors would be the better option to hire well-qualified personnel for the best value, actual implementation can result in costly safety, environmental, and economic issues. A primary advantage of using a single contractor is successful implementation of the safety and environmental protection program – one contractor means one set of procedures, protocols and training. Not only is it easier for the utility to oversee a single contractor's implementation of the safety and environmental protocols, but it eliminates site personnel confusion when coordinating and complying with multiple contractor requirements. Additionally, day-to-day coordination of on-site activities with multiple contractors can be cumbersome, sometimes resulting in confusion and/or miscommunications that may cause a service interruption, risks that a utility cannot afford. When using a single contractor for all on-site services, these risks are mitigated through a single chain of communication between the contractor and the utility. Single sourcing CCR services also provides an additional opportunity to streamline the manpower and equipment costs over using multiple contractors. A critical aspect to determining the best option for a utility is the contractor's qualifications to perform the required on-site activities. Contractors must be able to demonstrate a proficiency in each of the aspects that they are entering into contract.

Keywords

In-plant CCR services, ash management, ash handling, landfill operations, beneficial use, ash marketing, single source, contracts, multiple contractors

Conference

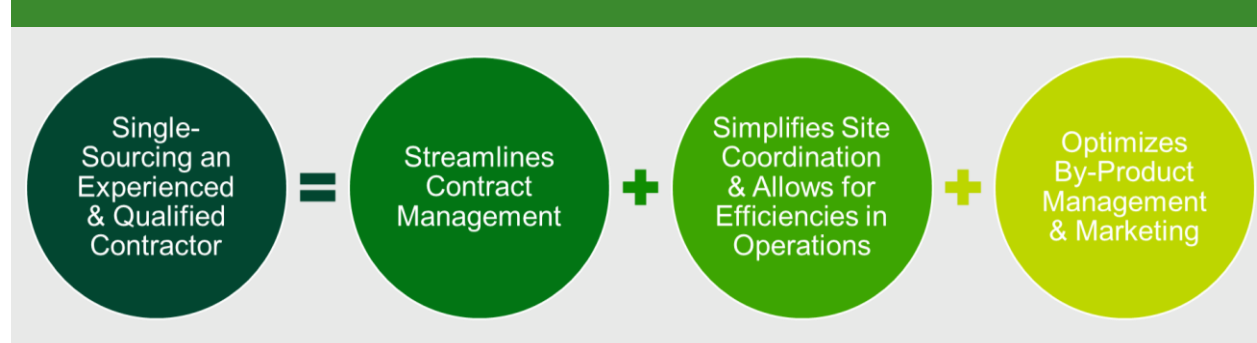
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INTRODUCTION

Electric utilities require a multitude of services to ensure continuous running of the facility. These services range from the initial handling of the coal to the boiler operation to handling the by-products of coal combustion including flue-gas desulfurization (FGD) waste and coal fly ash. Facilities have the option to self-perform or outsource some of these services. Often, the by-product handling, landfill management, and marketing to beneficially reuse the the bottom ash and fly ash are services that the electric utilities will outsource. When outsourcing these activities, it is best to consider single sourcing these activities over having separate contracts for the by-product handling/landfill management and the marketing of the by-products.

BENEFITS OF SINGLE SOURCE CONTRACTING



LEGAL CONSIDERATIONS

When contracting on-site by-product handling/landfill management and coal combustion residuals (CCR) marketing services separately, utilities will be required to have two contracts: one for each set of services (i.e., in some cases this may be the same contractor). Without close coordination during contract development, there is an opportunity to miss required activities that should be included in one of the two contracts. There is also the risk of duplicating the activities in both contracts resulting in a situation where both contractors may require payment for the same activity. Additionally, tasking the management and legal teams to ensure the contracts do not conflict nor impede each other can be difficult regardless of the timing of the release of the individual contracts. For example: It can be difficult to assign responsibility for the liability for CCR spills and control of fugitive

LEGAL BENEFITS OF SINGLE-SOURCE CONTRACTS

- ▶ Eliminates duplicate or overlapping tasks
- ▶ Minimizes coordination between multiple contractors if a task is inadvertently omitted
- ▶ Does away with conflicting payment term incentives between different contractors
- ▶ Reduces insurance costs
- ▶ Simplifies identification of the responsible party in the event of equipment damage or spills

dust in and around the loadout silo when both contractors are pulling from the same silo(s).

CONTRACTS

The scope of work for most CCR management contracts typically have several tasks that encompass the work. By-product handling and landfill operation activities may include, but are not limited to, managing the fly ash silo, managing bottom ash and FGD temporary storage facilities, hauling of by-products to the on-site landfill, landfill operations, dust control, and road maintenance. Marketing activities not only include selling of ash for beneficial use, but coordinating transportation to the customers and requires loading of trucks from the ash silo, bottom ash temporary storage, and in some cases, reclaiming ash from the landfill. Overlapping of these contracts primarily revolves around loading of trucks for on and off-site transport, use of the silo, use and maintenance of on-site roads to include de-icing or cleaning of roads, dust controls, and general housekeeping.

When developing the contracts for managing the CCP it is critical to ensure that all these aspects of the ash management are considered. When the facility issues two contracts to cover the management of the same material, there exist the potential to leave out required tasks and/or duplicate responsibilities for handling CCR. Additionally, when two contractors are working in the same area, there is the potential for conflicts in assignment of responsibility and/or liability (e.g., dust controls, housekeeping, loading of trucks for off-site sales, operation of truck scales, load adjustments). A single contract where all activities are captured and assigned to one contractor eliminates the potential for duplication and establishes a clear line of responsibility. In the event an activity is inadvertently missed, the electric utility will not need to coordinate with two parties to discuss the assignment or negotiation of the responsibilities. The utility will have a single point of contact with which to negotiate and only one contract to amend.

PAYMENTS

When the ash management and landfill operations contract and the marketing contract are issued separately, the payment terms are structured so that the two contractors have conflicting incentives. Under an ash management and landfill operations only contract, the payment terms incentivize the landfill contractor to place CCR materials to the landfill. Under the marketing only contract, the contractor is incentivized to find beneficial reuse opportunities for the CCR material and divert the material from entering the landfill. As such, contracting these activities separately essentially pits the contractors against each other for every ton of CCR material. Additionally, when a facility has two contractors, the electric utility must monitor activities closely to assure duplicate payments are not made for the same activity and/or payment is not made for an activity that is not required.

When the contracts for both services are combined, payment terms are based upon beneficial use of CCR. Typically, monthly costs for ash handling and landfill operations are accounted for in the per ton cost of CCR sold. So, the only 'cost' seen by the electric utility is the agreed upon income resulting from CCR sales. As stated previously, there would be no duplication of services simplifying contract management on the utility's part.

INSURANCE/LIABILITY

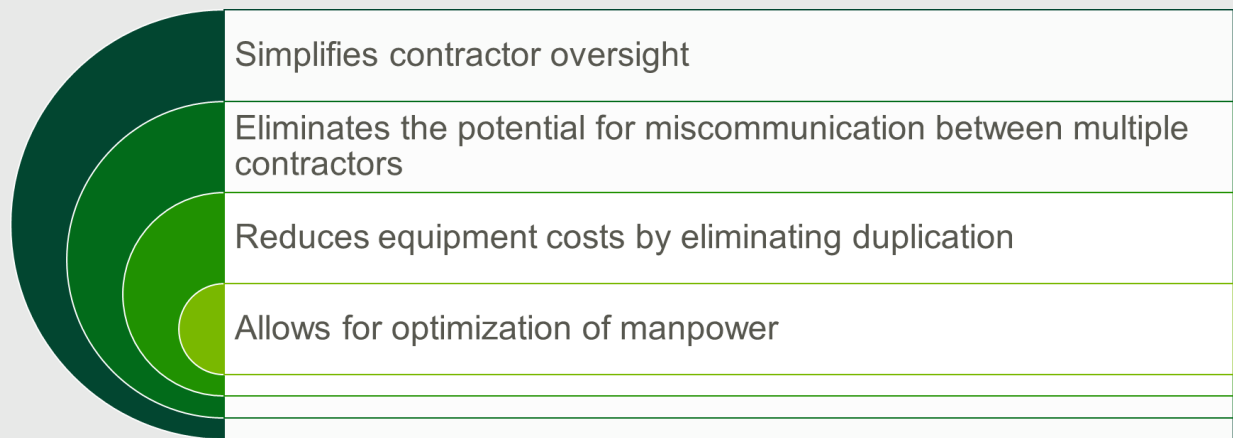
Two separate contracts require an insurance policy for each contract. This cost is inherently added into the contracts when being bid to the utility. With two contracts the coverage costs are essentially doubled and may be more if one contractor has a poor safety record. By unifying the contracts, the cost of the insurance is spread over a greater number of activities and costs are reduced since the coverage is for a single policy covering all the activities on site.

Additionally, where two contractors are performing these activities, the utility runs the added risk of loss of saleable material or potential environmental permit violation if there is an incident with equipment from one contractor damaging the other's equipment. A single contract mandates that one contractor will address and repair any internal equipment damage to ensure the proper running of CCR management at the facility. Other potential liability conflicts when two contractors work in the same area include identification of responsibility in the event of a spill and housekeeping responsibilities. Use of a single contractor will eliminate liability conflicts since the responsible party is clear, simplifying the utility's contract management.

SITE COORDINATION AND OPERATIONS

Contracting CCR handling/landfill operations separately from marketing services requires additional management and coordination for the electric utility. Additionally, separate contracts makes it difficult to optimize the use of equipment and manpower, often resulting in duplication between the contracts.

SINGLE SOURCE CONTRACTING SIMPLIFIES ON-SITE COORDINATION & OPERATIONS



COMMUNICATION

Utilities have reported that they have seen that the communication is much easier with a single CCR management contract. A single contract provides a single point of contact for the utility to discuss facility operations and communicate routine plant updates. Having separate CCR service contracts increases the opportunity for missed communications since the utility would be required to ensure both parties are updated on facility operations, resulting in potential site issues or added unnecessary costs to the utility. For example, in the event of an emergency shut down, the utility would be required to communicate critical information to multiple parties and ensure both contractors completely understand what the plans involve for shutdown and the impacts to their activities. Since this information is communicated quickly, often questions arise and unclear and/or conflicting information may be given to each contractor resulting in confusion during the shutdown. Clear communication with rapid deployment of information is important when there are additional on-site activities required. This confusion is minimized, if not eliminated when communication is only required to one contractor.

EQUIPMENT

A single contract for management of CCR reduces the quantity of equipment needed to perform the CCR handling, landfill operations, and marketing services. Issuance of multiple contracts often results in the duplication of some equipment on-site since the tasks the CCR handling contractor and marketing contractor perform often require the same equipment. A single contractor can use their equipment for multiple purposes on site, at the silo, temporary storage areas, landfill and on the road-ways. For example, a water truck can be used for dust control at the landfill as well as the roadways rather than having two water trucks for two contracts. Additionally, a loader that is used to load bottom ash and FGD for on-site disposal, could also be used for loading trucks for off-site sales. When these activities are performed by separate contractors, it can result in finger pointing if there are any delays during this process.

MANPOWER

In addition, to reducing the amount of equipment, a single contract requires less personnel to execute the work. Since some operations are only required part-time, operators can be assigned to multiple equipment and activities on site. When separate contracts are issued for CCR handling/landfill operations and marketing services, the ability to assign personnel to multiple roles can be difficult since it may be necessary to have additional personnel to ensure certain tasks are covered. Reduced equipment and personnel translate into lowered cost for the Utility and better overall service to the plant.

CCR MANAGEMENT AND MARKETING

Use of single contractor for both the CCR management and marketing services can result in optimization of CCR marketing for beneficial reuse. This can result in a potential revenue stream for the utility as well as minimizing use of on-site landfill air space and extending the life of the landfill.

SINGLE SOURCE CONTRACTING OPTOMIZES BENEFICIAL USE OF CCR



Bottom Ash

- Eliminates conflicting operations objectives; the landfill contractor's objective is maximizing placing material in the landfill versus the marketing contractor's objective is to sell bottom ash for beneficial use
- Operations objective becomes maximize the marketing of bottom ash
- Use of available airspace is minimized, extending the life of the landfill



FGD

- Single contractor incentivized to develop an alternate solution for stabilization of FGD
- Additional fly ash becomes available for beneficial use, resulting in increased revenue for the utility
- Volume placed in landfill is minimized, extending the life of the landfill



Fly Ash

- Eliminates conflicting operations objectives; the landfill contractor's objective is to maximize material placed in the landfill versus the marketing contractor's objective is to sell fly ash for beneficial use
- Operations objective becomes maximize the marketing of fly ash
- Use of available airspace is minimized, extending the life of the landfill
- At locations where all fly ash is placed in the landfill, inclusion of a beneficial reuse clause will incentivize the contractor to market the material

BOTTOM ASH

Bottom ash is often sluiced to a pond or other collection area. In some instances, this material may have a beneficial reuse. However, when CCR handling/landfill operations and CCR marketing are contracted separately, the contractors have conflicting operation objectives. If the management of this material is assigned to the landfill operations contractor, the payment structure is established to incentivize them to maximize placement of the material in the landfill. If the bottom ash handling is included in the marketing contract, the marketer is incentivized to find a beneficial reuse for this material. Any non-marketed bottom ash will be placed in the landfill, impacting the landfill operations contractor and requiring additional coordination of activities and equipment. Additionally, the utility will be required to pay the landfill operations contractor their minimum monthly fee.

With a single contract, the contractor is solely responsible for coordinating the marketing of bottom ash and landfilling of non-marketed bottom ash. In some instances, the contractor is able to remove the material already placed in the landfill for beneficial

reuse, resulting in reclaimed airspace and extending the life of the landfill. Landfill operations costs are accounted for in the agreed upon price per ton of bottom ash sold; so, the utility will not incur any additional costs.

FGD

At some electric utility facilities, fly ash is used to stabilize FGD prior to placement in the landfill. In situations where the utility produces a marketable ash, this results in a significant reduction in potential income since typically a substantial percentage of fly ash is used to stabilize FGD prior to being placed in the landfill. When contracts for landfill management and CCR marketing are separate, neither contractor has an incentive to generate a creative solution to stabilize FGD to allow for marketing of the fly ash.

At facilities where a single contractor is responsible for CCR management and marketing, the contractor is incentivized to develop unique solutions to free the marketable ash from this process since their payment is based upon the amount of fly ash sold. Developing an alternative process to stabilize FGD provides the contractor more fly ash to market and results in additional revenue for the utility that was previously unavailable. Additionally, less volume is placed in the landfill, extending its life and delaying future costs for landfill expansion.

FLY ASH

As discussed in Section 4.1, separate contracts for fly ash handling and marketing services results in both contractors having conflicting incentives with regards to payment. In addition, fly ash marketing is non-existent at some electric utilities and in these cases 100% is disposed in the on-site landfill. Typically, these utilities will only have one contract to manage the CCR and landfill operations. At these locations, the utility is missing out on the innovative nature of the ash marketers and the potential for additional revenue from beneficial use and saved landfill airspace. If the contractor is only incentivized to only manage the ash disposal operations, they have no motivation to look for innovative solutions for beneficial reuse.

When developing contracts at locations that generate ash that does not meet the American Society for Testing and Materials (ASTM) specifications, the utility should consider including a clause that provides a benefit to the contractor to find a beneficial reuse for the fly ash. Likewise, the contractor should negotiate for an option to find beneficial reuse markets for the fly ash. At a minimum, marketed fly ash does not require landfilling, reducing the volume of material placed in the landfill. This extends the life of the existing landfill and allows the plant to save costs by delaying the development of an additional landfill space or finding off-site disposal options. Not only does the utility save landfill airspace, but the utility and contractor can realize an increased revenue stream that benefits both parties.

QUALIFICATIONS

Selecting a qualified contractor is critical to the safe, and efficient management of the facility's CCR program. In addition to the benefits previously discussed by having a single CCR handling and marketing contract, a qualified contractor can reduce the volume of material placed in the landfill, improve the sales of produced CCR, and provide additional revenue return to the facility.

ATTRIBUTES OF A QUALIFIED CONTRACTOR



FINANCIAL WHEREWITHAL

It is important for the electric utility to have confidence that their contractor will continue to execute their work safely and effectively to ensure plant operations are not impacted in any way. A qualified contractor will have the financial resources to purchase new or like-new equipment to support the CCR handling and marketing activities. Weak financial resources could lead to contractors cutting corners and risking safety to save money. Payment delays or lack of payment to vendors can result in them cutting off supply of fuel, transportation, and other resources. Therefore, it is critical that the contractor has strong financial resources to safely and efficiently execute the contract.

EXPERIENCE

Qualified contractors should have experience performing CCR operations in active coal-fired power plant facility. They need to understand the logistics associated with the CCR handling and marketing activities to ensure successful operations throughout the duration of the contract.

Landfill Management

A qualified contractor will focus on safe implementation of the work activities and prevention of environmental impacts and will have the standard operating procedures (SOPs) to document this approach. The contractor should be able to provide the equipment and personnel to load, maintain, and operate the landfill in compliance with all permits and regulations. They should be able to provide personnel experienced in silo operations, operating the heavy equipment to be used on the project, and landfill operations. Often, landfill operations will require a certified landfill operator who has a working knowledge of the state's and permit requirements. Efficient daily operations require pre-planning and preparation to address impacts from dust, inclement weather, erosion, and for work being performed at the site by other contractors. Additionally, the contractor will need to provide enough equipment to adequately handle generated CCR and manage the landfill when CCR sales are low to ensure facility operations are not interrupted.

CCR Marketing Experience

A qualified marketing contractor will have a clear understanding of the local market area and the specification requirements for the beneficial use of fly ash and bottom ash. They will have familiarity and be able to provide the various technologies to bring innovative solutions that will improve CCR quality to meet ASTM specifications for beneficial use. The marketing contractor will have completed a local market survey to define the total need and availability of CCR in the area to provide the utility with a realistic view of the volume of CCR that can be beneficially reused. Additionally, they will have access to various transportation sources to ensure safe and efficient transportation of CCR to their customers. Contractors without this marketing experience may produce minimal returns to the electric utility and use more landfill airspace than anticipated.