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The Energy Construction Industry Gainsharing Handbook

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Abstract
[Excerpt] In 2002, The Boilermakers Tripartite Alliance Gainsharing Committee received a grant from the Federal Mediation & Conciliation Service to learn from past gainsharing experiences in the energy construction industry and sponsor pilot projects for the current testing and development of best practices. Acting as a joint labor-management alliance of the International Brotherhood of Boilermakers and industry owners and contractors, the Committee enrolled the assistance of Cornell University's School of Industrial and Labor Relations to research, conduct pilots, and produce this *Gainsharing Handbook*.

This *Handbook* offers an introductory outline of the components of a gainsharing program. The overall goal is to help industry partners understand whether and how to implement a gainsharing approach that can best match their needs and circumstances. Toward these goals the handbook provides background information together with guidance based on the experience of this industry and other construction-related and manufacturing environments. Sample worksheets and templates are included to illustrate how to develop the specifics of gainsharing in your situation. Pilot case studies are also presented highlighting lessons learned by those who have recently implemented programs in a variety of energy construction industry situations.

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Comments
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The Energy Construction Industry Gainsharing Handbook

To Assist Clients, Contractors and Unions in the On-Site Development and Implementation of Project, Outage, and New Construction Gainsharing Programs

A Project of the
International Brotherhood of Boilermakers Tripartite Alliance

Boilermakers Tripartite Alliance

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Part One: Developing Gainsharing Programs

Introduction

In 2002, The Boilermakers Tripartite Alliance Gainsharing Committee received a grant from the Federal Mediation & Conciliation Service to learn from past gainsharing experiences in the energy construction industry and sponsor pilot projects for the current testing and development of best practices. Acting as a joint labor-management alliance of the International Brotherhood of Boilermakers and industry owners and contractors, the Committee enrolled the assistance of Cornell University's School of Industrial and Labor Relations to research, conduct pilots, and produce this *Gainsharing Handbook.*

This *Handbook* offers an introductory outline of the components of a gainsharing program. The overall goal is to help industry partners understand whether and how to implement a gainsharing approach that can best match their needs and circumstances. Toward these goals the handbook provides background information together with guidance based on the experience of this industry and other construction-related and manufacturing environments. Sample worksheets and templates are included to illustrate how to develop the specifics of gainsharing in your situation. Pilot case studies are also presented highlighting lessons learned by those who have recently implemented programs in a variety of energy construction industry situations.

On the whole, the Handbook is a tool for generating and supporting further experimentation and development of gainsharing throughout the industry. Although the guidance and case study examples are all within the context of outage work, it is intended that this information will be informative to those considering new construction and project work as well.

Why Gainsharing?

The Tripartite Committee believes that gainsharing can be a good all-weather business tool to address critical issues of manpower supply as well as to increase the ability of union contractors to compete with the non-union sector. In periods of labor shortage, well implemented gainsharing can serve to attract and retain tradesmen within our industry by increasing both earnings and job satisfaction. The need for attending to the latter point is supported by recent research indicating that younger workers are motivated less by company or industry loyalty and more by earnings, personal skill and career enhancement, and work that is satisfying.

Gainsharing, done right, can address all of the above factors while helping to attract and retain manpower when labor needs are critical. Conversely, when business is slow and manpower is in oversupply, gainsharing (or in that case, "painsharing") might be employed to win work from the non-union sector. Although the research and limited pilot activities represented by this handbook are not conclusive, indications are positive that given the right job circumstances and relationships among primary players, gainsharing can be an effective business tool.

Gainsharing can be implemented either as a three-way agreement between a client, contractor, and local union (s), or as a two-way partnership between a contractor and local union(s). In either situation, the parties must be willing to enter into an extra-contractual agreement to work together differently in order to achieve superior performance (gain) and then to distribute the consequent financial rewards (sharing). These agreements remain supplemental to the collective bargaining agreements already in effect, and as such provide opportunities for site specific tailoring to unique needs and circumstances.

The ideas behind gainsharing are not new to the energy construction industry, where contingent reward has always been a factor. On hard money jobs, a contractor that performs well earns more money. Extending the concept a bit further and coupling it to the notion of partnering, some contractors have entered into agreements with customers to share the fruits of performance exceeding a negotiated standard. Adding tradesmen to the formula has proven to motivate all three parties to even further improve project performance.

The motivations of the players may vary. Contractors may see gainsharing as a means by which they might attract to their jobs, veteran (returning) tradesmen or even sufficient numbers of tradesmen in a tight labor market. Having thus optimized the staffing of their projects, contractors might also view gainsharing as an opportunity to energize the efforts of all employees working their jobs. Trade unionists might anticipate a working environment which permits members to demonstrate their knowledge of what it takes to get a job done right. Clients might hope for an organizational climate more conducive to on-budget, on-schedule completion. In all cases, performance improvement is equated to more cash, which is subsequently shared among the two or three partners in the gainsharing effort.

Constructing the Formula for SHARING

There are two sides to the GAIN + SHARING equation. Successful program implementation requires attention to both. In other words, you can put an excellent distribution formula in place, but if you don't operate on the job any better than you normally would, you may not generate much of anything to share. The sharing formula is not magic. It doesn't produce the gain; it only serves to distribute it. Nevertheless, we will address first the topic of formula construction and related program structural issues and follow later with discussion of management style and employee involvement structures that serve to create performance improvement.

Establishing the Baseline

Central to the notion of gainsharing is the concept of "par". There must be established some standard or baseline from which above average performance can be measured and rewarded. The contractual basis of our industry, on the one hand, lends itself well to gainsharing in that performance measure baselines may be readily provided, or built-in (i.e., man-hour budgets, schedule requirements, etc.). By contrast, in manufacturing and service sector gainsharing, the parties must undertake a special purpose analysis of historical data to determine such baselines.

The contractual basis of our industry also presents us with a limitation, that being the inherent imprecision, or "fuzziness" of the estimate. While estimators do employ historical data in the preparation of a bid, that data is likely gleaned from projects undertaken for different clients, employing different craftsmen, working on different equipment, under different internal and external environmental conditions (i.e., presence of other subs, weather, etc.). The more divergent from the norm a project appears to an estimator the more likely that they will employ a qualitative risk factor or percentage multiplier in establishing the numbers. So too might those derivative figures be adjusted yet further to reflect the contractor's eagerness to get the job and their appraisal of how hungry the competition might be.

The consequent fuzziness of contractual baseline figures does not present a problem for clients and contractors. Clients are reconciled to this fuzziness by their own estimates and analyses and by reliance on market forces through competitive bidding. Contractors are reconciled to the imprecision by their confidence in their own numbers and by the leveling effect of multiple projects. In short, both parties are reconciled to the fuzziness of the baseline because it is of their own doing.

But if craftsmen are to be part of contingency reward, how are they, as represented by their union, to be reconciled to contractual baselines? Somehow, they must be convinced that the man-hour budget or schedule constitutes a close approximation of "normal" or historical performance. A particularly lean aggressive bid or "loss leader" would present a poor baseline as superior performance will not be adequately rewarded. Similarly, though not problematic in terms of craftsmen enthusiasm, a "fat" bid would also serve ill as a baseline in that average or even below average performance would trigger a gainsharing payout. In this latter case, the contractor would likely not be inclined to offer gainsharing.

There are at least two possible solutions to this dilemma. One addresses the manner in which the union may become reconciled to the contractual baselines; the other sidesteps this particular issue entirely by employing derivative baselines that are extra-contractual. We call these two solutions respectively the Project Bid Model and the Project Goal Model.

The Project Bid Model

The Bid Model constitutes an extension or extrapolation of the bases of the contractor-client contract. In this model, the union must be satisfied that the bases of the bid (man-hours, schedule, etc.) are realistic and present the craftsmen with reasonable targets (or hurdles); in other words, the bar has not been set too high. This could be accomplished by the union being party to the preparation of bids or negotiation of time and material (T&M) contracts. However, that is unlikely as a matter of course, especially in the instance of competitive bids, given the contractors' concern for confidentiality and the workload this would put on union agents. Rather, a practice can be used in which a contractor, desiring of entering into a gainsharing arrangement with its craftsmen on a specific project, would invite the union to sit down with the contractor and review the successful bid (or T&M contract) in hand.

In this scenario, the contractor and his/her estimators, should be willing and prepared to answer questions the union might have regarding the suitability of the contractual man-hours and schedules for gainsharing purposes. How deep this discussion goes will depend upon many factors, not the least of which will be the level of trust between the two parties. In those instances in which trust levels do not permit the sharing of sufficient information for the union to make an informed decision whether or not to participate, and/or lack of experience with bid construction prevents the local union official from making such an informed decision, additional technical assistance should be sought.

The Project Bid Model ***may well serve*** for gainsharing purposes when:

1. The contractor is confident that the bid constitutes a fairly close approximation of realistic requirements,
2. The contractor is comfortable with being fairly transparent with the local union officer (or a regional/national official) regarding the basis of bid preparation, and/or
3. The union agent (local, regional, or national) is able to judge the extent to which the bid approximates realistic requirements, reflecting either that individual's experience and/or the good quality of information exchange with the contractor.

Conversely, the Project Bid Model ***would not serve well*** when:

1. The contractor knows the bid/contract figures to be either significantly lean or fat,
2. The contractor is not comfortable discussing the bases of bid preparation with the union (at any level), and/or
3. The union agent (at any level) is unable to judge the extent to which the bid approximates realistic requirements, reflecting either that individual's inexperience and/or the poor quality of information exchange with the contractor.

The Project Goal Model

The Goal Model is different. In this case, the gainsharing pool (or payout) is not entirely or at all funded directly from monies received from beating the project bid figures, but rather is at least partially budgeted separately by the contractor and/or client. For example, a contractor might anticipate that improvement in customer satisfaction will improve chances for follow-on contracts with this client and improve the company's reputation with clients generally. Improvement in OSHA reportables will translate into a better experience record that over time will result in smaller insurance premiums. The opportunity for greater earnings will increase the reliability of adequate and experienced labor pools for future outages. Although improvement in these variables does not immediately translate into more profit on this particular job, it will improve the contractor's financial position over time, and for this reason they are willing to front the gainsharing pool. As for the client, participation in the funding of a gainsharing pool is motivated by a desire to achieve levels of project results (safety, quality, schedule attainment, etc.) beyond that specified in the basic contract.

The Goal Model presents opportunities for selection of a wider range of performance measures than those specified in the project contract. How many measures to be tracked, the baselines from which performance will be gauged, and the monetary value of performance improvement for each measure are matters for negotiation between the contractor and the union. This model does not generally require the contractor to be transparent with regard to the project bid and as a principal party to the negotiation of these derivate measures, the union is thereby reconciled to the appropriateness of the formula.

The Project Goal Model ***is recommended*** when:

1. The Bid Model is not a good fit (see specifics above), and/or
2. The parties may benefit substantially from working off measures that are not directly specified in the (owner-contractor) project contract.

The Project Goal Model ***is not recommended*** when:

1. The contractor and/or client are unwilling to fund a gainsharing pool which may be only partly recovered by immediate returns on the project at hand.

Program Design Elements

Whether employing the Project Bid Model or Project Goal Model, or a hybrid of the two, there are a number of design elements that will come into play. These are:

A. *Measures* – In which areas of performance do we wish to concentrate?
B. *Baselines* – How will we gauge extent of improvement?
C. *Conversion* – How will we translate improvement into $?
D. *Participation* – How will we divide up the $?
    1. Disqualifiers – Shall we have minimum standards for participation and performance?
    2. Payout Frequency – How often will we divide and share the $?
    3. Holdback – How will we deal with erratic performance?
E. *Administration* – How will we manage this process?
F. *Dispute Resolution* – How will we address disputes about performance issues?

A. Measures

It's important to identify those areas in which the partners anticipate the greatest gains might be realized. Is it beating the schedule? How about beating the man-hour budget? Or is safety improvement a principal concern? You're not limited to one measure of performance. Multiple measures may be just what you need, however they do add to your administrative costs (tracking) and there is something to be said for simplicity. That having been said, Project Bid Gainsharing is often a single measure approach (man-hours), whereas Project Goal Gainsharing lends itself well to multiple measure tracking (productivity, quality, material costs, tool expense, schedule performance, customer satisfaction, safety, etc.). In any case, it is important to select only those measures over which the craftsmen have significant influence or control, can be tracked without too much administrative cost, and are verifiable. Additionally, selecting more than a half dozen is not recommended because it creates too much complexity.

One particular performance measure must be used with caution, and that is "safety". Group incentives such as gainsharing create social pressure to achieve targeted goals. That's a good thing, and group pressure to work safely is a really good thing. However, if that same pressure results in unreported injuries, it's not good. One option in this regard is not to include safety as one of your group incentive (gainsharing) performance measures. Instead, if you wish to incent safety performance at all, do so in a more conventional safety program fashion totally separate from and parallel to your gainsharing program.

You also have other options for incorporating safety as a measure. One is to employ it only in a field of several other measures, and then to weight it (by comparison to the other measures) rather low. Another way to factor safety into gainsharing is to make it an individual disqualifier, rather than a group incentive. More information on this is provided later in our discussion of disqualifiers.

B. Baseline / Standard

Once you've decided on where to look for gain (performance measures), you need to establish a baseline or standard from which to measure improvement. Once again you are presented with a number of choices. A few examples will illustrate. If you've decided to measure direct labor productivity, the baseline could be the man-hours estimated in the successful bid. In a T&M project, the man-hour baseline could be that negotiated between client and contractor. Performance to schedule could be measured against the standard of contractual milestones or deadlines. Safety improvement could be based on historical rates of OSHA reportable accidents. Quality can be indexed to specifics such as number of X-rayed welds either passed or rejected.

C. Converting Performance Improvement Into Dollars (The Gainsharing Pool)

The pool of funds from which the parties will be rewarded for above-standard performance is created in two ways. In the Project Bid Model, the pool is generated directly by contractually specified client payments exceeding contractor's actual costs (i.e., number of man-hours saved x hourly bid rate = gainsharing pool). In the Project Goal Model, the pool is funded separately from contractor and/or client reserves. As mentioned previously, these parties are incentivized to provide such a pool based on anticipated improvements in matters such as customer satisfaction, reduced insurance premiums, and stability in future labor force availability.

D. Participation – Distribution of the Pool

The allocation of reward among the parties (client, contractor, and craftsmen) is negotiated as a function of comparative risk and contribution to success. On a competitive bid job, there may be no client participation at all, the allocation of gain simply a matter of distribution between contractor and craftsmen. The theory behind this is that the client has received its best price and that risk and contribution rest solely with contractor and craftsmen.

It can also happen that the contractor and union believe that enlisting the client's participation in the job, beyond the usual enforcement of client's contractual rights, may significantly contribute to efficiencies. However, in this case the lion's share of the allocation would generally still fall to contractor-craftsmen distribution given that contractors and owners are free to establish separate performance incentives and build these into their contractual obligations independently.

It is important that the contractor's salaried employees be part of the distribution, either through the contractor's share, or as part of the "workers" allocation should the contractor's share be reserved solely for risk capital. Gainsharing is a group incentive and therefore it makes sense to include every party and individual who can contribute to, or block, the attainment of that goal. Allocation among craftsmen is apportioned by gross pay or hours worked.

1. *Disqualifiers:* In order to promote equitable distribution or to further the interests of the various parties, provisions may be made for exclusion of payment to parties or individuals under specified circumstances. For example, a quality clause may preclude gainsharing payment from client to contractor if workmanship defects become apparent within a specified period of time. In turn, contractors may limit distribution to craftsmen who, during their work on the project, do not meet certain criteria such as termination for cause, safety, attendance, quits, etc.

   The role of disqualifiers in a gainsharing program is to provide balance; individual vs. group and carrot vs. stick. For example, if you want to factor safety into your gainsharing program but are concerned about peer pressure to under-report accidents if you make it a group performance measure, consider making it an individual disqualifying measure instead. Whereas group performance measures serve as carrots, an individual disqualifying measure serves as the stick.

2. *Payout Frequency:* There are two opposing theories in this regard. One suggests that the payout should be as frequent as possible in order to keep participants interested. The other theory suggests less frequent payout of larger sums also in order to keep participants interested, in this case by the larger size of the reward. There is no science to guide us here, only the experience of manufacturing and service sector gainsharing that suggests that either approach can work. If you elect for less frequent, larger payouts, you should nevertheless provide for frequent communication of progress reports in order to sustain interest. The outside limit of payout frequency would be the duration of the project.

3. *Holdback:* If the design incorporates multiple payouts, rather than a single end-of-job distribution, a holdback reserve might be employed in which a percentage of the gain pool is held back for later (or final) disbursement. This provision may serve two purposes. It could smooth out an otherwise erratic series of distributions (big reward one month, no reward the next), and it can be designated to roll back to the contractor if a loss is experienced later in the project – a bogey.

E. Oversight and Administration

As you no doubt recognize, all of the above entails some additional work. The objective is to offer guidance that will minimize the burden and normalize the process of adding gainsharing to construction and maintenance projects in our industry. Therefore it is suggested that you be guided by the dictum that "less is more;" less bureaucracy, less paperwork, less meetings, etc. This inclination is balanced by recognition that there are very real needs for structures, systems, training, and communication to enable a collaborative effort like gainsharing to work. Remember, the formula by itself may not be sufficient.

An oversight group can be useful in determining the overall framework for gainsharing, or the design of the plan. The composition of such an oversight group (as small as two) and the sequence of their engagement will depend upon the scope of the anticipated gainsharing plan. For example, on a T&M project, the initial discussions may be between client and contractor, with the union brought in soon thereafter. In a competitive bid project, the client may or may not be involved at all. Arrangements for consulting and/or training in support of gainsharing would be the responsibility of this oversight group.

Once the project is underway and the gainsharing plan in effect, somebody has to keep track of the numbers, communicate these results, and issue gainsharing checks. Similarly, somebody would need to take primary responsibility for soliciting work improvement ideas and implementing the results. In both cases, this responsibility falls mainly to the contractor. Should there be a need to make some adjustment to the plan once underway, the oversight group would perform this function.

F. Dispute Resolution

Gainsharing programs are established as extra-contractual agreements, outside of the collective bargaining agreement. If it appears beneficial to establish means for explicitly resolving discrepancies in interpretation of performance on gainshare measures, then such language can be added to the gainshare agreement. Normally these procedures would include a process whereby all sides of the dispute could be aired and authority for resolution would be vested in either one or more of the parties.

PAINsharing

Most of the preceding discussion has been directed toward gainsharing applications in a stable or growing market in which contingent rewards are above and beyond the established or contractual labor rates. In market downturns a variation on the gainsharing theme may be employed to win work that might otherwise be lost to non-union contractors. The mechanics of a painsharing project are essentially the same as those previously described with one significant difference. The union permits the contractor to bid a job at a labor rate less than the current standard, and 100% of subsequent gains return to the bargaining unit workforce until they are made whole (recoup wage concession). Any gains beyond that break-even point are then shared as in a normal gainshare plan.

Post-Gainsharing: Setting and Meeting Expectations

Gainsharing experience may alter the post-gainsharing expectations of the parties. Clients may be looking for continued standard-breaking contractor performance, contractors may be counting on sustained above-average bargaining unit performance, and craft members may have grown accustomed to participative management styles. Some of these expectations may be at least partially met through successful innovations incorporated into future jobs, even beyond those of the innovating contractor. Improved work habits may also carry over to some extent, as might elements of participative management. Although elevated expectations might be perceived by trade unionists as a threat, the collective bargaining process will continue to provide protection in this regard. Complete transfer of gainsharing experience to non or post-gainsharing projects is not realistic, but should not present a problem since our industry has long factored in the implications of a different workforce, supervision, and incentive arrangements.

As to the implications for follow-on gainsharing projects, a concern might be that improvements achieved in the previous gainsharing effort might be considered the new norm or standard for the next, thus raising the bar ever higher producing more stress and less reward in each application. Not to worry. On Project Bid Model gainsharing jobs, most contractors will generally realize they should not bank on a complete repeat of previous experience, but will likely build only a portion of that experience into their bid. If this is not the case, the union review and sign-off procedure will allow for continued negotiation or result in a no-go decision on the part of the union. On Project Goal Model gainsharing jobs, the negotiation of the targets, stretch targets, and reward levels constitutes a built-in system of checks and balances, allowing some degree of continuous improvement without short-circuiting the incentive itself.

Sample Gainsharing Plans

The preceding discussion should be viewed as an introductory sketch of the basic concepts, components, and known best practices behind gainsharing. Every project requires the creation of a plan that addresses the specific circumstances of that project. Such a plan, or blueprint, must be designed through full consideration of the finished product's goals, technical requirements, and applications within each specific situation.

Since the requirements of energy construction industry clients are far from uniform, there is no "Off-the-Shelf Energy Construction Industry Gainsharing Plan." However, to establish a foundation from which you and your partners can respond to your unique circumstances and innovate on specific aspects, the two following archetypical plans are offered for guidance.

Archetype Plan "A" The Project BID Model

Having won a competitive bid job for new construction, the contractor approaches the union offering to share any savings in man-hours to complete the work.

Sample BID Plan Components

Type of Contract:	Competitive bid (hard money job)
Initiating Party:	Contractor
Partnering Parties:	Contractor and Local union

Performance Measure:	Single Factor - Labor Productivity (man hours)
Baseline / Standard:	Bid Man Hours
$ Pool:	Bid Hours Minus Actual Hours x Hourly Bid Rate
Participation / Distribution:	To Be Negotiated
Contractor Distribution:	Contractor Discretion
Craftsmen Distribution:	Proportional to All Hours Worked
Craftsmen Disqualifiers:	Must Complete Project (no quit)
Payout Frequency:	End of Project / No Holdback

Improvement Idea Generation:	Suggestion System
Communication:	Weekly Crew Meeting
Oversight:	Contractor & Business Agent
Craft Orientation:	Contractor & Business Agent
Administration:	Contractor

As stated above, this plan is initiated by the contractor recognizing an opportunity for gain in under-running the man hour budget. An approach is made to the local union business agent with a proposal to enter into a gainsharing agreement in order to harness the energy and creativity of the tradesmen who will be working the job. In reviewing the documents and through discussion with the contractor, the business agent is satisfied that the contracted man hours represent a realistic figure and that there is indeed potential for gain. The parties agree to develop within a period of weeks, a letter agreement spelling out the specifics of their project gainsharing plan. They further agree to jointly monitor the performance of the plan should there be any need to make adjustments along the way.

This being their first attempt at gainsharing, they prefer to keep it as simple as possible. It will be a single factor formula focusing solely on direct labor productivity. The baseline for determination of gain will be the estimated man-hours. If the project is completed for less hours than this contact bid number, the under run hours multiplied by the contractual hourly rate (wage & fringes) will constitute the gainsharing pool to be divided between the contractor and the tradesmen who worked the job. No formula is specified in the distribution to salaried project personnel, but it is presumed that the contractor will be guided in his judgment by the size of the gainsharing award realized by individual tradesmen. Should the contractor neglect to reward his salaried employees proportional to that of the tradesmen, it is unlikely that they will actively support future gainsharing efforts.

That portion of the gain directed to the bargaining unit workforce, will be distributed to all qualified gainsharing participants. “Qualified” in this case means working the job to completion. A quit or termination for cause would disqualify a tradesman from sharing in the pool. All distributions to the bargaining unit workforce/trades will be on the basis of

proportional hours worked, including overtime hours. If tradesman "A" worked 90% of the hours worked by tradesman "B", "A" would receive 90% of the sum distributed to "B". Should there be a pool for distribution at the conclusion of the project, a single gainsharing payment to tradesmen will be made within 15 days of client's final payment to contractor.

One final point; since in the above scenario distribution of gains is made only at the conclusion of the project, it is important that the contractor prepare and communicate progress reports on a regular and frequent basis, monthly at a minimum, but weekly would be better.

Archetype Plan "B" The Project GOAL Model

If a generating station outage can be completed ahead of schedule, the client will be able to close out an expensive contract for purchase of replacement power. The client proposes to share that savings with the contractor, who in turn offers a portion of that share to the craftsmen workforce. Additionally, the contractor hopes to reduce a tool loss expense that has been growing larger of late. This is negotiated with the local union, to be funded by a pool of funds set aside by the contractor.

Sample GOAL Plan Components

Type of Contract:	Negotiated Time & Materials
Initiating Party:	Client (schedule) and Contractor (tool loss)
Partnering Parties:	Client, Contractor and Local union

Performance Measures:	Multiple (schedule and tool loss)
Baseline / Standard:	Negotiated
Stretch Targets	Negotiated
$ Pool:	Budgeted
	* Client (schedule)
	* Contractor (tool loss)
Participation / Distribution:	Negotiated
Contractor Distribution:	Contractor Discretion
Contractor Disqualifier:	"Quality" Savings Clause – 15 Day Period
Craftsmen Distribution:	Proportional to All Hours Worked
Craftsmen Disqualifier:	Quits and Termination for Cause
Payout Frequency:	15 Days after End of Project / No Holdback

Idea Generation:	Suggestion System
Communication:	Weekly Crew Meeting
Oversight:	Client, Contractor & Business Agent
Craft Orientation:	Contractor & Business Agent
Administration:	Contractor and Client

This plan has two initiating parties. It is the client that recognizes a potential source of gain in an early close out of a power purchasing agreement. And it is the contractor that envisions less expense and greater tool availability through reduction of tool loss.

Recognizing that tradesmen behavior is key to achieving success regarding both measures, they jointly invite the local union business agent to consider entering into a gainsharing arrangement.

Following discussion with client and contractor and in reviewing relevant documents, the business agent is convinced that the workforce has a reasonable chance of impacting both schedule and tool loss. The three parties agree to develop a letter of agreement spelling out the specifics of their project gainsharing plan. They further agree to jointly monitor the performance of the plan should there be any need to make adjustments along the way.

Central to plan development is a three-way negotiation in which a series of targets and rewards are established reflecting different levels of accomplishment with regard to the two performance measures. Unlike the Project Bid Model, the savings (gain) pool here is not directly generated by the mechanics of the construction contract but rather is indirectly funded by client (schedule) and contractor (tool loss). If the client chooses to divulge the amount of savings realized through early termination of the outage power supply contract, a distribution ratio (client/contractor/tradesmen) might be negotiated. Otherwise, the client may specify a sum ($X) to be shared between contractor and tradesmen at various levels of performance as indicated by the table below.

Schedule Performance (Project Completion Prior to Contractual Deadline)

Target	Deadline less 1 week	$ X
Stretch Target	Deadline less 2 weeks	$ 2X
Super Stretch Target	Deadline less 3 weeks	$ 3X

On projects with distinct milestones or deliverables, it is also possible to set multiple schedule targets rather than just one as indicated in the above example. In the case of multiple sequential targets it may be desirable to consciously design less taxing goals early in the job-cycle to increase the chances of some “early wins” and consequent confidence and interest building on the part of craft.

Regarding the tool loss performance incentive, that sum ($Y) would generally be negotiated between contractor and union. The client may choose to participate in funding this pool should there be a projected advantage to the firm’s association with a successful tool loss effort by a contractor on the client’s property.

Tool Loss ($ Value of Tool Loss through Duration of Project)

Target	20% loss reduction	$ Y
Stretch Target	40% loss reduction	$ 2Y
Super Stretch Target	70% loss reduction	$ 4 Y

The size of the reward multiplier for stretch and super stretch achievement may be a straight line function of the expanded target, as in the schedule performance example. Alternatively, as in the tool loss example it may be a non-linear function that recognizes and rewards the much greater difficulty of achieving the higher targets. For distribution purposes, the schedule and tool loss measures are independent of each other. Consequently

there could be a payout on one, but not on the other, or both measures may result in payout, but at different levels of target achievement.

No formula is specified with regard to distribution within the ranks of salaried project personnel, but as with the Bid Model, it is presumed that the contractor will be guided in judgment by the size of the gainsharing award realized by individual tradesmen. All distributions to the bargaining unit workforce will be on the basis of proportional hour worked (including overtime hours). If tradesman "A" worked 90% of the hours worked by tradesman "B", "A" would receive 90% of the sum distributed to "B". Only "qualified" tradesmen will participate in the distribution, qualification entailing no quits or terminations for cause.

There is a qualification stipulation as well regarding the schedule performance measure. Should the plant experience a forced outage due to poor workmanship during the initial 15 days of operation following conclusion of the project, there will be no payout. Also, since it has been determined to provide distribution only at the conclusion of the project, it is important that the contractor prepare and communicate progress reports on a regular and frequent basis, monthly at a minimum, but weekly or daily would be better.

The two archetypal plans described above provide a general outline of how the Bid and Goal Models differ, as well as indications of how gainsharing plans may be tailored to differing circumstances. Pages 27-33 provide specific tools for further explanation and use in defining the variables of formula development and structural program issues for your situation.

Creating the Plan for GAIN

Beyond the establishment of appropriately tailored measures, targets, and the many mechanics of sharing, *creating gain* is the shared responsibility of the contractor and union, together with the owner/operator if they are principally involved. The contractor and owner must provide adequate resources and appropriate attention to planning so that the work environment and circumstances can be supportive of craft motivation and innovation. In addition, success hinges on the extent to which there is an atmosphere of openness to new ideas for accomplishing the work and management practices in place for selecting and developing improvement ideas. Such intentional involvement of craft establishes a situation in which craft can contribute either through *individual awareness* and action or as *collaborative-systemic improvements* identified through collective thought and application of experience.

Individual Awareness

There is a component of creating gain that does not require any invention beyond those specifics previously discussed under the heading of *Constructing the Formula for SHARING*. If a good job has been done in establishing an appropriate formula and results are well communicated, you can expect some degree of improvement simply through the individual tradesman's awareness of the linkage between work habits, the group's performance, and eventual payout.

An example of individual awareness creating gain would be where a tradesman working on a gainsharing job clocks more wrench time (time on the tools) by simply using a bit of fore-thought in gathering up necessary tools and supplies at the outset of a task rather than making multiple trips to the crib. Another example would be simply stopping to pick up a piece of scrap that might pose a safety hazard. The source of improvement in both of these cases resides in the individual. They will likely not communicate to peers or supervision that they are doing anything differently, in fact the individual may not even be aware they have changed their behavior.

Collaborative-Systemic Improvements

A second, and potentially large, source of gain resides in collaborative-systemic improvements. Unlike the individual awareness component described above, these improvements are the conscious product of more than one mind working together in the generation, approval, communication and implementation of a work practice innovation. For example, a tradesman might make a suggestion to the supervisor to establish smaller temporary tool cribs closer to the various work sites. Or a safety committee might conduct an analysis of incidents that suggests the value of washing down a work area prior to commencement of work in order to reduce the frequency of incidents involving foreign objects in eyes. In an outage environment where the nature of the work process is well established, such systemic improvements will likely relate to site specific work conditions and practices. In project or new construction environments there may be larger systemic needs and greater potential for "big ticket" improvements.

Employee Involvement

In gainsharing, gain is produced both by workers' intensification of effort and attention (working harder) as well as by workers' contribution of ideas to improve the production/construction process (working smarter). It has been an axiom of employee involvement efforts of the last 25 years that the key is for workers to *work smarter not harder*. That catch phrase is a characteristically American overstatement to make the point that industry needs to fully tap and engage the knowledge, experience, and creativity of employees. In this regard, successful employee involvement ensures that both the transfer of knowledge and the process of developing how work is accomplished converge as a two-way exchange between workers and employers.

Employee involvement in the broader construction industry has developed dramatically in recent decades. There are a wide array of principles and practices that have been, and continue to be, used with the goal of engaging employees as partners in conducting the work. These practices range from informal suggestion systems; to various quality programs in which employees study and identify means for improving performance; to self-managed work teams that are fully responsible for determining the tasks, resources needed, methods used, coordination with other teams, and performance requirements. In the more progressive situations, employee involvement is embedded within participative management practices, or formalized partnering approaches, that seek to fully engage

employees in identifying and solving problems as well as looking for new opportunities for productivity and employee satisfaction.

While many elements of contemporary employee involvement practices are applicable in the energy construction industry, there exist some fundamental challenges to formalized and broad-scale employee involvement in our industry. The primary challenges are due to the reliance upon a traveler workforce and the relatively short-term nature and intensity of most project and outage work. Given these conditions it is difficult to establish involvement practices that require long-term working structures and relationships along with "off-tool" problem solving activities. Although not directly involving the employee, if gainsharing is established as a consistent business practice, part of the requirement for ongoing relationships can be fulfilled through continuing tripartite engagement in program development and sponsorship.

On the more immediate employee involvement level, the possibilities remain wide-ranging for establishing activities that will energize and enable the parties to work together for greater productivity and partnership. Some of the categories to focus on and options for activities are listed in brief below, followed by more thorough explanations of each category.

Program Design:

- Engage craft in identification of measures & targets
- Conduct pre and post-job understanding/insight surveys

Improvement Idea Generation:

- Suggestion system
- Problem-solving teams/task-force

Communication:

- Orientation session and informational materials
- Performance status updates

Program Design

At the outset there are several important program design points to consider in planning for craft buy-in and the inclusion of employee knowledge as part of your gainsharing program. The first one relates to tapping the experience and participation of craft when developing gainshare measures and performance targets. Experience has shown that good relations between the primary players can allow for an environment where union business agents or managers can make substantive contributions to the formulation of what and how to measure performance, without necessarily having to get involved with the bid cost figures. Depending on your facility's previous experience with gainsharing, and thereby that of your year-round workforce, representative conversations with these craft prior to project start-up can generate valuable insight into what factors should be considered as a gainsharing program is designed.

Another aspect for consideration relates to the use of written craft surveys, or questionnaires. As described in detail in the later section on *Using Surveys to Improve Program Design*, although conducting surveys can be time consuming and not applicable

to all situations, surveys are one additional means of gathering input and insight from craft to use in program design. If used properly, such instruments can also serve to show craft that their ideas are being considered and incorporated in beneficial manners.

Improvement Idea Generation

The most rudimentary form of identifying ideas for systemic improvement is the "good idea" generated by an individual and communicated informally through on-the-job conversation or at weekly crew meetings to a responsive foreman or supervisor. Of course the success of this minimal-structure approach to employee involvement is contingent upon the practice of a management style by the contractor's supervisors and foremen that is encouraging of such tradesmen contributions. Should first and second level management style not be as uniformly supportive of unsolicited advice, and/or if the workforce is not confident that their ideas will be given due consideration, then it may be desirable to formalize a suggestion system.

A formalized system may be designed to entail two steps. An improvement idea may be acted on immediately at the supervisor level if it does not involve monetary expenditure over an established level and does not challenge any existing policy or labor contract provision. Should a recommendation require greater expenditure and/or push policy or contractual envelopes, it may be subsequently reviewed by higher management and/or the business agent for final disposition. If a formalized suggestion system has been employed, it is important that the proposing individual receives a prompt response.

In addition to the various contemporary employee involvement practices described previously, long-term employment environments often employ ad-hoc problem-solving teams composed of workers removed from their regular duties for extended periods of time. Such teams conduct formal analyses of operational problems and develop detailed systemic improvement proposals. Although perhaps different for project or new construction work, given the short duration and consequent intensity of outage and short project work it is not likely that problem-solving teams will play much of a role. An exception to this might be the formation of an advance outage team composed of local permanent employees of a facility teamed up with foremen from the hall brought in early. Together these individuals can work on issues raised in the previous outage, perhaps as solicited from travelers as they departed.

When designing the means for improvement idea generation, as well as more generally the overall type and extent of craft involvement, there is an important rule to remember. This rule is that craft are more inclined to look for performance improvements if they not only can see a clear line of sight from incentive to reward, but that they can contribute from their knowledge with trust that their ideas have a chance of being acted upon.

Communication

Ensuring a free flow of pertinent information amongst all parties is critical to the success of gainsharing implementation. In addition to the inherent communication needs discussed above in relation to program design and idea generation, there are two additional important areas to consider. The first has to do with how the gainsharing program is presented to

craft at the beginning of the job. Presumably the program would have been identified and promoted by the union in soliciting workers for the job, so on arrival craft should have some idea that gainsharing is in effect. However, the next step is making sure that everyone has an adequate understanding of measures, targets, and conditions for maintaining eligibility. Introduction of these program specifics, along with explanation or training on the premises of gainsharing (i.e., sharing gains made available through improved performance, work smarter, etc.) should be done as part of regular start-up job orientation meetings. Providing a one or two-page written description of the specifics which craft can walk away from the meeting with further builds understanding and ensures that everyone is working from the same information base.

The second matter relates to ensuring that craft understand exactly what progress they are making on the program's milestones and consequent gain pay-outs. Successful programs have developed simple graphic charts or graphs portraying the status of the relevant measurements and made these available in lunch rooms and/or other readily accessible locations on site. So that generating this information does not create undue extra work, the contractor can use the same project management or accounting software program(s) that are tracking internal reporting needs. In addition, verbal updates in support of written materials can be given by the contractor at job meetings. The important things to remember here are that progress information should be easy to understand so everyone is on the same page, accurate so that craft can trust the reliability of the contractor, and written so as to minimize the problem of multiple interpretations being in play at the same time. Provided with full information, craft can engage all the more constructively to adapt their performance and participate in the various other avenues of employee involvement discussed above.

How extensively a contractor's project management style is modified in the areas of program design, improvement idea generation, and communication is a matter for negotiation among the partners to the project. Customization will always be a necessary hallmark of gainsharing in the industry, given the diversity of market conditions, pre-existing relationships, varieties of management styles, local union cultures, scope of work, length of projects, etc.

Framework for Working Smarter

As indicated previously, the nature of construction energy industry work does not always lend itself to formalized improvement idea generation or problem-solving. However, regardless of the amount of time or the methods used for these tasks, some basic principles exist that can provide explicit guidance when informal intuitive means may benefit from a little more structure.

The following *Framework for Working Smarter* offers a step-by-step approach that can be helpful for linking the activities of identifying things that might need to change to the creative consideration and definition of what and how to make targeted improvements. This framework also promotes active feedback loops between craft and with the contractor for sharing information and making continual improvements based on mid-stream evaluation of implemented changes.

Framework for Working Smarter
for Quality, Productivity, Safety & Earnings

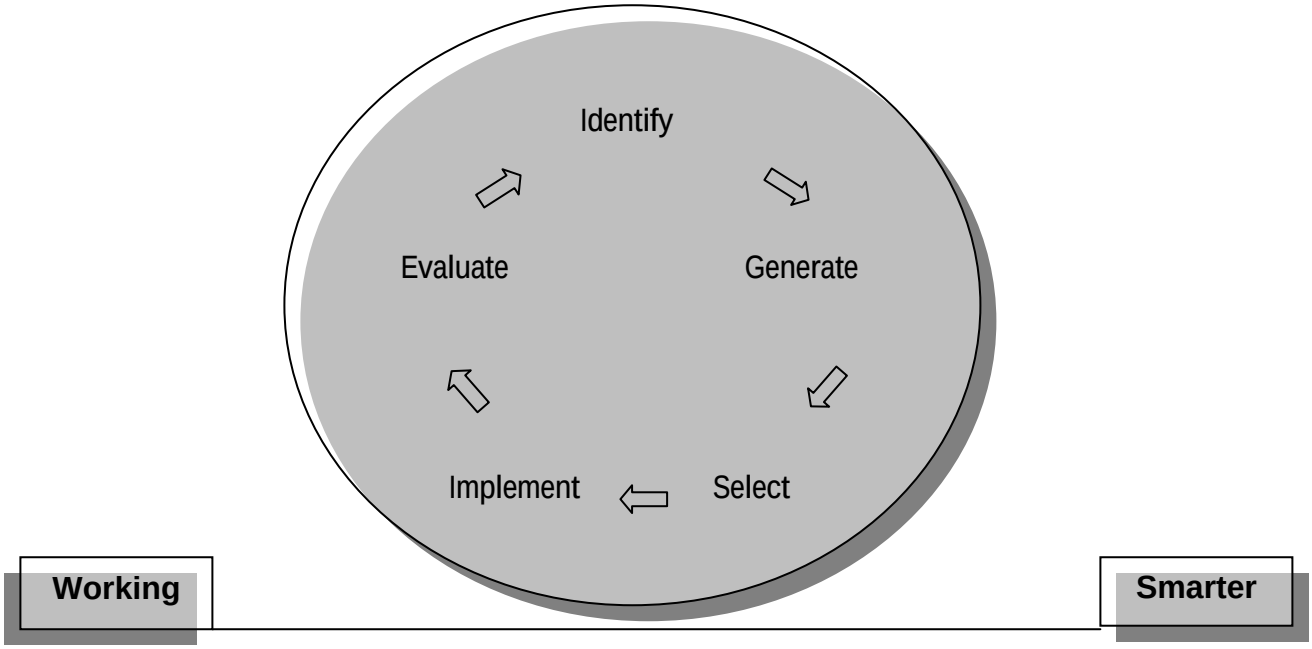
1. Identify Areas for Improvement
"What work activities could be more efficient/safer?"

2. Generate Creative Improvement Options
Chart work flow process, step-by-step, then ask:
"What might you do to make activities more efficient/safer?"

3. Select Improvements
"Which improvement options show the most promise?"

4. Define & Implement Plans
"What's the best way to implement these improvements?"
Now, proceed with the changes...

5. Monitor, Evaluate & Refine Improvements
"How have the improvements impacted performance?"
"Now that we know how the improvements are working out, how can we make things work even better?"



Using Surveys to Improve Program Design

As explained previously in the Handbook, administering a craft survey/questionnaire at the outset, mid-job, and/or at the end of the outage or project can provide valuable information toward current-year adaptations or for future-year improvements in your gainsharing program. The focus and selection of questions for such surveys will depend upon what information will be useful and at what stage of the outage the questions are being asked.

At job start-up questions are likely to be most useful if oriented to learning about how well craft understand the program and what expectations or concerns they have about it. Responses can be used to identify the need for better explaining program specifics and/or how to ensure that communication procedures and suggestion systems might be best tailored. A mid-job questionnaire would have a similar focus, but could also be used to get a better sense of how well your system of progress reporting is working and/or if there are missed opportunities for meeting target goals.

Although questionnaires at both of the above stages will provide insight that can be used to make improvements for future year programs, a post-job survey is focused specifically on this potential. Apart from evaluating specific program design elements, a post-survey provides baseline information that can be tracked over multiple years. This allows you to really understand factors about your gainsharing program's impact on craft incentive to return, what measures (at what target levels) provide the best incentives, how to best solicit and respond to craft suggestions, and what productivity and work arrangement issues really need to be addressed outside of your gainsharing program.

Conducting survey questionnaires, even if done informally, takes time. It also sets up an expectation from craft that management will do something with the comments provided to them. Much of the information and value gained from questionnaires can arguably be gathered through job meeting discussions, impromptu conversations with union stewards, or simply company staff observations. However, investing the time formalizes a learning process and enables you to look comprehensively at the issues, rather than just those that appear most obviously. Whether such an intentional approach makes sense in your circumstance is a matter for consideration by your program's principal players.

An important distinction to make in the application of surveys is between those that are intended to gauge craft understanding of a gainshare program and/or solicit ideas for program improvements, versus those aimed at seeking ideas for actual on-site work process or practice improvements. For the purposes of this Handbook, soliciting this latter type of information is covered as an intention of employee involvement efforts specific to improvement idea generation, and not as part of survey content.

Sample Questions

This section suggests sample questions that may be appropriate to use or adapt if you are developing a craft questionnaire. As mentioned previously, ultimately questions should be tailored to address those information points of most value to the design of your program.

Potential Pre-Job Questions

1. How did you hear about the gainsharing plan on this project?
2. What have you been told about how the gainsharing program will work on this job?
3. At the time of your referral to this job, could you have passed and been referred to a different job? If yes, how did the gainsharing opportunity influence your decision to take this job?
4. What are you hoping to experience on this job due to the gainsharing program? Please describe your expectations relative to:
   - Money
   - Application of your knowledge
   - Improvements to the work environment
   - Productivity and/or safety
   - Relations between union, contractor, and owner
   - Other?

Potential Post-Job Questions

1. How satisfied are you with the overall gainsharing program on this job? Please describe your satisfaction relative to:
   - Money
   - Application of your knowledge
   - Improvements to the work environment
   - Productivity and/or safety
   - Relations between union, contractor, and owner
   - Other?
2. Would you want to work on a gainsharing project again if you had the chance in the future? Please say why, or why not.
3. How well did the suggestion system (or enter whatever other means were actually used) provide you with opportunities to impact the way work was done?
4. Were the orientation and other employee involvement activities (enter types of activities actually used) helpful? Please describe in what ways these could have been more helpful or effective.
5. Please describe what was effective, and what was ineffective, about the ways in which (enter those gainsharing aspects actually used…performance monitoring, team problem solving, etc.) were used.
6. What specific suggestions do you have for improving the way that future construction gainsharing projects are set-up and administered?

Additional Post-Job Question Topics:

- Specifics on value of crew meetings
- Extent to which employee ideas and suggestions were listened to and used by the various managers and by other employees
- Level of trust between workers and contractor representatives
- Quality of supervision and committee oversight/monitoring, etc.

- Level of cooperation amongst employees in attaining gainsharing goals
- Perception of fairness and honesty on gainsharing calculations
- Perception of contractor's commitment to improving relationship with union
- Perception of union's commitment to improving relationship with contractor
- If owner is involved on-site, perception of relationship between union and owner
- Feelings about completion pay-out

Sample Post Outage Craft Questionnaire

We need your opinions to continue improving your earnings!

This is the second questionnaire you have been asked to fill-out. As you may recall, the first one was at the beginning of the outage. It was to hear your thoughts and expectations on the gainsharing program at the outset. Now that the outage is over and you know better the outcomes, we'd like your reactions and your ideas for improving gainsharing in the future at Company X.

Your responses to this questionnaire will help this facility's owner, contractor, and union representatives understand how to improve gainsharing programs in the future.

First, we have questions on what you think about this year's gainsharing program.

1. Now that the outage is over and you know the outcomes on gainsharing, what's your honest opinion about this year's program?

   _____
   _____
   _____

2. How hard or easy did it turn out to be to reach the highest pay-out levels on each of the following performance measures? **Please circle your rating.**

	HARD			**EASY**
Safety	**4**	**3**	**2**	**1**
Productivity	**4**	**3**	**2**	**1**
Quality	**4**	**3**	**2**	**1**

   If it was **HARD**, please explain **WHY** for each measure.

   Safety _____
   Productivity _____
   Quality _____

3. In order to maximize your gain (pay-out), did you have all the information you needed on the following points:

   A. The parts of your work that were being measured
      I had enough info ☐ I could have used more info ☐
   B. How your performance was being measured
      I had enough info ☐ I could have used more info ☐
   C. How you stayed eligible for receiving a payout
      I had enough info ☐ I could have used more info ☐

   What should have been explained better?

   _____
   _____
   _____

4. How did your work habits, and those of your brothers, change to maximize your pay-out? **Please check all that apply**.

   ☐ Better on-the-job planning by crews
   ☐ Better problem solving on-site
   ☐ Better attendance
   ☐ Better communication among crew members
   ☐ More personal responsibility
   ☐ Other
   _____

5. As Company X plans for future gainsharing improvements, which of the following ideas could help you improve individual and/or group performance, thereby increasing your gainshare bonus? **Please check the TWO (2) you feel are most important.**

   ☐ Include craft in work planning
   ☐ Include craft in estimating various work elements
   ☐ Include craft in conducting job safety analysis reviews
   ☐ Tool box meetings to plan daily/weekly work
   ☐ Suggestion system allowing improvement ideas to be considered
   ☐ Other _____

6. What other suggestions do you have for how to improve Company X's gainsharing programs in the future?

   _____
   _____
   _____

Finally, we would like to ask you some questions about yourself.

7. Have you worked before on a job with a gainsharing plan? Yes ☐ No ☐

8. At the time you were referred to this job, could you have passed and been referred to a different job? Yes ☐ No ☐

9. How much did this year's gainsharing plan effect your decision to sign on for this outage? Please circle your rating.

MADE A BIG DIFFERENCE	⟷	**DIDN'T REALLY MATTER**
4	**3**	**2**	**1**

10. Which union are you a member of? _____

11. Are you a permanent maintenance employee at this facility? Yes ☐ No ☐

Date you completed this questionnaire: _____

THANK YOU VERY MUCH for helping us understand how to improve gainsharing at Company X.

Setting Up Your Gainsharing Program

This Handbook has now laid out the basics of gainsharing and described many of the major considerations in determining if gainsharing is a good fit to your circumstances. To assist you in more concretely understanding how to proceed with developing and implementing a program, the following pages provide a variety of tools and support materials.

First is a step-by-step graphic representing, in sequence, the various developmental activities that have been described throughout the handbook. This is offered only as an overview to help you envision the overall endeavor. Invariably, your situation will require adaptation of these steps based upon your judgment and tailoring the process to your unique needs and available resources. Following the graphic there is a series of checklists and formula worksheets to serve as examples for your consideration and use.

The *Project Set-Up Checklist/Template* provides an overall checklist of essential issues that should be addressed, and ultimately specified, in the design of your gainsharing program. The *Project Bid Model* and *Project Goal Model Worksheets* are provided using hypothetical examples to illustrate potential gain measures and share formulas. Blank worksheets are included as well to assist in developing actual figures for your situation.

Gainsharing Program Development & Implementation

Process Steps

At Least 2-3 Months Prior to Job Start

Assess Your Situation for A "Fit" With Gainsharing

- Are the conditions right for gainsharing at our facility?
- What is it we hope to accomplish?
- Contact and enroll partners

Establish Owner-Contractor - Union Agreement

- Tailor gainsharing formula
- Negotiate agreement
- Determine monitoring & oversight responsibilities

Develop Craft Involvement Plan

- Enlist craft partners
- Determine procedures for soliciting input, working smarter, & reporting progress

At Job Start-Up

Orientation Sessions

- Develop & deliver program description materials & craft presentations
- Clarify questions

Pre-Job Craft Survey

- On-site survey on craft expectations & understanding of gainsharing plan
- Oversight team assessment of communication needs

Mid-Stream

Implement Improvements & Monitor Results

- Implement improvement suggestions
- Monitor, assess, & adapt systems based on oversight group & employee feedback

Close-Out

Post-Job Craft Survey

- Assess impacts on craft motivation
- Evaluate measures, targets, & suggestion system
- Learn future program improvements

Distribute Gain

- Final pay-out of realized gain, as accrued

Program – Project Debrief

- Assess outcomes (productivity targets, safety statistics, craft participation, etc.)
- Determine potential improvements for future year programs

Gainsharing Program
SET-UP CHECKLIST /TEMPLATE

1. **Project Name/Location:** _____
   Description: _____

2. **Parties to Agreement**: Client_____
   Contractor_____
   Union _____

3. **Type of Contract**: Negotiated Time & Materials_____
   Guaranteed Maximum Cost _____
   Other _____

4. **Contracted Start Date:** _____
5. **Contracted Completion Date:** _____

6. **Type of Gainshare Project:**

   A. Project Bid Model _____
   B. Project Goal Model _____
   C. Combined Project Goal/Project Bid Model ____

7. **Gain Share Program Specifics:** See attached Gain Share Program Worksheet

8. **Gain Distribution Logistics:**

   Between Client and Contractor
   A. Distribution Percentage split: Client _____ Contractor _____
   up to $_____ then Percentage Changes to Client _____ Contractor _____

   Between Contractor and Salaried Employees
   A. Distribution Percentage split: Capital Reinvestment _____ Employee Salary____
   B. Distribution: Proportional to hours worked ____ Other_____
   C. Disqualifier: Specify terms _____
   D. Payout Pool $: Specify amount _____
   E. Payout Frequency: ___ days after end of project. Holdback ___ % for _____ days

   Between Contractor and Bargaining Unit Tradesmen
   A. Distribution Percentage split: (see Worksheet)
   B. Distribution: Proportional to hours worked ___Other _____
   C. Disqualifier: Quits and/or termination for cause___ Other_____
   D. Payout Pool $: (See Worksheet)
   E. Payout Frequency: ___ days after end of project. Holdback ___ % for _____days

9. **Gainsharing Oversight/Coordination**:

   A. Plan Administration Responsibility: ____Client ____ Contractor ____Union
   B. Performance Monitoring Responsibility: ____Client ____ Contractor ____Union
   C. Process for monitoring progress (describe) _____
   _____
   _____

   D. Process for approving/implementing improvement ideas (describe)_____
   _____
   _____

E. How progress/results information will be distributed (describe) _____
_____
_____

10. Employee Involvement:

Orientation

A. Presented by:_____

B. Topics: Gain-Goal Sharing Philosophy ____ Program Logistics _____
Identifying Means of Improvement ____ Other_____

Communication

A. Weekly Crew Meetings (specify where held/who leads/format) _____
_____

B. Toolbox Meetings (specify where held/when/who leads/format)_____
_____

C. Posting of Progress/Results (specify when/where/what) _____
_____

D. Final Notification of Pay-Out/Results (specify when/how) _____
_____

Idea Generation

A. Suggestion System (describe)_____
_____

B. Team Problem Solving (describe)_____
_____

C. Other (describe) _____
_____

11. Dispute Resolution Process:

Any disputes arising in conjunction with the gainsharing components of this project will be resolved in the following manner:_____
_____
_____
_____

12. Other Relevant Information:

A. Additional information to be included in agreement: _____
_____
_____

B. Outstanding issues to be resolved: _____
_____
_____

SAMPLE (for Explanation Only)

PROJECT BID MODEL WORKSHEET

GAIN SHARE PROGRAM : Between Contractor and Bargaining Unit Tradesmen

Project Name/Location: _____ Projected Start/Finish Dates_____

A. Performance Measure:			
Productivity (Man hours)			

B. Contractor Gain Share $ %	**Tradesmen Gain Share $ %**	**(to be negotiated at outset)**	
50%	50%		

C. Gain Share Pool $ =	**Bid Man Hours --**	**Actual Tradesmen Hours x**	**Hourly Rate (wage & fringe)**
$300,000	48,000 hours (8 weeks)	42,000 hours (7 weeks)	$50.00

D. Tradesmen Share $ =	**Gain Share Pool $ (C.) --**	**Contractor Share**	
$150,000	$300,000	$150,000	

E. Ind. Tradesmen Pay-Out =	**Ind. Tradesman Hours ÷**	**Total Tradesmen Hours x**	**Tradesman Share $ (D.)**
$1,500	420 hours	42,000 hours	$150,000

Note Additional Conditions:

1. When completing worksheet at the outset of a job, only items A and B can be filled in. Other items are dependent upon overall job performance accounting after job completion.
2. Assumptions for sample calculations:
   Utility shut-down/scheduled maintenance, 100 tradesmen, 6 day weeks @ 10 hour days for 8 weeks = 48,000 total job bid man hours.
   Contractor-Tradesmen split gain share 50/50%

PROJECT BID MODEL WORKSHEET

GAIN SHARE PROGRAM : Between Contractor and Bargaining Unit Tradesmen

Project Name/Location: _____ Projected Start/Finish Dates_____

A. Performance Measure:			
Productivity (Man hours)			

B. Contractor Gain Share $ %	**Tradesmen Gain Share $ %**	**(to be negotiated at outset)**	
%	%		

C. Gain Share Pool $ =	**Bid Man Hours --**	**Actual Tradesmen Hours x**	**Hourly Rate (wage & fringe)**
$	hours	hours	$

D. Tradesmen Share $ =	**Gain Share Pool $ (C.) --**	**Contractor Share**	
$	$	$	

E. Ind. Tradesmen Pay-Out =	**Ind. Tradesman Hours ÷**	**Total Tradesmen Hours x**	**Tradesman Share $ (D.)**
$	hours	hours	$

Note Additional Conditions:

SAMPLE (for Explanation Only)

PROJECT GOAL MODEL WORKSHEET

GAIN SHARE PROGRAM : Between Contractor and Bargaining Unit Tradesmen

Project Name/Location: _____ Projected Start/Finish Dates_____

Performance Measure	Potential/Max. Gain Share Pool $	A. Baseline/ Standard	B. Negotiated Incremental Gain Share	C. Performance Goal Target	D. Total Pay-Out Amount	Approx. per Tradesman Pay-Out
					B x C = D	*** see formula**
1. Schedule	$400,000	8 week duration	$120,000 p/week	a. on-time	$ 0	$0
	(from client/			b. 1 week early	$ 120,000	$1,200
	contractor to trades)			c. 2 weeks early	$ 240,000	$2,400
			+ $40,000 bonus	d. 3 weeks early	$ 400,000	$4,000
					C ÷ B = D	
2. Materials/Supplies	$100,000	Actual savings	50% of savings	a. @ bid estimate	$ 0	$0
	(from client/			b. $50,000 savings	$ 25,000	$250
	contractor)			c. $100,000 savings	$ 50,000	$500
				d. $200,000 savings	$ 100,000	$1,000
					A – C x B = D	
3. Safety/Accidents	$10,000	2 reportable	$5,000 p/accident	a. 2	$ 0	$0
	(from contractor)			b. 1	$ 5,000	$50
				c. 0	$ 10,000	$100
				d.		
					C ÷ B = D	
4. Tool Loss	$20,000	$40,000 loss	50% of savings	a. $ 0 savings	$ 0	$0
	(from client/			b. $ 10,000 savings	$ 5,000	$50
	contractor)			c. $ 20,000 savings	$ 10,000	$100
				d. $ 40,000 savings	$ 20,000	$200
			If targets # 5	**(a & b) are met,**	**B = D**	
5. Satisfied Customer	$10,000	Acceptable perf.	$ 10,000	a. no call backs		
	(from contractor)			b.	$10,000	$100
				c.		
TOTAL:	$540,000					

* Per Tradesman Pay-Out Formula: D. Total pay-out $ ÷ total job man hours x individual tradesman's hours worked = individual pay-out $
Assumptions for sample calculations: Utility shut-down/scheduled maintenance, 100 tradesmen @ 10 hour days for project duration.

PROJECT GOAL MODEL WORKSHEET

GAIN SHARE PROGRAM : Between Contractor and Bargaining Unit Tradesmen

Project Name/Location: _____ Projected Start/Finish Dates_____

Performance Measure	Potential/Max. Gain Share Pool $	A. Baseline/ Standard	B. Negotiated Incremental Gain Share	C. Performance Goal Target	D. Total Pay-Out Amount	Approx. per Tradesman Pay-Out
						* see formula
1.				a.	$	$
				b.	$	$
				c.	$	$
				d.	$	$
2.				a.	$	$
				b.	$	$
				c.	$	$
				d.	$	$
3.				a.	$	$
				b.	$	$
				c.	$	$
				d.		
4.				a.	$	$
				b.	$	$
				c.	$	$
				d.	$	$
				,		
5.				a.		
				b.	$	$
				c.		
TOTAL:						

* Per Tradesman Pay-Out Formula: D. Total pay-out $ ÷ total job man hours X individual craftsman's hours worked = individual pay-out $

Part Two: Pilot and Case Studies Projects

Introduction

This section of the *Gainsharing Handbook* provides a summary of pilot and case studies as well as the lessons learned from the Tripartite Gainsharing Committee's research project conducted by Cornell University's School of Industrial & Labor Relations. Taken together with Part One's description on the mechanics of gainsharing and program development, this section provides insight into the experience of those who have actually implemented gainsharing at energy production facilities in various locations under differing conditions.

Case Profiles

Three industry sites were directly involved in this project's consultation and/or research activities. These were:

- PPL Montana / Power Maintenance Resources, Inc. / Boilermakers Local 11
- Texas Genco / Babcock & Wilcox Construction Co, Inc./ Boilermakers Local 79, Pipefitters Local #211, Operators Local #450
- Arkansas Nuclear One / Stone & Webster / Boilermakers Local 69

The most active involvement was with large-scale outage work at a facility operated by PPL Montana where previous incentive plans and direct consulting from Cornell/ILR paved the way for a full-scale gainsharing program for 2005 outage work. The second study, being of a smaller scale outage at a Texas Genco plant, profiles a "do-it-yourself" project in which the principals utilized a previous version of this Gainsharing Handbook to guide their successful development of a Spring 2005 outage program. Both of these sites served as true pilot studies for this gainsharing research project in that the level of detail provided is rich and extensive and in some manner responsive to Cornell's assistance. Additionally, these two projects respectively represent the two primary gainsharing approaches of a) goal and b) bid.

The third site, being Arkansas Nuclear One, has been employing gainsharing for several years independent of this Handbook and research project. Although primarily a case study description, it is reported here due to the depth of this facility's experience with gainsharing for both outages and year-round operations. Each of the three sites has different conditions in regard to previous experience with gainsharing, relations with and availability of local trades, and motivating business-case interests.

Given this research project's varying levels of engagement with the three sites, each case study is described and analyzed at a slightly different level of detail. However, based on available information, each case is presented under the following four headings; 1) Project History & Circumstances, 2) Description of the Gainsharing Plan, 3) Program Outcomes, and 4) Lessons and Future Plans allowing the reader to consider both issues distinct to a case, as well as those which cut-across cases. Concluding Part Two are sections entitled *Additional Overall Lessons from Pilots/Case Studies* and *Proposed Criteria for Successful Gainsharing Implementation.*

PPL Montana… Pilot Study

The Principals: PPL Montana (operator)
Power Maintenance Resources, Inc. (contractor)
Local 11 Boilermakers (primary union)

The Operation: 2,276 megawatt coal-fired facility (4 units) in Colstrip, Montana

The Outage: 350 trades employed for 5 weeks (86,000 man-hours) to overhaul boiler and scrubbers on unit #2. Job cost of $6.5M.

Gainsharing Model Used: Project Goal

Project History and Circumstances

PPL Montana's Colstrip facility is located in southeast Montana, 125 miles from Billings. The operator has long employed Power Maintenance Resources, Inc. (PMRI) as a sole source contractor for both its maintenance and outage work. The outages are performed utilizing a time and materials (T&M) contract with an incentive arrangement in place.

As in all regions, there is considerable competition for an outage workforce from nearby facilities. In this case PPL is competing with operations in North Dakota, Wyoming, Washington and Oregon. Due to the Colstrip plant's geographic isolation and a subsequent need to attract travelers for up to 60% of its skilled outage workforce, the operator had a history of offering contingency compensation and incentives at outage times. Prior to the Spring 2005 outage, these included a variety of programs such as a bonus for group safety performance ($175 max.), a cost savings/productivity bonus ($175 max.), foreman's bonus, and since 1996 a subsistence, or "sub" pay rider, up to $50 per day for travelers.

In 2004, PPL chose not to pay subsistence for the outage work. Since the '04 outage did not include a lot of boiler work, and therefore boilermakers were not critical path, the operator was comfortable in assuming the manpower risk that year. However, when faced with a '05 outage that entailed considerable boiler work on the critical path, the company acknowledged the need to offer a craft incentive in order to assure adequate labor to support a successful outage. Rather than offer the traditional incentive that rewarded craftsmen for attendance, PPL wanted to offer a program that rewarded craft based upon measurable performance.

The Tripartite Gainsharing Project was brought to the attention of the operator, contractor and Local 11 Boilermaker leadership in 2004 just prior to the beginning of that year's outage. Although too late to impact the PPL/PMRI program for that year, as the gainsharing project's consultants, Cornell/ILR worked with the parties to facilitate their deliberations on program development for '05 and to research into craft interests and attitudes about previous gainsharing arrangements at PPL through a survey questionnaire and on-site focus groups. Scott Harbuck and Jeremy Clotfelter, project managers

respectively for PMRI and PPL, were primary collaborators in development of the final program design implemented for the facility's Spring 2005 outage as described in this case study. The program met the primary interests of providing a coordinated outage incentive program that combined all previous incentive measures into a single program funded through a set-aside pool established by the operator. Local 11 business manager, Bob Hall, concurred with this approach and participated in the program development, with other trades content to let the Boilermakers take the lead in this regard.

Description of the Gainsharing Program

Performance Measures

A multiple performance measure plan was designed focusing on 1) schedule, 2) safety, and 3) quality. A description of each aspect follows in detail. A spreadsheet representing the specific measures and the actual performance and pay-out percentages is included at the end of this pilot study on pages 43-44. 80% of the gainsharing pool was fronted by the client, with the remainder funded by the contractor. The client's contribution was established by the amount budgeted in previous years for sub pay and other incentives.

1. Schedule

Given the contractor's involvement with critical path projects, adherence to schedule was weighted heavily at 50%, being equal to safety and quality combined. Five boiler related target dates were established as well as six scrubber related milestones. Dollar values were placed on achieving each of these target dates, greater value assigned to the critical path boiler dates than to the scrubber dates. Three levels of award were established at 50%, 100%, and 120%. The 100% level corresponded to achievement of the targeted/milepost date, being a reflection of historical performance.

2. Safety

Safety was weighted second, at 30% of the total available gain pool. The actual number of OSHA defined recordable accidents was established as the incident to be measured. Five levels of award were provided. Five or more recordables would result in no award for safety; four recordables would pay out at 25% of the 30% safety pool; three at 50%; two at 75%; one at 100%; and no recordables would produce an award of 120%. The payout metrics for recordable accidents was based on current OSHA rates for the construction industry.

3. Quality

Quality was weighted third at 20%. It had three components, two of which were based on test inspections (weld quality tests and boiler hydro test) and the last based on run time without incident (30 days). Within this measure, weld quality was weighted most at 50%, with hydro test second at 30% and run time third at 20%. While hydro test and run time were pass/fail measures, weld quality had four levels of award. These were: greater then 9% rejects resulted in no award; 6-9% rejects delivered a 50% payout; 3-6% rejects paid out 100%; and less than 3% rejects triggered a 120% reward. Contrary to safety, historical data showed a more consistent rate of rejects, with 4 % posted in 2004.

Employee Involvement

No formal employee involvement structure was employed to generate systemic work improvements, nor were any reported. It was anticipated that gains would be achieved through improved attention to work habits conducive to safety, quality and productivity, and that any suggestions for systemic improvement could be made and responded to though the existing informal chain of command. The client and contractor had high confidence in the existing atmosphere of open communication. Tradesmen confirmed that they felt they could talk to their foremen as well as the next level up, and that the morning safety meeting lent itself well to this purpose.

Design, Administration & Communication

As mentioned earlier, design of the gainsharing formula rested with the client and contractor who subsequently sought concurrence from the Boilermakers business manager, who, in turn, "talked it up" at the hall to prospective workers. An initial explanation of the program was made to trades at orientation meetings. Subsequent monitoring of performance was handled jointly by the contractor and client who communicated results to the trades through the contractor's project manager and foremen passing on information at morning safety meetings. With the exception of the final payout calculation, most communication was verbal unaided by handouts or posted material.

Program Outcomes:

This section provides specifics on project performance and outcomes relative to the program's three primary measures as well as a variety of other relevant considerations. As noted above, a spreadsheet detailing the milestones and final outcomes is provided on pages 43-44. The identification and analysis of issues and the description of outcomes beyond the financials were informed through two separate (one mid-outage and another post-outage) on-site craft survey questionnaire, follow-up conversations that Cornell/ILR had with principals of the operator, contractor and union, as well as a series of on-site discussion groups with craft.

Pay-Out

Craft received a pre-tax per hour payout of $3.20. The final payout pool amounted to 71.42% of the full pool. The breakdown between measures was as follows:

Schedule	41.92%
Safety	7.5%
Quality	22.0%
TOTAL	71.42%

1. Schedule

The initial schedule target (front water wall replacement duration) was estimated at 22 shifts. However it was completed in 27 shifts, resulting in no payout on this first scheduled milepost. Part of the over run was due to some problems beyond the control of the crafts. Bad argon gas resulted in the loss of 2.5 shifts, craft had to stop to fabricate buck stay clips that were not provided, plus there were problems with the scaffolding that was under the control of a separate contractor that was not part of the gainsharing program. The client and contractor bumped the gainsharing target up three shifts to adjust for these uncontrollable delays, but still the revised milepost was missed by 2 shifts due to one individual who mistakenly cut through a number of water tube pipes. Tradesmen reported that failure to achieve any payout on this first schedule milepost hurt morale, but performance on the subsequent ten schedule mileposts improved to the point that the final payout was not dramatically short of what would have been 100% on-time performance.

2. Safety

Four recordable accidents resulted in a safety payout of only 25% of the available safety pool, the lowest percentage performance of the three measures, and the subject of some controversy having to do with issues of a) controllability, b) undesired behavior, and c) appropriateness of measure. Following are descriptions and discussion on each of these issues:

A. Controllability: The tradesmen felt very strongly that they were punished (low percentage award) on the safety measure for outcomes over which they had either no control or only individual rather than group control. Three of the four recordables had to do with treatment for foreign objects in the eye. Craft pointed out that the work environment is dirty and that there is particulate matter in the air which cannot be completely avoided, even when wearing all prescribed safety gear. They also suggested that the company might consider washing down the area in advance of the outage, thereby removing some of the particulate matter prior to the tradesmen entering the work space. This is a practice that has been abandoned in recent years. This suggestion, or other possible systemic improvements, if implemented would suggest that addressing the issue of particulate matter in the air is within the influence of the workforce.

B. Undesired Behavior

In post-outage discussions craft also indicated that the safety component of the gainsharing program resulted in people not reporting injuries, or going to the hospital on their own and paying for treatment out of their own pocket. This undesired behavior actually worked against their interests in one case in which a “particle in the eye” incident, that might have been immediately treated without triggering a “recordable,” was not reported in timely fashion by the employee until it became inflamed requiring a degree of treatment which ultimately resulted in a recordable.

An additional issue this circumstance identifies is that if incidents or accidents are not reported, the company loses its ability to accumulate quality data that might indicate trend lines giving advance warning of developing systemic problems – think airline near-miss reporting system.

C. Appropriateness of Measure

The use of "OSHA recordable" as a measure of safety performance was the subject of some debate during post-outage debriefings. A reported accident becomes "recordable" when at least one of three consequences results: 1) a prescription is made, 2) the incident requires multiple physician visits, and/or 3) a puncture or injection is involved. The possibility of developing alternative measures for safety was discussed. It was suggested that such measures could discern between minor incidents (e.g., particle in eye) and more significant accidents in which the human and financial impact were more serious. An objection to this solution was voiced by the contractor and operator given that their interests relate to OSHA defined incidents.

3. Quality

The crafts maxed out all three quality measures, the two pass/fail tests (hydro and 30-day uninterrupted run) as well as posting only 2.2% weld rejects (being less than 3% and meeting the 120% milestone payout).

Tradesman Attraction / Retention

The outage was adequately staffed. The Boilermaker's business manager credits this to aggressive recruiting at the hall. The operator is unsure however as to whether the gainsharing program played a role in this. They recognize that the program was new and unproven, and believe that the larger attraction might have been the volume and intensity (shifts of 7-10s and 7-12s) of the work. A mid-outage survey completed by a significant percentage of the workforce indicated support for this conclusion in that 86% of respondents indicated that gainsharing had little or no impact on their decision to work this particular outage.

This self-report data may be a bit suspect due to the fact that the culture of the crafts is clearly one which a tradesman sees himself as an independent minded professional who enters into an agreement to sell his high quality services at an established negotiated rate and thereby not one to be manipulated by management or corporate driven productivity schemes. Nonetheless, in post-outage discussions the crafts reported significant interest in the daily reports of performance results and expressed concern about peer pressure not to report accidents. In addition, they ultimately performed well above historical standards. This may suggest that if indeed they were not initially attracted to the assignment because of gainsharing, they did become engaged by it once on-site. Perhaps the true measure of success in this regard will be the degree of retention for the '06 outage.

Craft response to the survey question on attraction may also have been influenced by a widely held view that gainsharing was being offered as an alternative to sub pay and that the crafts would much rather just have the sub. This view also worked to the disadvantage of the program in that the tradesmen considered sub pay theirs to be lost, as opposed to something additional to be won through improved performance. Over time this perception may change but an alteration in the composition of the program description spreadsheet may help as well. By placing the stretch target (120%) and largest reward to the left of the spreadsheet, then regressing with lesser performance to the right, the program administrators unconsciously reinforced the tradesmen notion that the highest award was their starting place and that anything less than that (even four levels of above-standard performance in the case of "safety") amounted to degrees of failure. Had the administrators reversed the linear order of targets and awards (0% at the far left, and 120% at the far right) this may have somewhat countered the sub pay history of bonus entitlement.

As a final reflection on the impact of the gainsharing program on craft performance and interest in taking the job, the contractor pointed out that even if the survey response was accurate, in that 14% said that the presence of the gainsharing program did influence them somewhat or a lot in taking this job, this percentage could make all the difference in adequately manning a project.

Attendance

Attendance was not factored into the gainsharing program, either as a carrot (incentive) or a stick (disqualifier). Foremen reported that it should have been tracked as an individual disqualifier, as the number of excused and unexcused absences was too high (at 3%) making work planning quite difficult. This view was shared by both the contractor and business manager as well.

Communication

Most program description and progress communication was verbal, unaided by handouts or posted material. This nearly sole reliance on verbal communication seems to have fallen short as tradesmen reported that the program was not well enough explained. The underlying logic to the mid-term adjustment to the initial schedule target (22 shift adjusted to 25), and the decision not to adjust for the mistaken cutting of the boiler tubes, also seems not to have been well understood. Additionally, due to late reporting of recordables, several versions of the final payout were circulated, each one less than the previous.

Lessons and Future Plans

In consideration of the Spring 2005 outage gainsharing program outcomes, what follows is a summary of insights that can, and in many cases are already planned to be, addressed by PPL/PMRI/Local 11 in their implementation of gainsharing programs for following years. These lessons have been identified through a combination of assessment by the principal parties, suggestions or issues identified by craft on-site, and Cornell/ILR's overall program evaluation efforts. Presented without intent of establishing any order of importance, these lessons and future plans are as follows:

1. Employee Involvement: The intensity and comparatively brief period of an outage does not lend itself well to forms of employee involvement that take employees off-line during work hours to engage in formal problem-solving. Especially on critical path repair jobs, tradesmen hit the ground running and don't let up until the outage is complete. For next year PPL/PMRI plan to engage outage foremen during the planning stages to identify possible work efficiencies and "work smarter" strategies beforehand. The year-round safety core group will be working on the eye injury problem as well.

2. Program Communication Practices: Providing written communication in addition to verbal reporting at job meetings will likely enhance craft understanding and thereby their ability and interest to fully engage in the program. The operator and contractor are considering the distribution of written gainsharing orientation materials at next year's job start-up to outline program specifics and the rationale/mechanics of gainsharing. Also, there is consideration of displaying simple visual graphics at convenient job locations to convey progress to date on performance measures. Finally, the intention is to provide craft with a letter of thanks for their participation in this year's program and an assurance that management will consider suggestions for next year's program made by craft in their post-outage surveys.

3. Safety Measure Issues: Clearly the measurement of safety performance is complicated and requires further consideration. Tradesmen viewed safety much more as a matter of individual responsibility and control rather than subject to group influence. Within the gainsharing formula, individual mistakes/failings/errors impact productivity and quality, but generally not as dramatically as they do in relation to safety. This is due to the substantial impact of each individual recordable. The client and contractor feel that it may be useful to modify the program next year to address both the group and individual components of safety. Also under consideration will be making the measures less aggressive and defining formula increments that are not strictly linear.

4. Attendance: Although there is no conclusive data to support the benefit of factoring attendance in as a measurement, the assumption is that it could be beneficial to do so.

5. Formula Development and Representation: Greater attention is warranted on creating milestones in a manner that allows for more chance of "early wins" in order to avoid the deflated morale that came from not making the initial schedule milestones. In addition, as outlined in the Program Outcomes section, further consideration could be given to representing milestones as cumulative gains as opposed to sequential losses.

6. Broaden Union Involvement in Program Development: Boilermakers constituted 40% of the outage workforce (with the next 30% constituted by electricians and pipefitters and the balance spread across seven other crafts). As the majority craft, Boilermaker business manager Bob Hall was the sole union representative involved in program development. Other craft participated in the program based on the Boilermakers being happy with the arrangement and the fact that the General President's Agreement was in effect. Bob Hall was in contact with the other principal unions, however direct involvement of the other unions may have increased understanding and commitment to the final program, thereby

allowing a greater number of business managers to be informed advocates for the program in their communications with their craft.

7. Establishing Confidence in Bid Figures and Measurement Milestones: One of the challenges noted in the Handbook relates to how to establish craft confidence in the contractor's bid figures and calculations as they relate to man hours, scope, and the establishment of milestones. During program design neither the contractor nor the union saw this issue as a major concern given everyone's familiarity with the plant and previous outage conditions. Nonetheless, once the outage was underway, many craft on-site did express a concern that the schedule was too aggressive. Further consideration may be warranted on how milestones are established and/or how their determination is communicated to craft.

PPL/PMRI Colstrip Craft Incentive Program
2005 Outage Gainsharing Plan Payout Metrics

SAFETY
30% of total pool

Recordables	0	1	2	3	4	5
% of safety pool	120%	100%	75%	50%	25%	0%
% of total pool	36.0%	30.0%	22.5%	15.0%	7.5%	0.0%

Opportunity	30%	of total pool
Earned	7.5%	of total pool

SCHEDULE
50% of total pool

Boiler - 75% of schedule pool	% of boiler pool	% of total pool	Early 1 shift 120%	On-time 100%	Late 1 Shift 50%	Late 2 Shifts 0%
Front WW Replacement Duration	20%	7.5%	9.0%	7.5%	3.8%	0.0%
F.B.S. Removal Started	20%	7.5%	9.0%	7.5%	3.8%	0.0%
Rear Slope Replacement Duration	20%	7.5%	9.0%	7.5%	3.8%	0.0%
Boiler Watertight	20%	7.5%	9.0%	7.5%	3.8%	0.0%
Off Fireside C.O.	20%	7.5%	9.0%	7.5%	3.8%	0.0%
		37.5%				

Scrubbers 25% of schedule pool	% of scr. pool	% of total pool	Early 1 shift 120%	On-time 100%	Late 1 Shift 50%	Late 2 Shifts 0%
"A" Vessel Repairs Complete	16.7%	2.1%	2.5%	2.1%	1.0%	0.0%
"A" Vessel Scaffold Removed	16.7%	2.1%	2.5%	2.1%	1.0%	0.0%
"B" Vessel Repairs Complete	16.7%	2.1%	2.5%	2.1%	1.0%	0.0%
"B" Vessel Scaffold Removed	16.7%	2.1%	2.5%	2.1%	1.0%	0.0%
"C" Vessel Repairs Complete	16.7%	2.1%	2.5%	2.1%	1.0%	0.0%
"C" Vessel Scaffold Removed	16.7%	2.1%	2.5%	2.1%	1.0%	0.0%
		12.5%				

Opportunity	50.00%	% of total pool
Earned	41.9%	% of total pool

QUALITY

20% of total pool

	% of quality pool	% of total pool	*Weld Reject Rate* <3% 120%	3-6% 100%	6-9% 50%	>9% 0%
Weld Quality	50%	10.0%	12.0%	10.0%	5.0%	0.0%

			Pass	Fail
Boiler Hydro Passed	30%	6.0%	6.0%	0.00%
30 day run time w/no tube leaks	20%	4.0%	4.0%	0.00%

Opportunity	20.0%	% of total pool
Earned	22.0%	% of total pool

TOTAL FINAL PAYOUT

	Opportunity	Earned
Safety	30.00%	7.50%
Schedule	50.00%	41.92%
Quality	20.00%	22.00%
	100.00%	71.42%

Texas Genco

The Principals: Texas Genco (Owner)
Babcock & Wilcox Construction Co., Inc. (Contractor)
Boilermaker Local #74, Pipefitter Local #211, Operator Local #450

The Operation: 690 MWG B&W Radiant Boiler: Unit 5 at W.A. Parish Plant site

The Outage: 100 crafts persons for 4 week outage

Gainsharing Model Used: Project Bid

Project History and Circumstances

Texas Genco is one of the largest wholesale electric power generating companies in the United States, with over 13,000 megawatts of generation capacity. The company's W.A. Parish plant is located near Houston, Texas, and has four coal-fired units. At this site Babcock & Wilcox Construction Co., Inc. (BWCC) has frequently provided outage maintenance services. Since the concept of performance based contracting had become the standard contracting method between Texas Genco and BWCC, extending the concept to include the Crafts in a gainsharing program was a logical extension of the company's business practices.

Aware of the gainsharing initiative of MOST by virtue of his involvement with the MOST Owners Advisory Committee, Don Powell, then Manager of Contractor Services for Texas Genco, now Manager of Purchasing, Logistics and Land Management, initiated discussions with the International Boilermakers (George Rogers, Ronnie Keck, and Herman Sullivan) and BWCC's Ken Wasilewski. The parties discussed the use of the gainsharing approach outlined in a previous version of this *Gainsharing Handbook* for an undetermined future outage project which would lend itself to a gainsharing approach.

Shortly after these discussions, two identical projects were identified on adjacent identical boilers, to be performed in series with two months between the finish of the first project and the start of the second project. This appeared to be an ideal situation since the actual performance factors for the first project could serve as the target performance factors for the second project. This circumstance would demonstrate to all parties that the targets were credible, i.e., realistic and achievable. During the first project all elements of actual cost versus estimated cost were tracked using the standard project management package (Primavera) used for all projects with Texas Genco. The decision to apply gainsharing to this series of projects was not divulged during the first project in order to ensure that baseline performance was not influenced.

Description of the Gainsharing Program

Establishing the Gainshare Pool

Consistent with a "project bid" gainsharing model, the pool of gainshare dollars was established through actual project savings due to the job being completed in less work hours than the projected target. The projected target was established using the baseline performance outcomes of the prior outage as explained above, including both direct and indirect work hours. The differential between target hours and actual work hours established the work hours saved. The value of the avoided work hours established the gainshare pool.

Performance Measures

The gainsharing program was built upon both group and individual target performance expectations. The group targets related directly to work hour and schedule milestones. While encouraging favorable collective work hour performance, there were also individual performance factors (metrics) that defined successful project performance. To encourage craftspersons to focus on these elements, personal eligibility metrics were developed in the areas of safety, absenteeism, and the avoidance of terminations and quits. Work hour penalties which would reduce or eliminate the craftperson's gainsharing payout would be the result of undesirable performance in these areas. The primary individual performance measures/disqualifiers were established as follows:

1. Safety

In developing the program the safety metric received much discussion, especially on whether to make it a group or individual goal. The team settled on it being an individual metric for the following reasons. Should even one incident occur, due to the size of the project, the resultant incident rate would eliminate any gain from this aspect of the program for all of the participants. If this happened early in the project, the desired attention to safety could have been diminished. The team wanted all participants to have project long participation in the safety metric. It has also been a Tripartite initiative to drive safety to the individual level to make each individual responsible for their own safety. By making safety performance an individual metric, these goals were accomplished. Each individual would be rewarded for their own safety record, and even those with incidents could suffer only partial forfeiture of participation in the program.

2. Absenteeism

Work hour penalties tied to attendance were established to discourage absenteeism, late arrivals, and early quits.

3. Termination/Quits

Similarly, work hour penalties tied to avoiding quits and terminations were established to encourage the craftspersons to stay to the end of the project and to preserve their accrued eligible work hours.

Establishing the Eligibility of Work Hours

The three individual performance measures described above acted as disqualifiers for the establishment of the portion of the work hours saved that ultimately would be counted as the total gainshare eligible work hours. Through protocol established by the gainshare program the amount of each individual craftperson's eligible work hours was defined. By adding together all individual craftsperson eligible hours, the total eligible work hour amount was established.

Establishing the Value per Craft Work Hour and Individual Pay-Out Amounts

Once the total eligible work hour amount was defined, then the value per craft work hour was established by dividing the gainshare pool by the total eligible work hours. On a per eligible work hour basis everyone shared equally in the pool, regardless of craft or classification. This meant that regardless of differentials in base pay between a boilermaker and an operator, both would be paid the same hourly amount for their gainsharing eligible hours. The actual payout amounts were determined by multiplying the individual craftperson's eligible work hours by the value per craft work hour.

Challenges and Considerations in Developing the Gainsharing Program

A variety of challenges and considerations arose throughout the development of the gainsharing program. Some of the more prominent ones are discussed below:

Building Buy-In to the Program: It was recognized that all parties would need to "buy in" to the program. A series of meetings between Texas Genco, BWCC, and the Boilermakers as the primary craft were held to develop the program including overall targets and individual performance objectives. Once the program was developed the other crafts participated in a meeting to review the program and its development.

Ensuring Understanding of Program Specifics: From the outset it was vital that all craftspersons be aware of and understand the program, as well as believe that the targets were reasonable and achievable. A program summary was developed to be reviewed and distributed as part of the initial employment process. This document was given to each craftsperson and a sign-off was obtained verifying that each individual had read, understood, and was willing to participate in the program.

Determining What to Measure: In order to make the program easily understandable and credible it was desired to keep it as simple as possible. This meant including as few targets and disqualifying components as practical while still encouraging the intended result. Tracking only the directly measured group and individual targets was judged to be the optimal approach. The team decided to make neither quality nor schedule a specifically measured performance factor. In the case of schedule it was anticipated that favorable performance in the other directly measured performance factors would result in no worse than schedule adherence, and more likely schedule improvement. In the case of quality, it was anticipated that the craftspersons would realize that the cost of rework (more work

hours) would directly diminish the gainshare payout and that this awareness would heighten individual and group sensitivity (peer pressure) to do the job right the first time.

Minimizing Program Administration Effort: It was determined that the administration of the gainsharing program should not create undue additional burden on the participants. BWCC expected that administering the program using its existing field office and project management information and tools would be efficient and avoid unnecessary additional effort.

Communication Procedures: It was agreed that communicating project progress and status in a timely and understandable manner was essential. Large scale versions of some of the standard project management reports were displayed to communicate this information to the craftspersons. Also, a quick response as to results and the actual gainsharing payout at project completion was important to couple the results with the expected payout. This was expected to be achievable due to the use of in place systems and contemporaneous input of data.

Program Outcomes

The 2005 program was very effective in achieving the desired results. All areas of group and individual performance achieved significant improvement as measured against the baseline project. The targets selected were also successful in indirectly influencing other desired performance, as the craftspersons quickly understood the performance characteristics necessary to maximize their individual gainsharing payouts. The average craftperson's pre-tax program payout was $2,350, with the highest individual payout being $5,770 and the lowest $123. This equated to an hourly average payout of $12.80 that was distributed to craftspersons within one week of project completion. Per the program's original intentions, the gainshare payout checks were distributed together with a thank you and congratulatory letter from Texas Genco and BWCC.

Individual Performance

The following section outlines the specific outcomes for the individual target milestones and provides how the gainshare project's performance compared to that of the benchmark project on which gainsharing was not in effect. Overall, approximately only 3% of the total work hours were forfeited due to undesirable performance.

1. Safety: Only one incident occurred. This is an improvement from the benchmark project in which there were two minor on-site first aid cases.

2. Absenteeism: Unexcused absenteeism was less than 0.5%. This is a dramatic improvement from the 3% unexcused absences recorded for the benchmark project.

3. Termination/Quits: Two quits and four terminations were recorded during the outage project.

Following is an example of the spreadsheet used for tracking absenteeism and termination/quits, as well as for individual crafts person work hours.

GAINSHARING PROGRAM

EMPLOYEE	1/12	1/13	1/14	1/17	1/18	1/19	1/20	1/21	1/22	1/23	1/24	1/25	1/26	1/27	1/28	1/29	1/30	1/31	2/1	2/2	2/3	2/4	2/5	2/6	TOTAL HOURS	GROSS
HENRY JONES	8	8	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	8	230	$ X,XXX.XX
SAM CRANE	8	8	8	10	10	10	10	10	10	10		10	10	10	10	10	10	10	10	10	10	10	8	8	220	$ X,XXX.XX
TOMMY HILL	8	8	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	8	227	$ X,XXX.XX
JOHN McNUTT	8	8	8	10	10	8	10	10	10	10	10	3	10		10	10	10	10	10	10	10	10	8	8	211	$ X,XXX.XX
ROBERT SMITH	8	8	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	8	230	$ X,XXX.XX
JOSE RAMIREZ	8	8	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	8	230	$ X,XXX.XX
TONY KELLEY	8	8	8	10	10	10	10		10	10	10	10		10	10	10	10	10	10	10	10	10	8	8	106	$ X,XXX.XX
GEORGE BROOKS	8	8	8	10	10	10	5.5	10	10	10	7.5	10	10	10		10	10	10	10	10	10	10	8	8	213	$ X,XXX.XX
JASON JONES	8	8	8	10	10	10	10	10	10	8	10	10	10	10	10	10	10	10	10	10	10	10	8	8	229	$ X,XXX.XX
ANTHONY O'KELLY	8	8	8	10	10	10	10	10	10	10															0	$ --
TIM JOHNSON	8	8		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	8	222	$ X,XXX.XX
STEVE JOHNSON	8	8	8	10	10	10	10	10	10	10	10	10	9	10	10	10	10	10	10	10	10	10	8	8	229	$ X,XXX.XX
WILLIAM JOHNS	8	8	8	10	10	10	10	10	10	10	10	10	10	10	10	10	5	10	10	10		10	8	8	215	$ X,XXX.XX
JACK HOOT	8	8	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	8	8	230	$ X,XXX.XX
JERRY WILLIAMS	8	8	8	10	10	10	10	10		10	10	10	10	10	10	10	10	10							0	$ --
GRAND TOTAL																									2792	$XX,XXX.XX

EXCUSED ABSENCES

EMPLOYEE QUIT

UNEXCUSED ABSENCES

EMPLOYEE TERMINATED

Group Performance

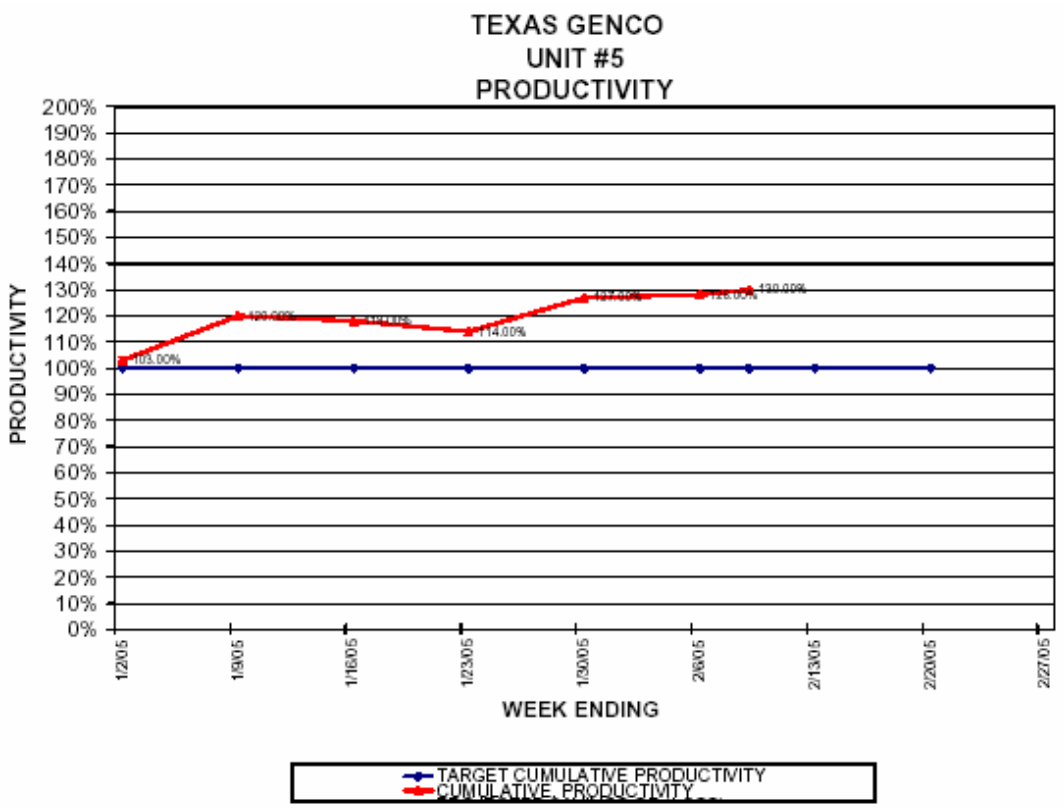
As described previously, the overall group performance factors related to work hours were the basis upon which the total gainshare pool and eligible work hour values were established. Although schedule and quality were not directed factored into the program as performance targets, these factors were tracked as well for sake of comparison with performance on the benchmark job. The following results and comparisons with the benchmark project were realized on the group performance factors:

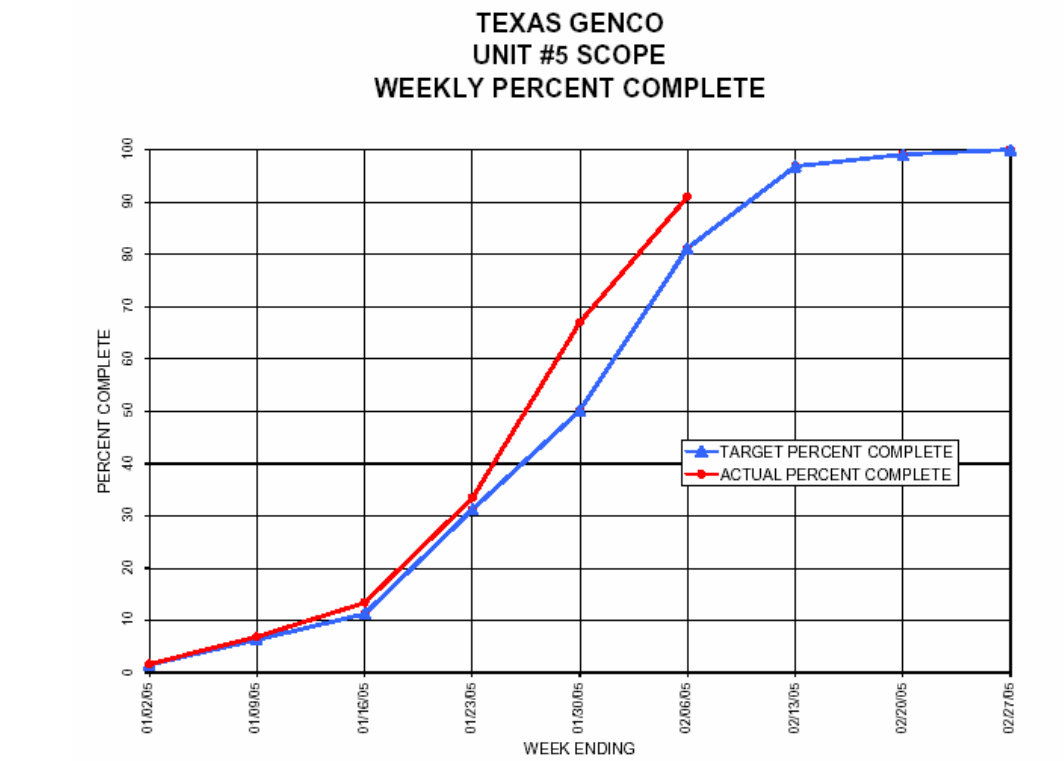
1. Productivity/Work hours: A 24% reduction in direct and non-direct work hours was attained relative to the benchmark project.

2. Schedule: A 27% reduction in outage days (to hydro) was realized.

3. Quality: 0% rework was required on the gainshare outage, in contrast to achieving less than 1% on the benchmark project.

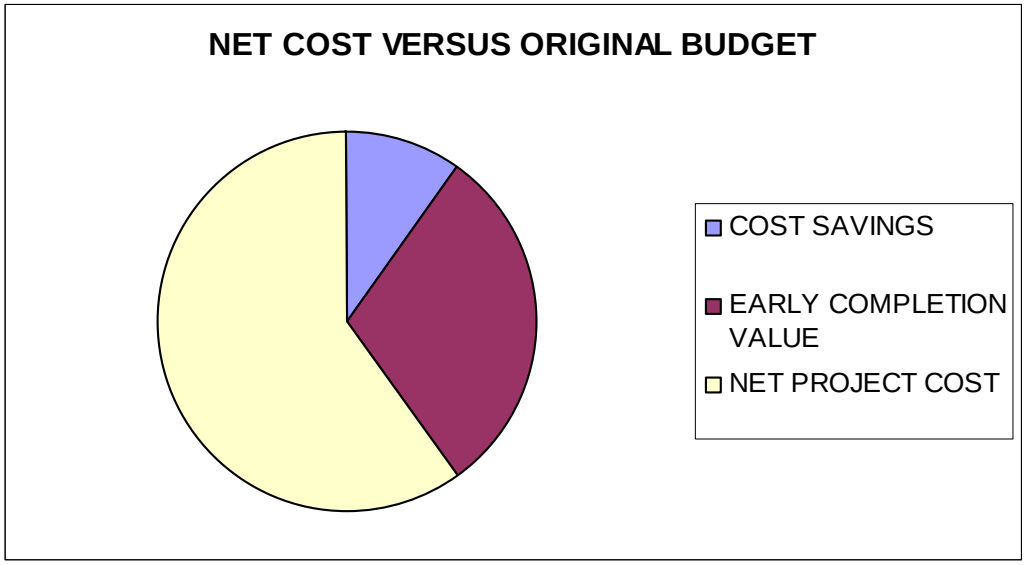
Following are examples of graphs used for tracking and reporting on productivity and schedule:

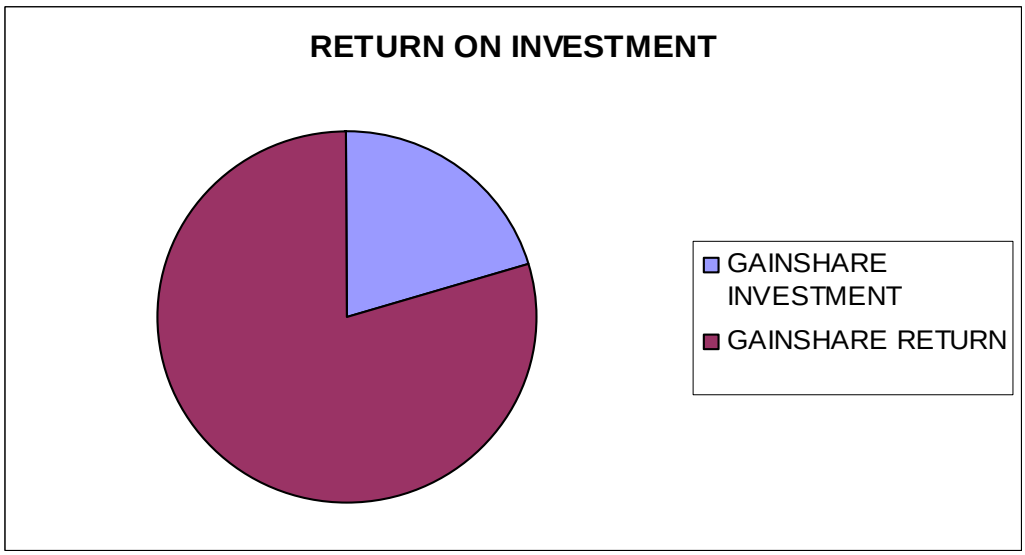




Other Performance Results

A variety of other factors considered as core business determinants in the future applicability of gainsharing for Texas Genco and BWCC were extrapolated from the overall results. These indicators were cost savings and return on investment. As the following charts show, there was significant benefit attained relative to each of these business measures.





Lessons and Future Plans

Feedback on the overall success of the 2005 gainsharing program from all involved parties was very positive. A lesson's learned session with Texas Genco, BWCC, and the Crafts represented resulted in the need for no structural changes to the program. All parties are looking forward to the next opportunity to implement gainsharing. Due to the success of the program, a variety of insights and lessons were gained that warrant mention here. These are as follows:

1. Building Buy-In: The development and pre-project meetings worked very successfully to create a program that was credible and had "buy-in" from all the participants at the Owner/Craft/Contractor management level.

2. Ensuring Understanding of the Program: The summary used to explain the program at the hire-in process was effective in communicating the program to each craftsperson. Asking for a sign-off from each craftsperson raised the level of comprehension of the program.

3. Program Administration: Program administration was kept simple, without a lot of rules or regulations imposed. Tracking of attendance and safety was done with existing systems using common excel spreadsheets. This approach minimized any additional administrative burden.

4. Performance Tracking and Communication: Using the standard project management software (Primavera) facilitated BWCC's ability to track milestone progress and post semi-weekly graphic print-outs of actual versus target productivity and earned value. Having this information readily available and easily understandable positively impacted craft motivation and understanding of progress.

5. Employee Involvement: No formal structured craftspersons involvement program, or suggestion program was implemented for this project. Observations during the project indicated ad hoc occurrences of "brainstorming" and inter-craft cooperation and planning in response to specific situations. For a project of this size, it was felt that such informal means are not only desirable, but more cost, schedule, and administratively successful than other approaches. Larger and longer projects may benefit from a more formal approach to crafts person feedback.

6. Gainshare Pay-Out Letter: Dispersing the gainsharing check the week following project completion with a letter of thanks signed jointly by Texas Genco and BWCC was considered an important component of the overall program. As such, this approach satisfied the goals of providing immediate feedback and reward and the continuation improving performance and relationships. The concluding letter below is an example of the letter sent to all participating craftspersons.

CONGRATULATIONS

The recently completed burner relocation project at Texas Genco's W A Parish Unit #5 was a huge success. Based upon the efforts of the entire team, especially the craftspersons, the project was completed safely, in conformance with all quality requirements, ahead of schedule, and under budget.

The Gainsharing Program developed and implemented for this project created a true Tripartite project approach with Texas Genco, Craft Labor, and BWCC working together cooperatively to execute the project and to share in the benefits of exceeding project target goals and expectations in the areas of SAFETY, QUALITY, AND PRODUCTIVITY.

Your individual performance and the collective performance of the entire craft team have resulted in significant project savings and operational benefits. Based upon these savings a Gainshare pool has been calculated per the program rules which you received and reviewed when you joined the project team. The Gainshare pool is being distributed to each participating craftsperson in accordance with these rules.

Your share of the Gainshare pool is included.

Thank you for your efforts and contribution to the success of this project. We are looking forward to future projects and successes.

TOGETHER WE MAKE IT HAPPEN

Don Powell	Ken Wasilewski
Manager, Contractor Services	Regional Construction Manager
Texas Genco	Babcock and Wilcox Construction Co., Inc.

February 21, 2005

ARKANSAS NUCLEAR ONE… Case Study

The Principals:	Entergy (owner) Stone & Webster (contractor) Local 69 Boilermakers, Local 295 Electricians, Local 36-L Sheetmetal Workers, Local 624 Operating Engineers, Local 79 Elevator Constructors, Local 10 Asbestos Workers, District Council 80 Painters (unions)
The Operation:	800 megawatt nuclear plant unit
The Outage:	600-800 trades for 2003 outage (145,000 man hours)
Gainsharing Model Used:	Project Goal

Project History and Circumstances

Entergy owns and operates power plants with approximately 30,000 megawatts of combined electric generating capacity from fossil, nuclear, and renewable sources. The company's Arkansas Nuclear One (ANO) plant is located in Russellville, Arkansas, where two nuclear units produce approximately 1700 megawatts. Incentive programs with craft participation have been in effect at this plant since 1996. Although the gainsharing programs have been developed entirely independent of the Tripartite effort represented by this Gainsharing Handbook, this case study is included because of the depth of experience and potential represented by such a well established program.

Due to his previous position as Business Manager with the Boilermakers Local 69 in the area, Dale Branscum of the Boilermakers International made contact with Stone & Webster's site manager, Harold McQueen, and arranged for Cornell researchers and himself to meet with representatives of the contractor and the involved locals. A separate meeting occurred with each of the two groups in January of 2005 with the purpose of learning specifically how their craft incentive plan operates, what it takes to maintain it, and the general attitudes and insights of craft on the benefits of the plan. Separate summaries of these exchanges are represented in this case study's Program Outcomes section. Although much of the information reported is similar, both accounts are included to illustrate the different focus and perspectives of the two groups. In addition, the Description of the Gainsharing Program section that follows provides a variety of information as presented to on-site craft to describe the specific measures, milestones and operating principles of ANO's gainsharing/incentive program.

Description of the Gainsharing Program

The following charts are used by Stone & Webster to describe the components of ANO's incentive plan.

Arkansas Nuclear One
Entergy/Stone & Webster/Building Trades

Incentive Plan

1.	**SAFETY**	**30%**
2.	**SECURITY**	**5%**
3.	**A.L.A.R.A.**	**10%**
4.	**QUALITY**	**20%**
5.	**ATTENDANCE**	**10%**
6.	**REFERRALS/RETURNING CRAFT**	**5%**
7.	**HOUSEKEEPING**	**10%**
8.	**PRODUCTIVITY**	**10%**
		100%

= 10% Increase in Gross Earnings

A. **INCENTIVE GOES INTO EFFECT APRIL 12, 2004, AND WILL END MAY 16, 2004.**

B. **PAID WITHIN TWO WEEKS AFTER OUTAGE COMPLETION.**

C. **GOALS EVALUATED PRIOR TO OUTAGE.**

D. **CRAFT MUST BE RELEASED FROM PROJECT BY R.I.F. TO REMAIN ELIGIBLE FOR INCENTIVE PROGRAM.**

1. **SAFETY** - Zero lost time accidents and zero recordable accidents.

2. **SECURITY** - Less than 1 S.I.R. per 50,000 man-hours.

3. **A.L.A.R.A**. - Meet department Man Rem and P.C.E. goals.

4. **QUALITY** - Less than 5 C.R.'s. NOTE: Self identified CR's written by Stone & Webster craft will not be counted against this incentive. Human performance CR's involving WRONG TRAIN/WRONG COMPONENT WILL ZERO OUT THIS CATEGORY.

5. **ATTENDANCE** - 1% unapproved absences. Craft to remain on site until R.I.F. is issued. Emergencies will be handled on a case by case basis.

6. **REFERRALS/RETURNING CRAFT** - Entergy nuclear system experienced craft to be greater than 75% of all craft on site, with less than 10% of no shows per date.

7. **HOUSEKEEPING –** Improve housekeeping in work areas with less than 10 deficient areas for outage. **Note**: Areas will be walked down weekly by Craft Leads, Modification Engineers, or Modification Supervisors. Deficient areas will be noted on Housekeeping Walkdown Sheets and brought to the attention of all craft.

8. **PRODUCTIVITY** - Meeting daily schedules including breaker to breaker outage schedule.

INCENTIVE SCORE SHEET

SAFETY

				30%
				‘0’ Lost time, ‘0’ Recordables

SECURITY

1%	2%	3%	4%	5%
<5 S.I.R. per 50,000 man-hours	<4 S.I.R. per 50,000 man-hours	<3 S.I.R. per 50,000 man-hours	<2 S.I.R. per 50,000 man-hours	<1 S.I.R. per 50,000 man-hours

A.L.A.R.A.

2%	4%	6%	8%	10%
4% over Dept. Man Rem and P.C.E. goals	3% over Dept. Man Rem and P.C.E. goals	2% over Dept. Man Rem and P.C.E. goals	1% over Dept. Man Rem and P.C.E. goals	Meet Dept. Man Rem and P.C.E. goals

QUALITY

4%	8%	10%	15%	20%
CR’s, 15 or Less	CR’s, 13 or Less	CR’s, 11 or Less	CR’s, 9 or Less	CR’s, 7 or Less

NOTE: Self identified CR’s written by Stone & Webster craft will not be counted against this incentive.

ATTENDANCE

2%	4%	6%	8%	10%
5% unapproved absences*	4% unapproved absences*	3% unapproved absences*	2% unapproved absences*	1% unapproved absences*

*NOTE: Craft to remain on site until R.I.F. is issued. Emergencies will be handled on a case by case basis.

REFERRAL DATES/RETURNING CRAFT

1%	2%	3%	4%	5%
67% Return* With 18% no shows.	69% Return* With 16% no shows.	71% Return* With 14% no shows.	73% Return* With 12% no shows.	75% Return* With 10% no shows.

*NOTE: Percent of Entergy experienced craft in site total.

HOUSEKEEPING

2%	4%	6%	8%	10%
30 – Deficient work areas.	25 – Deficient work areas.	20 – Deficient work areas.	15 – Deficient work areas.	10 – Deficient work areas.

PRODUCTIVITY

2%	4%	6%	8%	10%
5% over schedule	4% over schedule	3% over schedule	2% over schedule	Meet daily or outage schedule.

Incentive Program Principles

The following information is used to orient craft to the principles of participation in ANO's incentive program.

The Craft Incentive Program and what YOU can do to make it a success at ANO

- Participate in making the Incentive work
  - Bring your suggestions for a better job forward to your Foreman or Supervisor.
- Encourage others to support the Incentive Program team.
  - Everyone is important on this job.
- Attitude is everything/be pro-active.
  - Keep a positive attitude and be open to communication.
  - Keep coworkers focused on ANO's high expectations.
- Teamwork is the key to our success.
  - All crafts are interdependent on each others productive efforts. We are all in this effort together.

Entergy/Stone & Webster/Building Trades *Site Administration*

- A Joint Labor / Management Committee (JLMC), comprised of Union, Stone & Webster, and Entergy representatives will meet every two weeks to review strategies and progress on the Incentive Plan.
- The JLMC will receive input from craft workers on valid suggestions that could improve performance and keep the incentive program on track. The JLMC will track performance and will be responsible for communicating the status of the incentive goals to the craft workers.

Program Outcomes

Stone and Webster On-Site Meeting

The incentive plan has been in existence for nine years for three of four nuclear plants owned by Entergy. The exception is the Waterford facility (near New Orleans) for which there is adequate coverage by the building trades, and no need to provide an incentive plan. The incentive program is designed for recruitment and retention. The General President's agreement covers the maintenance at ANO, and 7 of 13 trades now make more under that agreement than their contracts on the open market. Outages typically involve 160 to 190K craft hours. The incentive plan has been altered over the years to reflect changing priorities of the owner and contractor and needed improvements. The most significant change has been to weigh safety as a higher percentage of the possible bonus. This has been done by increasing the percentage of the incentive plan that is tied to safety, and reducing the percentage of the bonus tied to other factors. The payout has ranged from 6.3% to 10% gross bonus; with an average payout of around 8.5% (they have never actually calculated an average). The plan is reviewed each year following the outage, and that has led to changes in weighting for the next outage.

Stone and Webster estimates that there are three or four meetings each year associated with the plan. These include two or three before the outage and one review meeting after the outage. In addition, Harold McQueen spends about an hour a week during the outage tabulating the results. The results are posted regularly during the outage. The emphasis on safety has yielded dramatic improvements, including cross-craft responsibility for safety. There is a high level of peer pressure during the outage to perform to the standards. Stone and Webster's profits are a markup on craft and non-manual labor costs. Entergy pays the entire cost of the incentive plan, which has ranged from $150,000 to $300,000 per outage.

On-Site Craft Meeting

The Arkansas Nuclear One program originally started when Stone & Webster replaced Bechtel as the maintenance contractor at this plant and three other nuclear sites (all Entergy) in 1996. The original Stone and Webster contract included a 90% of market wage and an incentive plan allowing for 0 to 12% addition to gross pay for all time worked at ANO. As the contract improved over time (half of the trades now make more at ANO than they do in the general market) the incentive was changed to only be used during outage time (about once a year). At that time, the incentive plan was altered to allow for a 0 to 10% gross bonus for time worked during the period leading up to the outage and during the outage until an individual worker is laid off.

In general, the business managers were well informed about the specifics of the plan, and had little to criticize about it. They thought both their members and the travelers were satisfied with the plan, although the business managers thought it could be paid at more frequent intervals, rather than at completion of the outage. The business managers also thought that the plan significantly improved attendance, and that the trades all responded to the plan. They reported a normal craft workforce of around 100 at ANO, increasing to 600 to 800 craftsmen during the outage.

Issues and Lessons

1. Cross-Craft Cooperation: Boilermakers and electricians are the primary crafts on the job, with the electricians being the principle craft representative when the plant is operating. Pipefitters, asbestos workers, etc are also included. This diversity of representation necessitates greater cross-craft cooperation in attaining goals.

2. Gainsharing Program and Collective Bargaining: It is not clear whether the establishment of the plan and the reward structure can actually qualify as a negotiation. The President of the Arkansas Building and Construction Trades signs off on the plan each time it is used, but the principal negotiation takes place between Entergy and Stone and Webster.

3. Long-Term Benefits: An incentive program can be regularly (year-round and multi-year) used to address long-term issues and to alter the behavior of all the participants to benefit each of them.

4. Creating Continuous Improvement: Incentive plans can create learning systems in which continuous improvement becomes the norm. A critical component of this factor is the stability of the parties; owner, contractor, trade leadership, and craftsmen.

Additional Overall Lessons from Pilots/Case Studies

In addition to the specific lessons cited in connection to each case profile, overall assessment shows a variety of broader insights and lessons. These are explained below without intending to establish any particular order of importance.

1. ***Implementing a gainsharing program for short-term outage work requires a long-term business perspective***. The last-minute "lock-in" on scope and dates for outage work creates an atmosphere whereby owners and contractors can lack confidence in their potential for adequate profit margins to share with craft. If the terms of an outage gainsharing/incentive plan are not known adequately in advance, local union representatives are unable to promote the plan as part of that job's pay package and consequently can not use the plan as incentive to attract "traveler" craft.

   In addition, attending to the many details (understanding profit potential, working out the formula, getting buy-in from trades, etc.) of a well-conceived gainsharing plan can take several months, especially since these tasks seem to fall to project managers with already over-busy schedules. Proper planning requires pre-emptive commitment on the part of the owner and contractor. When such commitment is integral to a long-term business strategy, planning aspects can be anticipated and cost-benefit analyses conducted with a multi-year perspective. .

2. ***The primary decisions and strategies that impact work efficiency must be made during the job planning stage, therefore employee involvement efforts aimed at improving performance will be most effective when commenced prior to the start of work.*** Although new construction and large project work may offer different opportunities, the short-term intensity of outage work does not allow adequate time to develop or engage in significant employee involvement efforts once the job is going. Pre-job employee involvement related to identifying inefficiencies and problem solving can be arranged by working with year-round maintenance employees and local union representatives instead of the outage workforce force. In addition, mid or post-job surveys from a previous year's outage can serve to identify issues and solutions to be factored into a current year's program.

   One of the more common formalized means of employee involvement in other industries is a suggestion system whereby craft can provide insights on work sequence, allocation of resources, etc. However, given that the primary impact of such suggestions either has limited immediate financial impact or can only be implemented through planning for future outages, the contractor's incentive for investing significantly in formalized suggestion systems appears to be low. Nonetheless, those sites that openly encourage informal suggestion sharing through stewards and supervisors do seem to get valuable in-stream ideas. Further experience is required to fully understand how to involve craft on-site and what specific types of input should be solicited.

3. ***Greater involvement of local union business managers and/or agents in upfront gainshare program development may increase their understanding of the program and thereby their interest and ability in advocating its benefits to their craft.*** As one of the craft's primary connections at hire-in, local BMs and BAs can have a significant influence on their craft workforce's receptivity to a gainsharing program. If these union representatives are well informed about why and how milestones and targets have been developed, as well as being thoroughly versed in gainsharing principles and the mechanics of the program, they are more able to get their craft engaged in the potentials of gainsharing.

4. ***Although Boilermakers are often the critical path craft involved in industry outage and project work, inclusion of other craft as principal partners in gainsharing programs may be beneficial to success.*** In those cases supported and researched for this Handbook, participation of craft other than boilermakers primarily occurred based on assurances of acceptability to the Boilermaker representatives. Although ultimately not significantly problematic for pilot sites, in some situations there may exist a potential for greater cross-craft cooperation relative to acceptance of the program and work performance if more than one union is taking responsibility for the program's success.

5. ***Gainshare formulas should be developed in manners that balance group and individual measures so that craft have incentive and control in both categories.*** Given that one of the primary motivating factors for gainsharing is greater earnings, craft must see potential for appreciable gain to be encouraged to alter their work habits and behaviors. Having too much of that potential tied to group (the entire cross-craft on-site workforce) dependent measures such as schedule and quality, or safety, may discourage individuals from believing they can realize any substantial gains. Providing some measures (i.e., attendance, return referral, or some aspect of safety) as individually dependent measures may allow craftsmen a greater sense of outcome control and thereby more incentive to improve performance.

6. ***Designing gainsharing programs to be sustainable over multiple years may require that no one party has gain without the others doing so as well***. Given that many of the success factors for gainsharing point to integration with broader good business and labor management practices, all parties should benefit from program implementation. In other words, a gainsharing program that allows an owner or contractor to make significant gains without sharing those with the union is going to leave craft disgruntled and unmotivated for the future. Likewise, a plan that puts significant gain in the pockets of craft but does not also benefit owners or contractors will not be repeated in future years.

   Ensuring equitability relates to how the distribution formula is established. On Bid Model projects there is built-in protection when craft gain is directly tied to schedule, that in turn is tied to reduced costs to the owner and contractor. Goal Model projects don't necessarily have the same built-in equity. It is possible to construct a formula that would pay craft well for safety, attendance, and quality even when schedule targets

are not met. This could leave the owner and/or contractor at a loss, since generally their most immediate gain is through beating schedule. Conversely, if schedule targets are significantly beat but the lion share of potential gain for craft is in safety, attendance, and quality where performance has not met targets, then it possible that a disproportionate amount of the realized gain goes to the owner and/or contractor.

Proposed Criteria for Successful Gainsharing Implementation

Based on the experience of the pilots, case studies, and lessons from related industries, the following list of criteria represents those factors that increase the overall likelihood of successful gainsharing development and implementation. Although every situation is unique, and having all the criteria in place in any one situation is unlikely, these factors can serve either as goals, or indicators to strive for, in ensuring that gainsharing is a likely fit and successfully implemented in your circumstances.

Success Criteria

1. Pre-existing relationships with some degree of trust between owner, contractor and union
2. Interest, incentive, and willingness to improve relationships
3. Previous successful experience with incentive programs and/or extra-contractual arrangements
4. Gainsharing seen as integral to sustainable good business practice
5. Market conditions that allow for adequate profit margins to be shared
6. Sufficient time for pre-planning and program design
7. Mutual consent among participating parties on where gain potential exists
8. Willingness by all parties to take some risk relative to potential earnings
9. Development and provision of thorough pre-job orientation session and materials
10. Solicitation and utilization of craft suggestions on work performance improvements early in the planning and/or outage schedule
11. Performance measures based on elements that craft have control over
12. Union involvement in target development and adoption of an assertive role in representing the program to craft
13. Capacity for thorough on-site performance progress reporting
14. Program mechanisms for adjusting to mid-job scope changes
15. Post-job follow-up communication with craft thoroughly explaining outcomes

Acknowledgements

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