

# **COST REVIEW FOR CONTRACTING ALTERNATIVES FOR TRANSMISSION FACILITIES IN ALASKA**

**PREPARED IN PERFORMANCE OF CHUGACH ELECTRIC ASSOCIATION  
CONTRACT NO: 95233**

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## FOREWORD

Late in the fall of 1995, in anticipation of soon letting bids for the actual construction of the Northern Intertie Project, members of the board of the Chugach Electric Association contacted us to provide an economic analysis centered on differences in costs that might exist in building those projects under various conditions of labor use. The basic question we were asked to evaluate is whether competition would be improved and costs lowered if all contractors, not just those agreeing to use workers supplied by the International Brotherhood of Electrical Workers (IBEW) union, were invited to bid for the work.

The authors bring extensive expertise to this task. Dr. Herbert R. Northrup, Professor Emeritus of the Wharton School, University of Pennsylvania, is author of over 300 articles in various professional, business, and popular journals and of 35 books and monographs dealing with labor and manpower policy, labor economics, or labor relations. He has been a consultant to numerous "Fortune 500" companies, and directed the Industrial Research Unit of the Wharton School for 27 years. Dr. Armand J. Thieblot, President of A. J. Thieblot & Son, NCSDO, was formerly Associate Professor of Management at the University of Maryland. Among other labor policy publications, he authored nine articles or monographs specific to the Davis-Bacon Act and other federal and state prevailing wage issues, and has testified frequently in Congress and to state legislatures on these issues. (Résumés of the authors are appended to this report.)

The work product embodied here is the authors' own, and we are solely responsible for the conclusions drawn and for the estimates made. Our results were informed by interviews made with contractors and contractors associations, both union and non-union, in Alaska and in the lower 48 states, as well as by published and public materi-

als assembled at our request by Chugach Electric Association and others. They are also based on conclusions drawn from our experience as labor economists, our familiarity with the practices of organized labor in general and the IBEW in particular, and our familiarity with prevailing wage laws in general and "Little Davis-Bacon" Act of Alaska in particular. The conclusions that we present here derive from estimates based on our understanding of the projects to be constructed, including evaluations of future events which may or may not actually come to pass, and so are necessarily at a corresponding level of generality. As labor economists, we are neither contractors nor engineering estimators nor lawyers, so any of our opinions about engineering or legal matters are entirely those of nonpractitioners, and should be accepted and treated as such. We have no financial interest in the outcome of the intertie projects nor in the contracting methods or contractors that might be selected to construct them.

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## EXECUTIVE SUMMARY

Competition in the bidding process for the three proposed intertie projects of the Railbelt Utilities could result in substantial savings in their cost. The savings would come about not because of any change in content or quality of the finished projects, but simply from different contract conditions that would affect the cost and use of labor by the contractors who might be doing the line construction work.

Without, at this point, commenting on whether one condition or another might actually be possible to achieve, we have listed below in Summary Table 1 the estimated cost outcomes and savings under eight different combinations of labor contracting conditions involving union rates, concessionary union rates, rates under the Alaska public contracts law (prevailing rates), and open rates. Only differences that could be readily quantified, such as wages, fringe benefits, special payment requirements, and crew makeup restrictions, were included in the table. Other areas of possible expense (or savings) are discussed in the text, but not included.

Even thus simplified, the potential savings to be derived from opening bidding and free competition among all interested and qualified contractors regardless of their union affiliation or source of labor, would be immense—well over \$20 million. To preserve control over the supply of labor, the International Brotherhood of Electrical Workers (IBEW) has already offered to give up some of the costly extras in its standard contract (“Bradley [Lake] Concessions” in Summary Table 1, compared with “NECA Contract”), but the difference between those concessions and the estimated cost of doing the work under Alaska prevailing rates is still around \$4 million. At each level except the open-shop, the presence of the “Little Davis-Bacon” act (LDBA) would increase contracting costs, because at the time this report was prepared, wage rates required by it were actually higher than union scale.

Not included in the table are three additional areas of savings that might arise from competitive bidding, even if the projects were built under Alaska prevailing rates. 1.) Some added savings would result from parts of the line contracts for which manhour estimates of labor use were not available. 2.) Savings would arise from the competition itself, if included among the bidders were any of the large, experienced open-shop contractors who are known to qualify for lower bonding rates and reduced worker’s compensation insurance premiums, because all competitors would have to

anticipate their ability to bid up to \$1.5 million less as a result. 3.) As much as another \$9 million could be saved by bidding the separately contracted parts of the projects (substations and energy storage facilities) competitively. If these savings were realized, they would add another \$10.5 million to the open-shop savings and \$5.6 million to prevailing rate savings, but nothing to the IBEW Bradley Lake Concessions.

**Summary Table 1**  
**Cost and Savings on Intertie Projects**  
**Depending on the Nature of Labor Contracting Terms**

CONTRACTING CONDITION	NORTHERN INTERTIE COST	SAVINGS \$	SAVINGS %	INDICATED SAVINGS, ALL INTERTIE PROJECTS
NECA CONTRACT WITH LDBA	\$50,496,028	\$0	0%	\$0
NECA CONTRACT (NO LDBA)	\$50,302,076	\$193,953	0.4%	\$484,882
BRADLEY CONCESSION WITH LDBA	\$47,703,885	\$2,792,143	5.5%	\$6,980,358
BRADLEY CONCESSION (NO LDBA)	\$47,513,832	\$2,982,197	5.9%	\$7,455,492
BRADLEY CONCESSION PLUS 22% RATE DISCOUNT	\$45,106,571	\$5,389,457	10.7%	\$13,473,643
LDBA	\$46,178,450	\$4,317,578	8.6%	\$10,793,946
LDBA RATES ONLY	\$45,967,296	\$4,528,732	9.0%	\$11,321,831
OPEN BIDDING	\$40,990,081	\$9,505,947	18.8%	\$23,764,868

Source: Table 13

If the Northern Intertie project were to be constructed by contractors free to choose their own source of labor, even if they were large open-shop contractors from the lower 48, there would be a much greater likelihood of employment being drawn from the local areas near to where the work is to be performed. It is worthy of note that under the lowest cost estimate, the average construction worker would take home in wages and fringe benefits (exclusive of social security, unemployment insurance, and workers' compensation insurance) over \$80,000 per year. Thus the benefits of competition would not come at the detriment of either the area or the area's workers.

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## I. INTRODUCTION

Before the turn of the next century, Chugach Electric Association and the other Railbelt Utilities may be faced with the need to spend something over \$200 million constructing intertie lines to improve service throughout their region and better link the power grids of Anchorage, Fairbanks, the Kenai Peninsula, the Matanuska Valley, the Copper River Basin, and Valdez. Less than half of the total construction cost of these intertie projects will be provided by state grants, leaving over \$100 million to be paid for by a customer base that will increase only slightly as a result of the projects.

Assuming there are perhaps a quarter of a million families in Alaska who will pay for the "government's share" of the projects' cost, each will wind up paying \$400.<sup>1</sup> And assuming there are about 178,000 Railbelt Utility customers, each will be responsible for \$610 of the "utilities' share" of the costs. So each taxpaying Chugach customer will, in one way or another, bear over \$1,000 of the cost of the intertie projects. Those customers have every right to be concerned with the cost of those projects and the efficiency of their construction, for it is a matter of considerable concern for their own pocketbooks.

But how can the efficiency of construction of the intertie projects be improved? After all, once the analysts and engineers have finished their work and a project has been designed, many of the construction parameters become fixed. An intertie must, for example, connect to existing generators or distribution systems along an established route. Its structures must be built to withstand known weather conditions, its foundations and anchors be suitable for the terrain, its wire be of the right size for its voltage, etc. The answer is that one of the most important, if not *the* most important, variables to any contractor bidding on a job like this is in the organization and deployment of the labor force used to construct it.

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<sup>1</sup> Although there are no income or state sales taxes in Alaska, it is assumed that families will pay for their share of the projects through a reduction in state deposits to the Permanent Fund, the fund which distributes annual dividends to each Alaskan.



Labor is a large part of the construction of power transmission lines, generally amounting to 30 to 40 percent of costs. For these interties, total labor cost would be on the order of \$70 million, so a reduction of only a single percentage point would yield more than \$700,000 in savings, and labor reductions resulting in lowering overall project costs by a single percentage point would save over \$2,000,000. It is, therefore, far from trivial to evaluate the cost of labor for the projects under various conditions or restrictions that might be encountered or which might be made part of the bid specifications, and see whether any such savings are possible.

Three general types of restriction on the use of contract labor exist, of which two will be discussed at some length. First, the one that will not be discussed is the set of restrictions on labor use imposed on almost all employers by various levels of government. Included here are such items as statutory minimum wage rates, prohibitions of child labor, safety and health requirements, social security, and unemployment protection, workers' compensation insurance, and the like. Although they vary somewhat from state to state and job to job, whatever they are for a particular job, they are essentially the same for all contractors on that job and are therefore inescapable. Of the two that will be discussed, the more significant is that which comes about as a matter of private contract—the restrictions on the use and deployment of labor found in collective bargaining agreements. Although any such agreements would seem to affect only organized labor and its employers, it does sometimes happen that for whatever reasons, a construction buyer will specify that only contractors who are already signatories to such agreements, or are willing to abide by their terms, will be allowed to perform the work. The third case is that of restrictions imposed by governments in the form of what are called “prevailing wage” laws.

To accomplish these ends, this report is organized as follows:

- **Section II** will deal with the question of competition among contractors and will demonstrate, through the evaluation of existing data on the construction of other transmission line projects, that a relationship does indeed seem to exist between the type of labor restrictions that apply on a job and the sharpness of the competition for it, and its cost.

- **Section III** evaluates the nature of the restrictions on labor use and deployment that have evolved in recent years in the unionized sector of the construction industry, and compares the wage rates, fringe benefits, crew deployment, and the like between open-shop work and union work. In that section will be found a discussion of the labor situation in Alaska. Finally, the salient characteristics of the IBEW contract will be

previewed.

- **Section IV** looks into the restrictions on labor use and deployment in prevailing wage laws in general, including the federal Davis-Bacon Act, and then of the Alaska prevailing wage law. It details some of the requirements of the Alaska law as they would apply to the intertie project, were it determined that the project was covered by the statute.

- **Sections V through IX** perform comparative analysis of four levels of contracting as they might apply to engineering studies of the Northern Intertie segment of the overall intertie project, as follows:

1. Construct under the National Electrical Contractors Association (NECA) Contract With the International Brotherhood of Electrical Workers (IBEW)
2. Construct under IBEW Bradley Lake concessions as outlined in the Memo of Understanding,<sup>2</sup> or under additional IBEW concessions as might be obtained.
3. Construct under Alaska prevailing rate law,<sup>3</sup> or under Alaska prevailing rates.
4. Construct under open-shop rates and practices in open competition.

- **Section X** will provide the conclusions and a final note.

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<sup>2</sup> In 1990, a Memorandum of Understanding was entered into between various members of the Railbelt utilities and the International Brotherhood of Electrical Workers, Local 1547 which, if the memorandum were in effect, would require that any contractor selected to build the intertie project be an Alaska company employing Alaska workers through contracts with IBEW Local No. 1547, under concessionary IBEW rates and terms similar to those previously granted to Newbery Alaska for construction on the Bradley Lake project, and/or such further concessions as the parties might negotiate. Consultants have been informed that the Memorandum of Understanding may or may not be operationally valid, and offer no opinion as to its legality or applicability.

<sup>3</sup> Alaska Statutes, Title 36, Chapter 05 pertains to state regulation of wages and hours of labor on public contracts.

## II. MANAGEMENT FLEXIBILITY AND IMPACT ON COMPETITION

### A. The Nature of Competition Among Contractors for Work.

In a free enterprise society, competition is relied upon to protect the consumer by inducing competitors to provide goods and services at prices and conditions that “meet the market” in as efficient a way as possible, since only the efficient survive. Suppliers that charge more than the market can bear lose business to those that charge less, thus forcing the higher priced suppliers out of the marketplace unless they either reduce their prices or create political or other noneconomic conditions that permit them to add a monopoly component to their prices.

All standard textbooks and courses in economics describe not only the mechanics but also the benefits of competition in a free enterprise society, and belief in their reality is one of the most widely shared perceptions of the Western world. Instinctively, we know that in the absence of collusion or other aberrations in the marketplace, if there is only one contract to be awarded and several contractors who are interested in having it, those several will evaluate their cost estimates carefully. Each will trim away all possible inefficiencies and excess profit margins in the hopes of underbidding the others by enough to get the job, but still have a job worth having—that is, one whose estimate covers real costs and provides an acceptable return for the risks involved.

Competition for a project like the Northern Intertie Project. It is reasonable to ask how a contractor interested in crafting a bid in competition for a project such as the Northern Intertie Project, the 230 kV transmission line proposed to be built between Fairbanks and Healy, might approach the problem of identifying areas of inefficiency or of potential cost savings to increase the likelihood for having the lowest competent bid. The major components of this job, as outlined by Dryden & LaRue for one of the possible routes between the towns, will suffice for the illustrative purposes.<sup>4</sup>

By the time that contractors are invited to bid on a construction project like this one, land acquisition, route selection, tower and foundation design, materials delivery patterns, and similar items have already been settled by engineering studies. The con-

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<sup>4</sup> Dryden & LaRue, Inc., “Northern Intertie Project Cost Estimate,” July 1994. The particular route analyzed by D & L, known as the “Southern Route,” is no longer considered to be the most likely, but that fact is not critical to our purpose here, which is not to perform a cost estimate, but simply to show what components of total cost are within the control of the contractor for adjusting his bid.

tractor's purview is generally limited to arranging for or supplying equipment necessary to the clearing, assembly, and erection of the poles and towers, and stringing the wire, and providing the organization and labor necessary to accomplish it. Here too, the steps involved in each process are pretty well known by any competent and experienced bidder. Only three major areas exist for a contractor to differentiate his bid from those of other contractors in the hopes of having the lowest bid and winning the work: these are equipment, labor, and margin.

With respect to equipment, a competent contractor can anticipate what equipment is necessary to complete the job, but he may or may not have it available and near the proposed construction site. Thus he must anticipate how to buy or lease the equipment he thinks he will need, and how he solves that question will influence his bid amount. Regardless of what he chooses, however, his costs will not be greatly different from those of other contractors unless highly specialized or custom-made equipment is required, in which case the contractor who already has it will have an advantage over anyone who does not, but this project should not require any such. For our purposes here, we can assume leasing equipment in Anchorage or Fairbanks or bringing it in from other parts of the state or from the lower 48 will not produce a cost difference sufficient to win or lose a bid.

With respect to profitability or margin, all the contractors will estimate their actual anticipated costs to complete the work, then add a margin of safety in preparing a final bid. Different contractors will handle this differently, but those who are experienced will have some rule of thumb that has kept them from bankruptcy in the past.<sup>5</sup> If all contractors use the same percentage for margin, those with lower labor and equipment costs will have margin of lower total dollar amounts, allowing them to bid even lower, but the lower equipment and labor costs must drive the margin, not the other way around.

## **B. Management of Labor Is Key Variable in Bids**

Management of labor, the third item, is by far the most important variable with which contractors can modify their bids, although it may not be available in all circumstances. In the management of construction labor, one can expect three levels of competition depending on the nature of the restraints under which the bidding will occur:

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<sup>4</sup> As an example, one rule of thumb is that the margin on a job shall be no less than one-third of the total of expenses on the job that are at risk: labor, equipment leasing and other time-based expenses, and all expenses that might be extended by time. Experienced contractors have said that any lesser margin courts disaster, and any contractor who consistently bids with a margin much below this range is highly likely to go out of business.

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- *No restraints—open market.* In most private contracting situations, the selection of the individuals who will be performing under a contract is within the discretion of the contractor, because in such situations the construction buyer is interested only in the outcome of the contract. Typically, he wants a building to the plans and specifications his architects and engineers have decided upon, a building of a certain square footage and quality level, to house a certain number of persons or activities, to meet certain design characteristics, to conform to certain local or national building codes, to be finished on a certain schedule, etc. His architects or engineers are concerned with drafting specifications for the contractors to carry out. He is concerned with the building outcome in compliance with those specifications, not with the building process or how construction is carried out (within boundaries provided by law). If the contractor selected wants to use one journeyman at \$25 per hour and two helpers at \$10 per hour each (total \$45 per hour) instead of two journeyman at a total of \$50 per hour, or the other way around, that is up to the contractor and no concern of the construction buyer. Similarly if a contractor wants to pay \$30 per hour to a journeyman to act as a flagger instead of paying \$5 per hour to a casual laborer, it is of no concern, since even if it were up to the buyer to evaluate the quality of contractors' personnel, which it should not have to be, little or no quality difference would be discernable in the output.

In this mode, the construction buyer is disassociated from the payments to employees of the contractor in much the same way buyers of automobiles or television sets are disassociated from the wages or working conditions of the employees of the firms that made the products. If a contractor is able, by organizing his labor force or changing the deployment of his workers or paying them wages that he thinks reasonable to offer and they think reasonable to accept, and thereby lowers his overall bid on a job, making it less expensive for the construction buyer to have the same quality of output, money is saved, and all concerned are satisfied. The only ones dissatisfied are others who might otherwise have gotten the work at higher prices, or who feel they have some proprietary rights to the work.

- *Federal or state prevailing wage restraints.* Projects that are built for the federal government, or in which the federal government has a substantial interest, must follow the requirements of the Davis-Bacon Act, and in many states (Alaska included) projects that are built for the state must comply with the requirements of a state-level equivalent, a prevailing wage or public contracts act often called a "Little Davis-Bacon" act.<sup>6</sup> These acts and their economic impacts will be discussed here in a subsequent section. For the

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<sup>6</sup> Whether the intertie projects should be considered projects built for the state or in which the state has a substantial interest, is not a settled question.

purposes now it is sufficient to know that were a project such as the Northern Intertie to be built under Little Davis-Bacon restraints, contractors would have to pay wage rates no less than the levels of wages prescribed as prevailing by the Alaska Department of Labor, and meet certain other requirements. Subject to later verification, let us assume that for outside electrical work these rates are near to or the same as those found in the current NECA-IBEW contract, the union rate; that the prevailing wage carries with it the requirement to pay fringe benefits at no less than the levels prescribed; and that workers can only be employed in the categories of labor and job titles included in the prevailing wage listing, such as "lineman" or "groundman" or "apprentice," but not as "constructor" or "helper" or "learner."

Under these restraints, the buyer of construction takes on, vicariously, a social commitment, and must concern himself at least indirectly with the process of construction as well as the output. The contractor finds his flexibility in labor deployment limited, and can no longer use price (wages) as a control of quality among workers. He retains some (but not necessarily all) flexibility with respect to crew make-up, scheduling of overtime, and the like, but loses the ability to substitute organization and management for wage cost.

- *Union contract terms.* Were a project such as the intertie project to be built by a union contractor or under a union project agreement, it would be built under the terms of the IBEW contract (or some concessionary terms covering the same grounds to a lesser extent) that would contain many additional restraints beyond wages, benefits, and job titles. As will be discussed more fully later, such contracts contain rules, limitations, and payments concerning crew composition, overtime use, show-up pay, special condition pay for high work or working under helicopters, travel time requirements, per-diem subsistence, further restrictions of crew composition, and use of the hiring hall (so that workers are provided by the union rather than selected by the contractor). Even if wage rates and fringe benefits found in the contract might be the same as those in a Little Davis-Bacon determination, the constraints on the management of labor and the increase in the cost of labor are substantially higher.

#### Impact of Wage Restraints on Competition and Costs.

Based on the above, one might hypothesize that even without knowing the specifics, contracts let under competitive open-market conditions would be more likely to produce greater competition and lower construction costs than contracts for similar work let under prevailing rate conditions, and both would have more competition and lower construction costs than contracts let under union-only conditions or let without

**Table 1**  
**500-kV Lines Constructed in U.S. Western States, 1979-1990**

No.	Year	Miles	Wage Conditions	Low Bid	Diff. 2 - 1	\$/Mile (Cur. \$)	Corr.	\$/Mile (1990 \$)
1	1979	84.0	open	11,715,000	14.0%	139,464	1.88	262,250
2	1980	85	open	8,237,973	4.1%	96,917	1.60	155,067
3	1981	442	closed				1.43	
4	1982	160	closed				1.35	
5	1982	366	closed				1.35	
6	1982	37.6	D/B	9,661,377	1.2%	256,951	1.35	346,884
7	1982	37.6	D/B	11,858,488	4.5%	315,385	1.35	425,769
8	1982	18.4	D/B	3,383,601	6.7%	183,891	1.35	248,253
9	1983	224	open	17,044,599	4.8%	76,292	1.31	99,943
10	1983	23.9	D/B	20,770,961	12.7%	86,698	1.31	113,574
11	1983	85	D/B	13,200,000	1.7%	153,488	1.31	201,069
12	1983	160	closed				1.31	
13	1984	45.9	D/B	12,737,333	7.2%	277,502	1.26	349,652
14	1984	44.6	D/B	11,012,960	0.2%	246,927	1.26	311,128
15	1984	45.9	D/B	11,814,968	301%	257,407	1.26	324,333
16	1984	29.2	D/B	8,452,889	4.3%	289,483	1.26	364,748
17	1985	45	open				1.22	
18	1986	32	negotiated	15,000,000	-	468,750	1.20	562,500
19	1987	34	negotiated	15,000,000	-	441,176	1.16	511,764
20	1988	31	D/B	3,771,500	1.05	121,661	1.10	133,827
21	1990	82	D/B	15,993,404	5.0%	195,041	1.0	195,041
22	1990	72	D/B	17,960,756	5.05	249,495	1.0	249,495
23	1990	-	D/B	3,843,685	0.8%		1.0	
24	1990	82	D/B	126,874,000	4.8%	205,780	1.0	205,780
25	1990	81	D/B	21,640,000	0.9%	257,619	1.0	257,619
26	1990	5.2	D/B	3,697,446	18.1%	711,047	1.0	711,047

Source: Associated Builders and Contractors, Inc.

Note: "Diff. 2 - 1" is the percentage difference between the lowest bid and the second-lowest. "Corr." is the correction factor to convert dollars of the year to constant dollars of 1990 value.

competition. To test this hypothesis, contract bid information was sought on similar projects that had been done in the past where it was known what form or labor restrictions applied. A data base of such information was found in an open letter addressed to Pacific Power and Light Company by the Associated Builders and Contractors, Inc., an association of nonunion contractors (November 4, 1991). This is summarized in Table 1, above. This letter gives the bid details on 26 500-kV lines constructed in the western United States between 1979 and 1990. Although there were undoubtedly a larger number of 230-kV and 138-kV lines constructed during this period, these are the only ones for which we have been able to locate data.

The following derive from Table 1:

1. On protected-wage closed bidding jobs (3, 4, 5, and 12), there is no information, since the amounts of the bids on those jobs were not disclosed by the construction buyers.

2. On negotiated jobs, we have cost information on only two (18 and 19), showing that for these two jobs, the cost per mile was on average of \$537,132 in 1990 dollars.<sup>7</sup>

3. On Davis-Bacon jobs—or little Davis-Bacon, the source does not differentiate—the average bid difference between the lowest and next-lowest bidder was 4.6 percent, and the average cost per mile, in 1990 dollars, was \$295,881.

4. On the open-competition jobs (1, 2, and 9), the average difference between the lowest and the next-lowest bidder was 7.6 percent, and the average cost per mile, in 1990 dollars, was \$172,510.

Although the statistical base is not large enough for other than qualitative conclusions to be drawn from these data, they support the hypotheses that negotiated-price jobs are likely to be costlier than jobs for which various contractors compete, and that a relationship exists between the labor conditions required by contracts and the cost of things produced under them. A summary of these data is provided in Table 2.

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<sup>7</sup> The construction projects covered by the table took place over a span of 11 years during the earlier part of which there was considerable inflation in the United States. Because the jobs identified as open-shop jobs tended to be from the earlier years, it might be argued that cost differences might be attributable to the inflation rather than to differences in labor terms. Stating all costs in constant dollars eliminates this problem. The correction factor used here is derived from the CPI series of the U.S. Department of Labor, Bureau of Labor Statistics.



**Table 2**  
**Summary Analysis, 500-kV Lines Constructed in Western U.S., 1979-1990**

Labor Conditions in Bid Base	Bid Difference Between Lowest, Next-Lowest Bidder	Construction Cost in \$/mile (in constant 1990 dollars)
Closed bidding	-	-
Negotiated price	-	537,132
D/B rates	4.6%	295,881
Open competition	7.6%	172,510

Source: Table 1.

### C. Summary of Competitive Factors and Cost of Contracts

The major factor in competition is deployment and cost of labor. To the degree that use of labor is restrained either by a prevailing wage requirement or by union contract agreement, competition decreases and the cost of projects increases. Data available support the facts of both decreased competition and increased costs, but the data are insufficient to evaluate the amount in either case.

### III. THE RESTRAINTS OF ORGANIZED LABOR ON COMPETITION

Just as competition will force company competitors to provide goods and services that “meet the market,” so it will compel the payment of market wages and conditions. If a company offers less than the market, it will not be able to recruit a competent work force. If a company is compelled to pay wages above and beyond a market rate, it will lose business to competitors, and may even be unable to stay in business. As a result, such a company’s employees will suffer unemployment and even permanent loss of jobs. The construction labor scene provides a dramatic example both as to how competition works in the labor market, and as to how the construction unions use political and other tactics in order to offset the economic forces of competition.

#### A. Construction Union Decline.

In 1973, the AFL-CIO building and construction unions enrolled 40 percent of the construction industry labor force as members; by 1994, this proportion was only 18.8 percent.<sup>8</sup> (See Figure 1.) Meanwhile, the construction labor force grew by approximately 1.5 million.<sup>9</sup> In the first nationwide study of the market penetration of open-shop construction, it was estimated for 1975 that “the open-shop builders are in the majority and probably control 50 to 60 percent of the total work.”<sup>10</sup> A second nationwide study, made nine years later, concluded that:

the dollar volume of construction produced by union craftsmen is not likely to exceed 30 percent of the total. . . . During the years since 1970, open-shop construction has increased in the sectors and regions in which it has historically dominated. At the same time, sectors and regions which traditionally have been union strongholds have been significantly penetrated by the open shop.<sup>11</sup>

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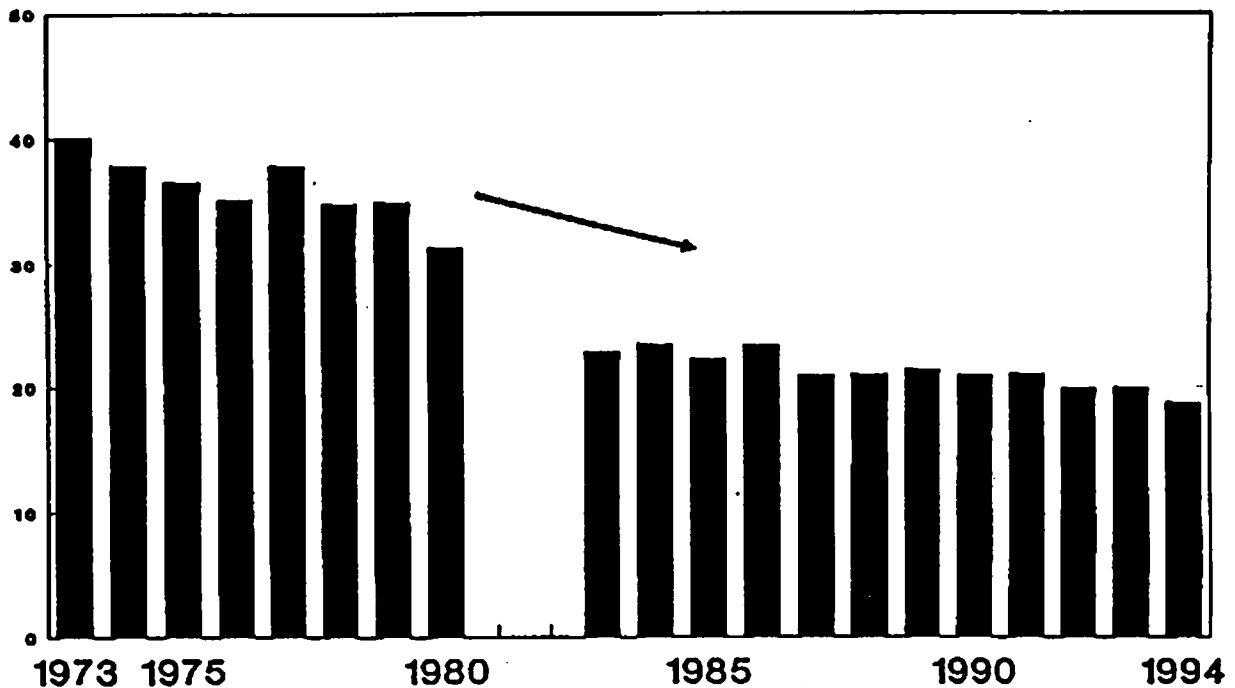
<sup>8</sup> Union membership data are published annually in the U.S. Bureau of Labor Statistics’ monthly journal, *Employment and Earnings*, usually in the January issue but sometimes in the February one. They are then reprinted in the *Daily Labor Report* (Bureau of National Affairs, Inc. [BNA]). For the 1994 data, e.g., see *Employment and Earnings*, vol. 42, No. 1, p. 216, Table 42. (1995).

<sup>9</sup> Data on the construction labor force are published monthly in *Employment and Earnings*.

<sup>10</sup> Herbert R. Northrup and Howard G. Foster, *Open Shop Construction* (Philadelphia: Wharton Industrial Research Unit, University of Pennsylvania, 1975), p. 351.

<sup>11</sup> Herbert R. Northrup, *Open Shop Construction Revisited* (Philadelphia: Wharton Industrial Research Unit, University of Pennsylvania, 1984), pp. 27-28. Hereinafter cited as “OSCR book.”

**Figure 1**  
**Construction Industry**  
**Union Employment as Percent of Total**  
**1973-1994**



**SOURCE:** Bureau of Labor Statistics

No study of this nature has been published since 1984, but based upon regular monitoring of the field, the open-shop share of the construction dollar has probably stabilized at 70-80 percent of the total market.<sup>12</sup>

The International Brotherhood of Electrical Workers (IBEW), like other construction unions, has seen its membership decline substantially. Formerly, the National Electrical Contractors Association (NECA), which is closely allied with the IBEW, produced the best yearly data nationwide and by state concerning the union-nonunion division of work in a single craft. As shown in Table 3, these data applied to inside

<sup>12</sup> These estimates are based upon the Dr. Northrup's regular monitoring of association, contractor, and union contacts and publications. For case studies in one area in which union construction virtually collapsed, and in another in which union control has largely been maintained, see Northrup, "Arizona Construction Labor: A Case Study of Union Decline," *Journal of Labor Research*, vol. 11 (Spring 1990), pp. 161-180; and Northrup, "The Status and Future of Unionized Construction in New Jersey," *N.J. Building Contractor*, vol. 4 (December 1990), pp. 9-12.

electrical workers. In 1972, the first year in which the NECA data were published for the country as a whole, 37 percent of the 33,189 inside electrical employers and 55 percent of the 327,411 employees in this trade were governed by IBEW contracts. By 1989, the last year for which these data were published, only 15 percent of the 58,644 employers and 29 percent of the 542,597 employees were so situated.

Table 3

**IBEW and Other Inside Electrical Employers and Employees  
United States, 1972-1989**

Year	<u>Employers</u>					<u>Employees</u>				
	Total	IBEW	Percent IBEW	Other	Percent Other	Total	IBEW	Percent IBEW	Other	Percent Other
1972	33,189	12,421	37	20,768	63	327,411	178,735	55	148,676	45
1973	33,129	12,187	37	20,942	63	346,593	181,884	52	164,768	48
1974	35,491	11,775	33	23,716	67	346,844	176,071	51	170,773	49
1975	35,989	11,400	32	24,589	68	317,818	159,499	50	158,319	50
1976	37,172	11,425	31	25,519	69	315,930	162,598	52	153,322	48
1977	38,760	9,900	26	28,860	74	332,888	158,523	48	174,365	52
1978	40,563	9,048	22	31,515	78	364,018	164,188	45	199,830	55
1979	42,902	10,853	25	32,049	75	397,605	188,138	47	209,467	53
1980	43,880	10,308	23	33,572	77	409,051	173,450	42	235,601	58
1981	42,722	9,489	22	33,233	78	412,158	160,782	39	251,376	61
1982	42,879	9,019	21	33,860	79	397,902	148,249	37	249,653	63
1983	44,307	9,990	23	34,317	77	399,264	152,171	38	247,093	62
1984	46,510	9,728	21	36,782	79	444,829	162,743	37	282,086	63
1985	49,323	9,312	19	40,011	81	481,390	158,267	33	323,123	67
1986	51,961	8,989	17	42,972	83	507,159	155,352	31	351,807	69
1987	55,511	9,045	16	46,466	84	518,203	155,656	30	362,548	70
1988	58,697	9,116	16	49,581	84	542,265	161,931	30	380,334	70
1989	58,644	8,891	15	49,753	85	542,597	159,177	29	383,420	71

Source: National Electrical Contractors Association, Annual Survey.

In Alaska in former years, however, with its booming construction economy, the IBEW fared much better. For the four years, 1986–1989, for which NECA published Alaska data, IBEW-unionized inside employers, as shown in Table 4, maintained a relatively stable percentage of the jobs, while the percentage of inside IBEW employees grew because unionized contractors tended to be the larger ones who won the big jobs. The data do not indicate that in any other state similar job gains were made, although data for all other states except Hawaii were published from 1973–1989, and the major union losses were in the 1970s and early 1980s, with the unionized share in the 1986–1989 period being much more stable.

Table 4

**IBEW and Other Inside Electrical Employers and Employees  
Alaska, 1986-1989**

Year	<b>Employers</b>					<b>Employees</b>				
	Total	IBEW	Percent IBEW	Other	Percent Other	Total	IBEW	Percent IBEW	Other	Percent Other
1986	239	105	44	134	56	1,489	638	43	851	57
1987	217	92	42	125	58	1,082	627	58	455	42
1988	202	82	41	120	59	863	415	48	448	52
1989	175	78	45	97	55	1,017	616	61	401	39

Source: National Electrical Contractors Association, Annual Survey

No such data have been published since those for 1989 were released. The IBEW international secretary reported to the 1991 convention that membership had declined from approximately 1.1 million to approximately 900,100 between 1986 and 1991, but these data include IBEW membership in manufacturing, utilities, and railroads, as well as in inside and line construction.<sup>13</sup> In mid-1994, the IBEW secretary announced that the union's "construction branch membership numbers are beginning to improve. Losses of . . . membership have slowed, almost to a stop."<sup>14</sup> During the period 1991-1993, nearly all AFL-CIO unions, including the IBEW and other construction unions, suffered

<sup>13</sup> *Officers' Report to the 34th Convention of the International Brotherhood of Electrical Workers* (1991), p. 63.

<sup>14</sup> "Building a Better Life for the IBEW Family," *IBEW Journal*, (July 1994), p. 2.

membership losses according to the per capita tax paid to the AFL-CIO.<sup>15</sup>

These data are somewhat contradicted by a new survey for 1989–1992 made by NECA.<sup>16</sup> This report revises the methodology of the previous annual reports, eliminates all white-collar occupations from its survey, and thereby raises its claimed market share for employers from 15 percent to 36 percent in 1989, which declined to 34 percent in 1992; and for employees, from 29 percent to 38 percent in 1989, which grew to 50 percent in 1992.<sup>17</sup> It appears likely also from the data and the observations just quoted from publications and officials that much of homebuilding and small commercial work, which is overwhelmingly done open shop, is not included in these revised surveys. Unfortunately also, no comparisons can be made because of the incompatibility of the former and present surveys.

Any idea that there had been a major improvement on IBEW's control of the market was put in doubt by IBEW President J. J. Barry in his policy statement of April 18, 1995,<sup>18</sup> in which he declared that the IBEW overall market share stood at 30 percent. Moreover, AFL-CIO statistics on paid membership of affiliates, issued in October 1995, showed that the IBEW had lost 31,000 members between 1993 and 1995.<sup>19</sup>

No studies exist to our knowledge concerning the extent of the union/open-shop division of work in outside (line) construction. The electric power grid is largely built, and therefore, all employment in this sector nationally is down. There are, however, strong indications that the open shop now has the majority of what is available in this work for electric utilities. A list of 18 unionized and 7 open-shop contractors who had 500-kV experience in the early 1980s saw 14 of the unionized contractors no longer in this business by 1991, but 6 of the 7 open-shop ones were then still active.<sup>20</sup> Today, it

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15 "AFL-CIO Membership Drops Significantly to Early 1970s Levels; Few Unions Gain," *Construction Labor Report* (BNA), vol. 39 (Oct. 6, 1993), p. 826.

16 *Special Report. Inside Construction Trends: 1989–1992*, (NECA, 1995).

17 *Ibid.*

18 *[International] Office Policy on Inside Construction Organizing*, (IBEW, April 18, 1995), pp. 8–9.

19 "AFL-CIO Statistics on Paid Membership of Union Affiliates Prepared for Federation's 21st Constitutional Convention," *Daily Labor Report*, No. 197 (Oct. 12, 1995), p. E-4. It is not known the extent to which these IBEW membership losses were in industries other than construction.

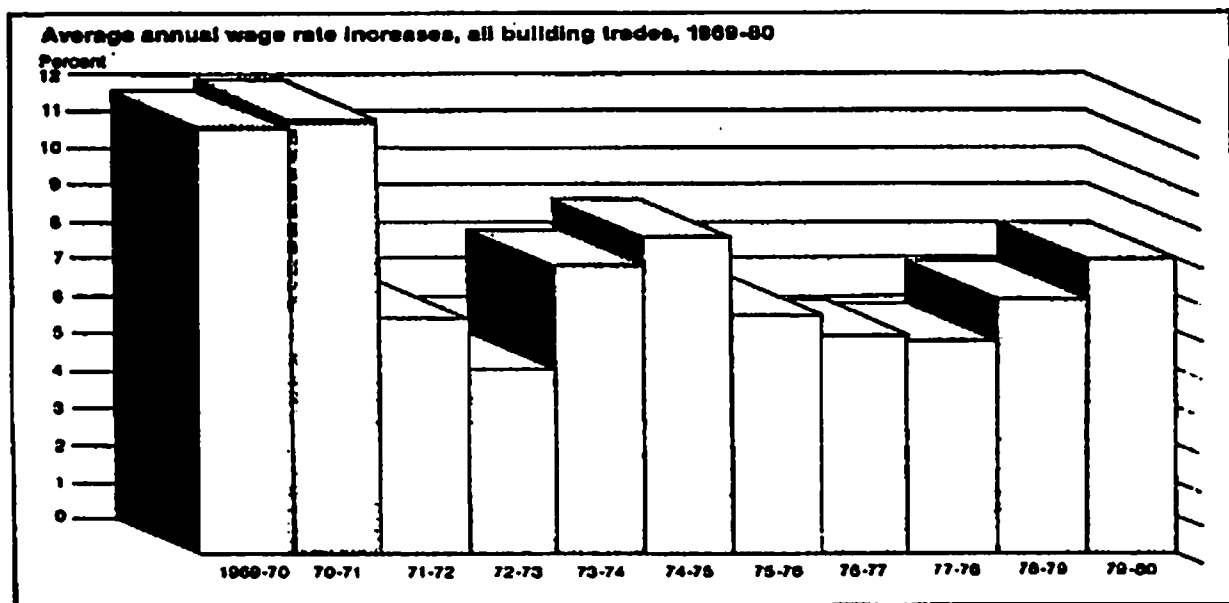
20 The outside electrical work has declined considerably in the last 20 years because most of the interconnections and lines have already been put in place. In a declining business, high-cost and inefficient companies quickly became unable to sustain themselves. Additionally, some of the key union companies, e.g., Foley, Fischback, and others, were seriously damaged during this period by being convicted of bid rigging and price collusion, and in one case being taken over by a corporate raider. See Andy Pasztor, "Fischbach's Watson-Flagg, President of Unit Plead Guilty to Rigging Bids," *New York Times*, Mar. 18, 1985, p. 27; "Utility Sues Firms for Bid-Rigging," *Engineering News-Record*, Jan. 31, 1985, p. 59; "Electric Firms Charged with Rigging Bids," *Engineering News-Record*, July 26, 1984, p. 59; and "Foley to

appears that Irby Construction, the largest open-shop line contractor, and probably the largest of all line contractors, has, or has just completed, the bulk of the 500-kV construction business.

## B. Why Unions and Unionized Contractors Lost Market Share

The reasons for union decline in most jurisdictions are quite obvious. During the 1960s and 1970s, average annual wage increases for unionized construction workers rose as high as nearly 12 percent per year, and averaged during the decade of the 1970s at more than 7 percent per year. (See Figure 2.) Moreover, productivity lagged, restrictions on efficient operations increased, and demands for overtime work at double pay rose with little or no compensating productivity resulting.<sup>21</sup> In response to escalating

Figure 2  
Average Annual Wage Increases, All Building Trades, 1969-1980

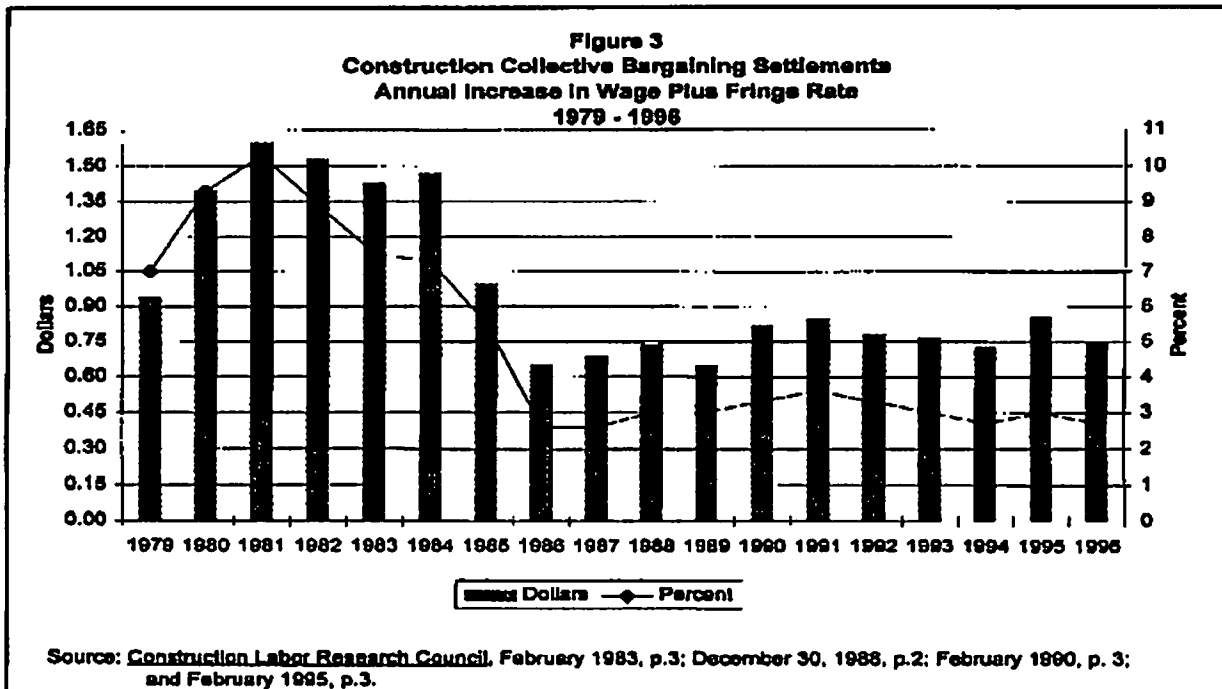


Source: Bureau of Labor Statistics, *Union Wages and Benefits: Building Trades, July 1, 1980, Bulletin No. 2091* (Washington, D.C.: U.S. Government Printing Office, 1981), p. 2.

Pay \$3-Million Fine," *Engineering News-Record*, Nov. 17, 1983, pp. 11-12.

<sup>21</sup> According to a study sponsored by the Business Roundtable: "When a job is scheduled for 50 hours per week, there is a reduction in productivity for the total 50 hours—not just for the 10 hours of overtime. . . . It is interesting to note that after working overtime for six to eight weeks, labor cost is inflated by 50 percent with the productive returns no greater than would be accomplished on a 40-hour week. Records indicate that continuous overtime operations beyond eight weeks results in an actual productive return of less work accomplishment than a regular 40-hour week. . . . The inflated cost per hour of productive effort is greater for the 60-hour schedule. . . ." *Coming to Grips with Some Major Problems in the Construction Industry* (New York: The Business Roundtable, 1981), vol. 1, pp. 9-10.

construction costs, users—those who authorize the construction and pay the costs—sought other means of meeting their construction needs. There resulted a surge of utilization of open-shop contractors, and a substantial increase in the number of formerly unionized contractors who either ceased operating union or set up open-shop subsidiaries and operated “doublebreasted,” that is, formed a holding corporation which had two or more subsidiaries, one operating union and another, open-shop. This permits the corporation to bid on jobs regardless of the union orientation in a given sector or area.<sup>22</sup>



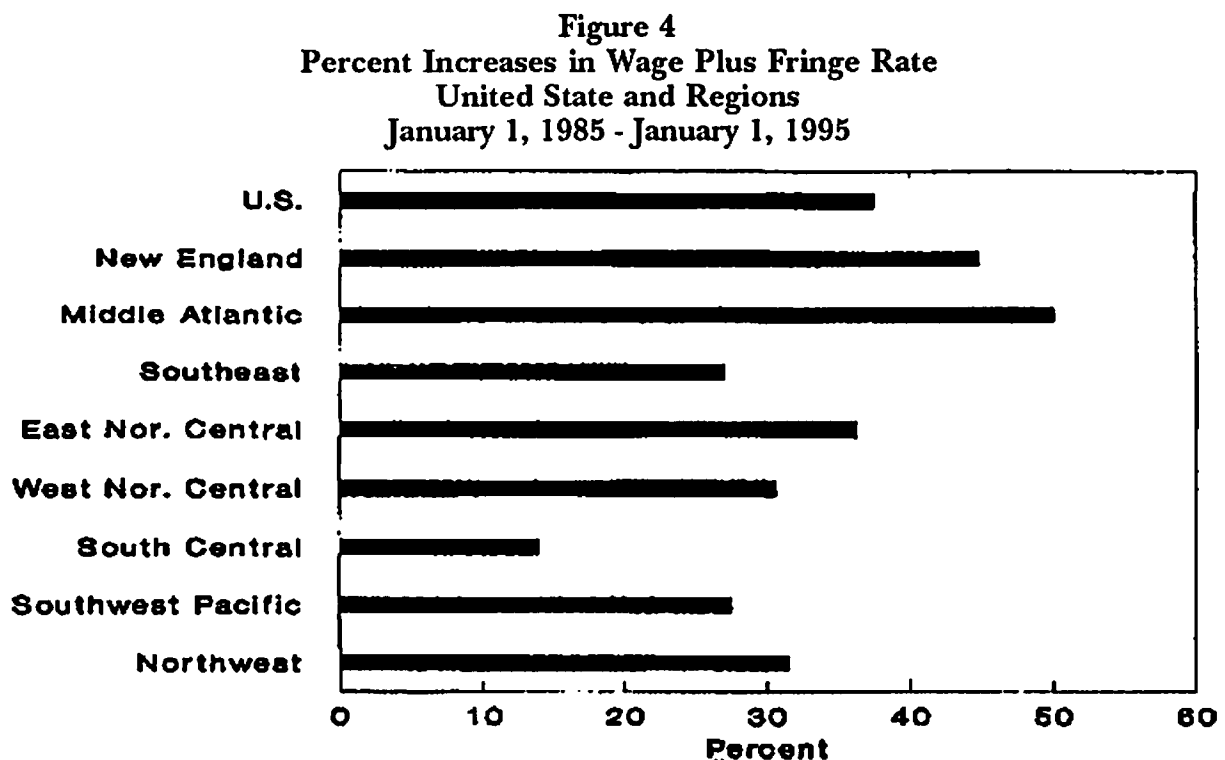
Faced with declining memberships and high unemployment of members, loss of business by contractors who remained unionized, and seemingly ever-increasing competition by open-shop rivals, the construction collective bargaining wage and benefit scene altered dramatically in the 1980s, as shown in Figure 3. After 1981, annual wage and benefit increases declined precipitously, with increases remaining mostly in the 2–3 percent average bracket overall, although in some heavily unionized areas, particularly the Middle Atlantic states, such increases were somewhat higher. Moreover, because wages were already substantial as a result of the wage inflation of the 1960s and

<sup>22</sup> These events are chronicled in the *OSCR Book*, chapters II–V. For analyses of doublebreasted operations and their rationale, see Northrup, “Construction Doublebreasted Operations and Pre-Hire Agreements: Assessing the Issues,” *Journal of Labor Research*, vol. X (Spring 1989), pp. 215–238; and Northrup, “Doublebreasted Operations and the Decline of Construction Unionism,” *Journal of Labor Research*, vol. XVI (Spring 1995), pp. 379–385.



1970s, a 3-percent wage for 1995 averaged \$.86 per hour, and a 2.7-percent raise, \$.075 per hour.

Figure 4 shows the average cumulative percent wage and fringe increase by regions, 1985–1995. In this period of so-called moderation, the percent increases exceed 30 in the Northwest, which includes Alaska, and were as low as 12 in the South Central and as high as 50 in the Middle Atlantic. “Even though rates of increase have been modest [on a national basis], they have matched the increase in the Consumer Price Index for this period.”<sup>23</sup>



Source: *Construction Labor Research Council*, February 1995, p. 2.

Continual increases in fringe benefit costs have been a serious competitive problem for the unionized sector in recent years. Fringe benefit costs are also a political problem in unions as fringe benefits have accounted for an increasing share of the total wage and benefit packages to the dissatisfaction of those unionists who would prefer wage increases instead. Health and welfare costs have been a major factor in this, more than

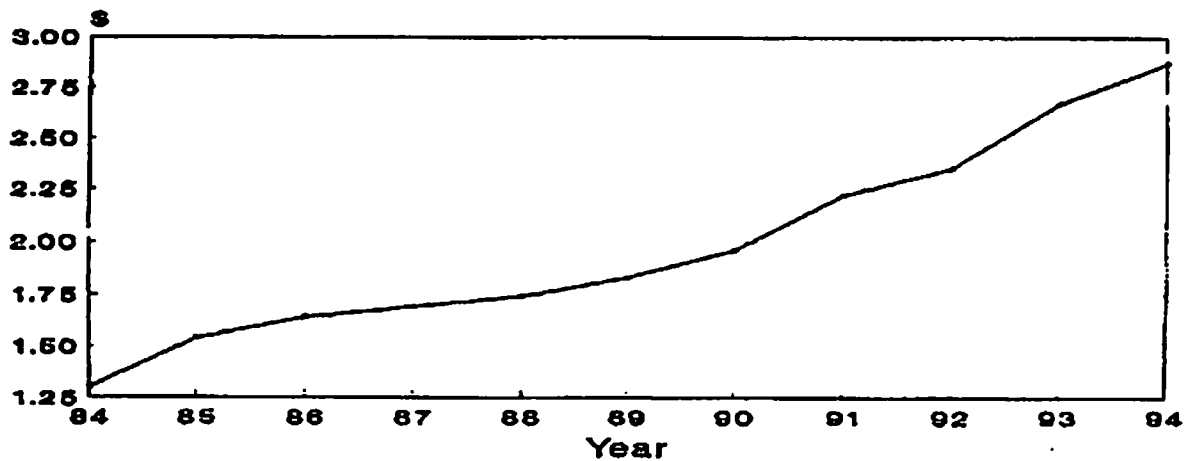
<sup>23</sup> “1995 Construction Labor Rate Trends and Outlook,” *Construction Labor Research Council*, February 1995, p. 2.

doubling in amounts between 1984 and 1994, as shown in Figure 5, and accounting for nearly 15 percent of the base wage rate and more than 11 percent of the average total wage and fringe packages in current unionized operations.<sup>24</sup>

Unions and contractors have also negotiated agreements since the early 1980s removing or modifying numerous restraints to productivity and flexibility of operations, although many such restraints remain in agreements in some localities. Table 5 shows that, in early 1994, "Terms and Conditions" in collective bargaining agreements cost unionized contractors \$2.18 per hour. According to the CLRC:

Year-to-year trends in this series of data are small. The percentage costs of contract terms and conditions fell slowly through the 1980s, but has been stable in recent years. Absolute costs have risen as the industry wage and fringe rate has increased.<sup>25</sup>

**Figure 5**  
**Health & Welfare Contributions**  
**Hourly Amount**



Source: *Construction Labor Research Council*, January 1994.

Since most of these costs are required only as a result of collective bargaining agreements, open-shop contractors reap an economic and competitive advantage. Thus,

<sup>24</sup> "Health Care in Construction. Cost Update and Potential Impact of Legislation," *Construction Labor Research Council*, January 1994, p. 1.

<sup>25</sup> "Cost of Terms and Conditions in Collective Bargaining Agreements," *Construction Labor Research Council*, March 1994, p. 2.

in the 1995 Merit [Open] Shop Survey,<sup>26</sup> 88.7 percent of open-shop contractors surveyed paid overtime only over 40 hours per week, and 97.1 percent at time and one-half,<sup>27</sup> as required by the federal Fair Labor Standards Act (FLSA) and comparable state legislation. Union contracts usually call for overtime at double time in various situations, and sometimes require overtime at over 8 hours in one day regardless whether the weekly total exceeds 40 hours. In addition, work on Saturday or Sunday is required overtime by many union contracts, again regardless of the weekly hours total.

**Table 5**  
**Source of Terms and Conditions Costs**  
**In Unionized Construction**

Overtime	\$ .89
Shift Premium	.32
Show-up Pay	.23
Manning Restrictions	.20
Fringes Paid on Hours Paid	.18
Time Paid, Not Worked	.17
Subsistence Pay	.06
Premium Pay	.06
Holiday Pay	.05
Travel Pay	<u>.02</u>
TOTAL	\$2.18

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Source: "Cost of Terms and Conditions in Collective Bargaining Agreements," *Construction Labor Research Council*, March 1994, p. 2.

Open-shop contractors may or may not pay shift premium; union contracts usually require it. Show-up pay is generally required by union contracts, and can be set at 2- to 8-hours' pay; open-shop builders generally do not pay this. Union contracts may contain all sorts of manning restrictions: number of foremen to journeymen, number of journey to apprentices, restrictions or total ban on use of learners and helpers, strict adherence to jurisdictional lines even if it requires uses of another tradesman who works

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<sup>26</sup> Just prior to the publication of the 1984 *OSCR Book*, Personnel Administration Services (now PAS, Inc., Saline, Michigan,) began conducting annual surveys of the pay practices of the nonunion (open-shop) sector. These surveys, now known as the "Merit [Open] Shop Wage and Benefit Survey," have been continued since with steadily increased coverage, and are now accepted as the most complete coverage and report on this subject.

<sup>27</sup> 1995 Merit Shop Wage and Benefit Survey, p. 7.

just an hour but may receive as much as a full day's pay.

"Fringes paid on hours paid" means paying the rate required for benefits even where the worker is paid for not working. This is probably largely unknown in open-shop construction. Time paid for not working is certainly much more extensive in unionized construction; the differences in premium pay have already been noted; the unionized contractors pay for more holidays not worked, often at premium pay, which open-shop contractors generally do not pay; and unionized firms are much more likely to pay for travel time. Combined with the unionized contractors' higher fringe benefit costs, the result is an important competitive advantage for open-shop contractors.

### C. Open-shop Data and Comparisons with Unionized Sector

Data for open-shop construction are not, and probably never will be, as complete as those for the unionized sector. The reasons are that open-shop contractors utilize, train, and deploy labor quite differently than do unionized ones (as discussed below), do not have the same job classifications or even titles, and do not have the largely standardized job descriptions found in the unionized sector. To determine what open-shop contractors pay, therefore, requires a survey of individual contractors and a determination of the content of jobs to ensure that the data from contractors classify work reasonably similarly.

Earlier open-shop wage and benefit data both from private and government surveys are found in Chapter XI of the 1984 OSCR Book. These reveal a wide dispersion between open shop and unionized wage rates varying from survey to survey, but generally the open-shop rates were found to be significantly below union rates. Open-shop rates also varied substantially according to the size of the project and were more dispersed. Fringe benefits were less common, cost the contractor less, and were different, particularly substituting profit-sharing for defined-benefit pensions.

Data from PAS, Inc., and the CLRC union wage surveys are not strictly comparable because of the different survey methods and coverage, but the respective figures and trends do provide reasonable pictures of the differences between the unionized and open-shop sectors. Table 6 shows average national open-shop wage rates for all crafts and for six crafts, including electrical workers, and general laborers, 1988–1995. These rates, which do not include fringe benefits, are considerably below many union rates, which today are likely to be close to \$20 per hour or greater. PAS reports wide variation in rates for different crafts in different areas, indicating that open-shop rates vary with competition from the unionized sector, as well as vice-versa. Moreover, the much lower rates for laborers are undoubtedly attributable to the fact that the supply of this classifica-

tion is more easily attracted than is skilled labor.<sup>28</sup> Fringe benefits in the open-shop sector vary by region, by size of the contracting company, and by craft. In all but the smallest companies, vacations, holidays, and health and life insurance benefits are available, often on a contributory basis for dependant health insurance. Pensions are less common, profit sharing much more common, than in unionized companies.

**Table 6**  
**Open-shop Construction**  
**Average Hourly Craft Wage Rates**  
**By Craft, 1988-1995**

<b>Hourly Craft Rates</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>
<b>All Crafts</b>	<b>\$10.82</b>	<b>\$10.86</b>	<b>\$11.27</b>	<b>\$11.90</b>	<b>\$11.94</b>	<b>\$12.82</b>	<b>\$12.42</b>	<b>\$12.65</b>
<b>HVAC Mechanics</b>	<b>\$11.33</b>	<b>\$11.53</b>	<b>\$11.86</b>	<b>\$13.01</b>	<b>\$13.24</b>	<b>\$13.72</b>	<b>\$13.45</b>	<b>\$14.28</b>
<b>Carpenters</b>	<b>\$11.46</b>	<b>\$11.62</b>	<b>\$12.06</b>	<b>\$12.50</b>	<b>\$12.78</b>	<b>\$13.23</b>	<b>\$13.35</b>	<b>\$13.30</b>
<b>Electricians</b>	<b>\$11.48</b>	<b>\$11.76</b>	<b>\$12.55</b>	<b>\$12.79</b>	<b>\$13.32</b>	<b>\$13.45</b>	<b>\$13.59</b>	<b>\$13.86</b>
<b>Pipefitters</b>	<b>\$11.54</b>	<b>\$11.98</b>	<b>\$12.66</b>	<b>\$13.39</b>	<b>\$13.34</b>	<b>\$13.52</b>	<b>\$13.91</b>	<b>\$14.31</b>
<b>Plumbers</b>	<b>\$11.89</b>	<b>\$11.50</b>	<b>\$12.13</b>	<b>\$13.07</b>	<b>\$13.17</b>	<b>\$13.82</b>	<b>\$13.85</b>	<b>\$14.16</b>
<b>Welders</b>	<b>\$11.17</b>	<b>\$11.02</b>	<b>\$12.12</b>	<b>\$12.83</b>	<b>\$12.87</b>	<b>\$13.25</b>	<b>\$13.51</b>	<b>\$13.77</b>
<b>General Laborers</b>	<b>\$7.50</b>	<b>\$7.74</b>	<b>\$8.23</b>	<b>\$8.47</b>	<b>\$8.35</b>	<b>\$8.65</b>	<b>\$8.68</b>	<b>\$9.03</b>

Source: "Contractor Compensation Quarterly," *PAS Publications*, Vol. 3 (Issue 4), p. 1.

Table 7 shows 1995 California average craft open-shop wage rates and fringe costs for the six crafts and general laborers in a state selected for its high employment costs (analogous to Alaska).

<sup>28</sup> All information concerning wages and benefits in open-shop companies are based upon PAS survey information in the *1995 Merit Shop Wage and Benefit Survey* unless otherwise cited.

**Table 7**  
**Open-shop Construction**  
**California Average Hourly Craft Wage Rates**  
**1995\***

<b>Craft</b>	<b>Average Rate</b>	<b>Weighted Average</b>	<b>Median</b>	<b>Average Fringe</b>
<b>HVAC Mechanics</b>	<b>\$17.31</b>	<b>\$16.96</b>	<b>\$18.00</b>	<b>12.6%</b>
<b>Carpenters</b>	<b>\$18.01</b>	<b>\$19.68</b>	<b>\$18.46</b>	<b>14.1%</b>
<b>Electricians</b>	<b>\$16.93</b>	<b>\$17.21</b>	<b>\$16.18</b>	<b>16.8%</b>
<b>Pipefitters</b>	<b>\$19.15</b>	<b>\$21.10</b>	<b>\$18.12</b>	<b>14.1%</b>
<b>Plumbers</b>	<b>\$17.98</b>	<b>\$17.61</b>	<b>\$17.00</b>	<b>16.3%</b>
<b>Welders</b>	<b>\$18.36</b>	<b>\$19.81</b>	<b>\$18.00</b>	<b>10.6%</b>
<b>General Laborers</b>	<b>\$13.35</b>	<b>\$15.59</b>	<b>\$14.50</b>	<b>13.5%</b>

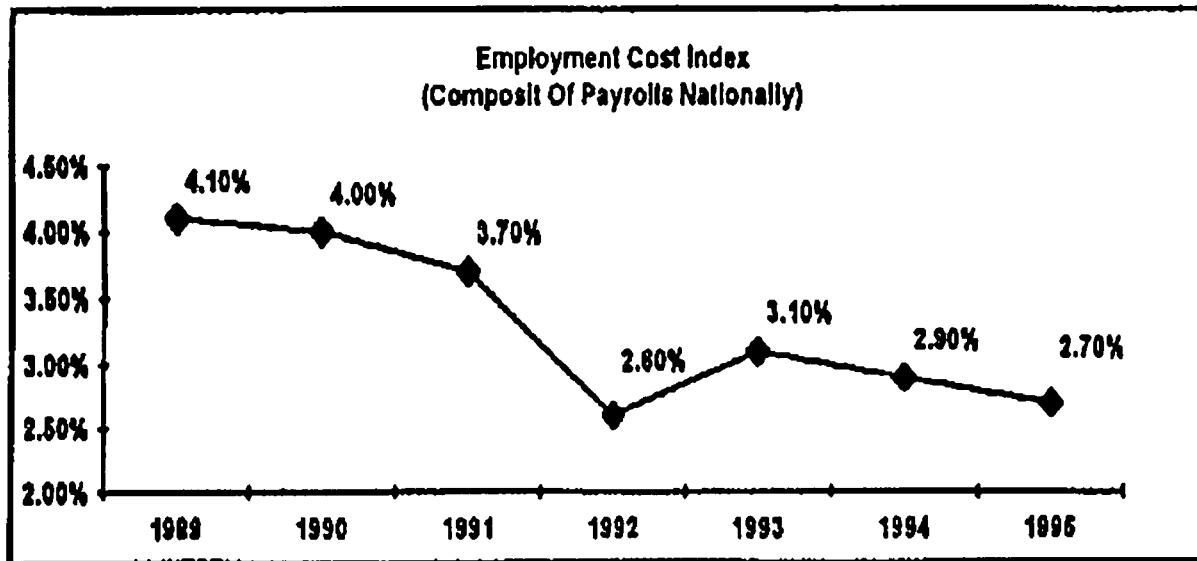
Source: "Contractor Compensation Quarterly," *PAS Publications*, Vol. 3 (Issue 4), p. 3.

\* California's 1995 average hourly rate was \$17.30; the average benefit rate was 14 percent.

Figure 6 completes the picture of open-shop wages with the "Employment Cost Index," which shows the increases in employment costs nationally, 1989-1995. In some of these years, the percentage increases exceeded those that unionized contractors experienced, but since union wages were higher, the dollar amounts are less than those in unionized firms. In three of the last seven years this index has been higher than the cost-of-living index, indicating again the effect of competition for employees.

The data for the open-shop sector demonstrate, as already noted, the lower wage costs of open-shop contractors. They also show, however, that open-shop wage rates are not meager, but rather that the rates of pay provide a reasonably healthy income. Open-shop contractors must pay what the market requires if they are to attract a competent work force. In Alaska, for example, our cost analyses set forth below will assume that open-shop contractors will offer linemen the union rate because the labor market there requires that in order to obtain the necessary skilled personnel. It will also be shown, however, as discussed next, that deployment of labor and nature of training by open-shop contractors will permit substantial savings despite equality of wage costs in some skilled categories.

**Figure 6**  
**Employment Cost Index**  
**(Composite of Payrolls Nationally)**



Source: "Contractor Compensation Quarterly," *PAS Publications*, Vol. 3 (Issue 4), p. 2

#### **D. Deployment, Training, and Local Labor Use**

One of the big differences between unionized and open-shop construction is the deployment of labor. Essentially, union deployment provides that skilled craftsmen perform nearly all the work involved in an expansive definition of a job even though much of the work is semiskilled or even unskilled. Thus, an electrical crew on a union job is likely to consist of three to five journeymen who not only perform the skilled work, but also unload materials, nail up conduit, pull wire through the conduit, etc., although they may be aided in some of these latter functions by apprentices who are studying to be journeymen.

On an open-shop job, the same work will be done by a crew consisting of one journeyman, one or two helpers, and one or two laborers. The journeyman may be paid the equivalent of the union wage rate, or even more, but the helpers and laborers much less. Moreover, incidental work considered as "belonging" to other crafts will be done by the

open-shop electrical crew, but on a union job, require the services of a journeyman in another classification who may be paid a full day's wage for a few hours of actual work. The regularity of jurisdictional disputes on union jobs between the Laborers International Union and various craft unions testifies to the fact that much of so-called craft work does not require craftsmen to perform it.<sup>29</sup>

In Alaska's unionized outside electrical work, skilled craft workers, as discussed below, are assigned to work that does not appear to command their training. Jurisdictional disputes do not usually occur, however, because IBEW Local 1547 has successfully assumed jurisdiction over nearly all outside work. In effect, on the outside work, Local 1547 is an industrial, rather than a craft, union.

The different deployment methods of unionized and open-shop contractors have important implications for the type of training they do, and this in turn greatly affects which group can most easily utilize local labor. Unions, aided and abetted by the U.S. Department of Labor Bureau of Apprenticeship and Training (BAT) and state counterparts, have traditionally designed regulations that limited approved training to apprenticeship, which is a combination of on-the-job training and classroom instruction. Traditional apprenticeship provides for the apprentice to advance on a time schedule regardless of his learning progress. The course typically requires four years, but recently the electrical and mechanical trades have attempted to lengthen apprenticeship to five years<sup>30</sup>—one year longer than is required for a bachelor of electrical or mechanical engineering. Union contracts control the terms and conditions of apprentice hiring and work, including the ratio of apprentices to journeymen, but contractors frequently do not recruit as many apprentices as the contract permits, often because the costs are set too high.

Prior to 1970, the BAT established regulations that effectively prevented open-shop builders from gaining approval for apprentice programs, but this is no longer true, although some state agencies have approved such programs only after considerable litiga-

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<sup>29</sup> Citations and further explanation of the statements made in this section are found in the *OSCR Book*, Chapter IX, and in Herbert R. Northrup, "The 'Helper' Controversy in the Construction Industry," *Journal of Labor Research*, Vol. 13 (Fall 1992), pp. 421-435.

<sup>30</sup> "Electrical Apprentice Program Extended from Four to Five Years," *Daily Labor Report*, No. 63 (April 3, 1987), pp. A-5,6. This article also notes the five-year plans of the Plumbers and Sheet Metal Workers. It is noteworthy that stretched-out apprentice time requirements were common during the 1930s when union construction jobs were difficult to obtain. See Sumner H. Slichter, *Union Policies and Industrial Management*, (Washington: The Brookings Institution, 1941), pp. 24-27.



tion. Today, open-shop companies have many such approved training systems.<sup>31</sup> Besides apprenticeship, open-shop contractors do a considerable amount of on-the-job training and task or block training, which involves the breakdown of skilled jobs into their component parts and has been described in this manner:

An important difference between labor-management apprenticeship programs and the training done by open-shop contractors and their associations is the greater use of task training. . . . Training of workers merely to accomplish specialized tasks has . . . proven to be more efficient and economical for specific projects than the broader training offered by traditional apprenticeship programs. Trainees can reach necessary levels of skills much faster when they concentrate on specialized tasks. The broad knowledge and abilities learned more slowly through traditional apprenticeship are not required by every member of the workforce.<sup>32</sup>

Task training, moreover, does not confine the learner to a narrow craft education. The "building block" method permits the trainee to acquire all-around knowledge by combining school work and on-the-job instruction. The trainee can progress as far as is desired, and at a pace based upon his ability and the motivation required to master a subject and task. Thus, whereas traditional apprenticeship is time constrained, usually set at four years regardless of the trainee's learning ability or desires, the same skills and competence under task training may be acquired in two years, or six years, or at intervals over long periods.

Two other advantages of task training are that it can be implemented on a job-by-job basis, and that multicraft skills can be acquired. Open-shop contractors survey an area's labor force and then devise a training program to meet the job needs in that area. This permits them to utilize local talent to a maximum extent. When the job is completed, the community has a reservoir of new skills. Additionally, where multicraft training is provided, the trainee not only has a wider skill to sell, but also the contractor can make more efficient use of the labor force.

The fact that the task training method permits open-shop contractors to utilize a high proportion of local labor runs directly counter to the almost standard union claims that only by signing a union contract can a community guarantee that outside labor

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<sup>31</sup> Irby, for example, has a well established approved lineman apprentice program, and is currently effectuating one for equipment operators.

<sup>32</sup> *Government Limitations on Training Innovations*. Construction Industry Cost Effectiveness Project, Report D-2 (New York: The Business Roundtable, 1982), p. 6.

will not receive most of the employment generated by a construction project. It is very difficult for unionized contractors to do this because (a) they must utilize a higher percentage of skilled employees since they employ few, if any, sub journeymen (helpers) to handle the semiskilled work, but instead must employ journeymen for this purpose; and (b) their training is largely restricted to traditional apprentice programs. Therefore, unions import "travelers" from local unions in other areas in order to supply journeymen rather than to supply local semiskilled labor.

The *IBEW News*, the official monthly magazine of the national union, repeatedly reports on the use of "travelers." Thus, in December 1995, the Salt Lake City local stated, "We have over 50 travelers working in our jurisdiction," and Bay City, MI, found work improving, stating that "being able to work at home will surely help. . . ." <sup>33</sup> In November 1995, Des Moines, IA, reported, "We even have travelers working in the jurisdiction;" in Atlanta, the travelers were thanked "for helping in protecting our jurisdiction." <sup>34</sup> Similar accounts are found in most issues of this journal in 1995, <sup>35</sup> as well in issues of previous years.

Additionally, one finds a similar situation pertaining to other construction unions. For example, when work slowed on high-rise office buildings in New York City, the travelers were the first to be laid off, causing comment that layoffs had not as yet hurt City residents. <sup>36</sup> In California, the Plumbers and Pipefitters fought open-shop construction with, among other things, the cry of keeping the outsiders out. After this and other unions won agreements to convert refineries to "clean" gasoline, they have imported journeymen from all over the West and beyond. <sup>37</sup>

In contrast, Irby imported only eight employees in performing a major job in Alaska. Moreover, open-shop companies attempt to utilize personnel from the immediate vicinity of the job, not from a large jurisdiction such as the entire state of Alaska. As will be explained below, this is one way in which they can do the job at less cost because they do not then have to pay for camps, travel time, etc. Again, this can be done only if sub journeymen are utilized and trained to do that part of the job to which they are

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<sup>33</sup> *IBEW News*, Dec. 1995, pp. 36, 39.

<sup>34</sup> *Ibid*, Nov., 1995, pp. 30, 34.

<sup>35</sup> *Ibid*, Oct. 1995, pp. 33, 34, 38, 41, and 44; Sept., 1995, p. 34; and Aug. 1995, p. 33, as well as in earlier months and years.

<sup>36</sup> Richard Levine, "As Towers Top Off, Construction Boom Fades in New York," *New York Times*, July 2, 1990, p. A1.

<sup>37</sup> "California Unionized Construction Workers Get Big Boost from Environment Regulations," *Daily Labor Report*, No. 223 (Nov. 18, 1992), p. A-11.

assigned. This type of labor deployment and training is a key aspect of the open-shop cost advantage.

A final advantage of open-shop deployment and training is that the open-shop contractor can utilize the same personnel for jobs in different crafts. Thus, sub journeymen are often used where they are needed, especially in doing rough carpentry and cement work, or simply assisting craftsmen in several occupations according to need. The advantage to the worker is continuity of the job and acquiring different skills; to the company it means savings in hiring costs and fringe benefits since the latter apply to the individual, not necessarily the time worked. Because of the craft union delineations in construction, this is not done in a union situation very easily.

### E. Union Tactics to Regain Market Share

As already noted, many formerly unionized contractors either have broken with unions and now operate open-shop, or have established doublebreasted operations. Meanwhile, unions have agreed to considerably smaller wage and benefit increases and have eliminated or mitigated some contract provisions which restricted productivity and more efficient operations. The construction unions have, however, determined that such economic actions alone are insufficient to regain their market share. They have, therefore, resorted both to political and direct actions.

Politically, construction unions pushed several proposed laws on the federal level that would enhance their power,<sup>38</sup> and have been very active at the state and local level as well. They are also pressuring local governments to require all-union agreements

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<sup>38</sup> A proposal by the construction unions would amend the Employee Retirement Income Security Act of 1974 ("ERISA") to provide that it not preempt state laws requiring payment of prevailing wages and benefits on public projects, regulating apprenticeship and training, or providing for collections of multi-employer plan contributions from open-shop contractors. Its purpose is to reverse court decisions that have prevented states from denying open-shop contractors accreditation of training programs, enacting prevailing wage laws, and requiring contributions of open-shop companies to union welfare and pension plans. See *Operating Engineers and Participating Employers Pre-Apprentice, Apprentice, and Journeyman Affirmative Action Fund v. Weiss Bros. Construction Co.*, 221 Cal. App. 3rd 867, 270 Cal. Rptr. 786 (1990); *cert. den.*, 111 S.Ct.1337 (1991); *Hydrostorage, Inc. v. Northern California Boilermakers Local Joint Apprenticeship Committee*, 891 F.2d 719 (9th Cir. 1989); *cert. den.*, 498 U.S. 822 (1990); and *Electrical Joint Apprenticeship Committee v. McDonald*, 949 F.2d 270 (9th Cir. 1991); *cert. den.*, 112 S.Ct. 2991 (1992). The unions have achieved a victory in an appeals court decision which ruled that ERISA does not preempt state "Little Davis-Bacon" (prevailing wage) acts. See *Keystone Chapter, Associated Builders and Contractors, Inc., v. Foley*, 37 F.3d 945 (3rd Cir. 1994); *cert. pending*, 63 U.S.L.W. 3564 (1995). See, however, *General Electric Co. v. Department of Labor*, 891 F.2d 25 (2nd Cir. 1981); and *Associated Builders & Contractors, Saginaw Valley Chapter v. Perry*, 869 F. Supp. 1239 (W.D. Mich 1994), in which state "Little Davis-Bacon" laws have been found preempted by ERISA because of regulation of contractor employee benefits.

Other legislation supported by the construction unions would expand the coverage of the Davis-Bacon Act, which is now being threatened with repeal by Congress, and outlaw doublebreasted operations. (See, for background, Northrup, note 11, above). For union success in temporarily eliminating the use of helpers on federally funded projects, see, Northrup, "The 'Helper' Controversy in the Construction Industry," note 29, above). Construction unions have also joined other unions in supporting a striker replacement ban.

that would preclude the use of open-shop contractors on major projects.<sup>39</sup>

The direct-action union programs include “salting”—having union members or organizers take jobs with open-shop contractors in order to organize the employees and to disrupt their operations;<sup>40</sup> utilizing environmental permitting processes to delay, or threaten to delay, the issuance of permits, thereby inducing users or financiers of construction to award contracts to unionized contractors;<sup>41</sup> and job targeting—reducing wages to meet open-shop competition, and then (if a unionized contractor wins the bid), providing a payment from a fund based upon a dues checkoff from union members is provided to the contractor enabling him to pay union members their regular union wage rate.<sup>42</sup>

The IBEW has been a leader of what it terms market recovery programs. The IBEW has done more salting and job targeting than any other union, and is actively attempting to enroll open-shop craftsmen. Its stated aim has been forthrightly set forth by the IBEW Special Projects Department:

The goal, then, in union organization of the construction industry, is the organization and maintenance of a loose monopoly of the manpower

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<sup>39</sup> The United States Supreme Court ruled in the *Boston Harbor* case that such agreements are lawful. See *Building & Construction Trades Council v. Associated Builders & Contractors*, 113 S.Ct. 1190 (1993). Such agreements, however, may run afoul of state competitive bidding laws. See *George Harms Construction Co., Inc. v. New Jersey Turnpike Authority*, No. A-113/114-93 40 Construction Lab. Rep. (BNA) 463 (July 13, 1994). But see, also, *Associated Builders and Contractors, Central Ohio Chapter v. Jefferson County Board of Commissioners*, Ohio CtApp., Seventh Dis. (Aug. 8, 1995), 41 Construction Lab. Rep. (BNA) 784 (Sept. 13, 1995); and *New York State Chapter, Associated General Contractors v. New York*, No. 71874 (N.Y. Sup. Ct. – App. Div. (Dec. 22, 1994)). These latter two cases have found no conflict between “Boston Harbor type” project agreements and state procurement laws. The New York case has, however, been accepted for review by New York State’s highest court. See *New York Appellate Court Agrees to Review Project Agreement Cases*, Daily Lab. Rep. (BNA), No. 132 (July 11, 1995), at A-3.

<sup>40</sup> See Northrup, “Salting” the Contractors’ Labor Force: Construction Unions Organizing with NLRB Assistance,” *Journal of Labor Research*, XIV (Fall 1993) 470–492.

<sup>41</sup> See Herbert R. Northrup and Augustus T. White, “Construction Union Use of Environmental Regulation to Win Jobs: Cases, Impact, and Legal Challenges,” *Harvard Journal of Law & Public Policy*, Vol. 18 (Fall 1995), pp. 55-119.

<sup>42</sup> For an analysis of job targeting, see Herbert R. Northrup and Augustus T. White, “Subsidizing Contractors to Gain Employment: Construction Union ‘Job Targeting,’” *Berkeley (Univ. of California) Journal of Employment & Labor Law*, Vol. 17 (Winter 1996), pp. 501-529). Two federal Courts of Appeal have decided that job targeting is illegal where construction is covered by the federal Davis-Bacon Act which requires that “prevailing wages” be paid. See *Building & Construction Trades Department, AFL-CIO v. Reich*, 40 F.3d 1275 (D.C. Cir. 1994); and *International Brotherhood of Electrical Workers v. Brock, et al.*, \_\_\_ F.3d \_\_; 1995 WL613624 (9th Cir. Nov. 1, 1995; 41 *Construction Labor Report* 1060, Nov. 15, 1995). Moreover, in California the State Director of Industrial Relations has ruled that where job targeting exists, the California “Little Davis-Bacon Act” prevailing wage cannot include the supplement paid from the union fund to the contractor, and this has been upheld by a lower state court, a fact which may be significant to the Alaska situation as discussed later in this report. See *Local Union No. 11 v. Aubry*, No. 966400, Cal. Sup. Ct., County of San Francisco, *Order Denying Petition for Writ of Mandate*, (Feb. 2, 1995).

pool.<sup>43</sup>

Local 1547 has been one of the most successful local unions in applying national policy in this regard. Local 1547 was losing ground by the early 1980s. New leadership, and a market recovery program that included salting and job targeting—but, above all, active and aggressive political action—resulted in substantial gains for the union in membership, an ample treasury,<sup>44</sup> *de facto* control of a number of the local electrical cooperative boards, and major influence in state politics. It appears now to be in a very strong position to achieve what the national union has stated is its goal.

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<sup>43</sup> *Union Organization in the Construction Industry*, (Washington: IBEW Special Projects Department, n.d., est. 1990), p. 3.

<sup>44</sup> According to the last filing with the U.S. Department of Labor (Form LM-2, Labor-Management Annual Report, filed April 24, 1995), Local 1547 had income in excess of \$6 million, net assets above \$2 million, and in 1994 made disbursements of nearly \$200,000 in excess of its income.

#### IV. LABOR USE RESTRAINTS IMPOSED BY GOVERNMENT

The unions, and the IBEW in particular, have been highly effective in circumventing the requirements of labor to compete for work. The government has also been active. In addition to the umbrella, safety net, and nondiscriminatory coverages such as social security, minimum wage, unemployment compensation, and mandatory workers compensation coverage that are extended to all, or almost all, workers, members of certain industries have come in for special protections, none more so than those in the construction industry. Workers on federal and federally supported projects, which amount to over \$45 billion of construction per year, and those in 30 of the states, are provided the special consideration of the country's various prevailing wage laws, whose impact we shall now examine.

##### A. Prevailing Wages in Concept and Practice

The Davis-Bacon Act is a piece of federal legislation dating from 1931 that governs the use of labor on almost all contracts for public buildings or public works. It says, in part,

The advertised specifications for every contract in excess of \$2,000, to which the United States or the District of Columbia is a party, for construction, alteration, and/or repair, including painting and decorating, of public buildings or public works of the United States . . . and which requires or involves the employment of mechanics and/or laborers, shall contain a provision stating the *minimum wages to be paid various classes of laborers and mechanics*, which shall be based upon the wages that will be *determined by the Secretary of Labor to be prevailing for the corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work in the city, town, village, or other civil subdivision of the state in which the work is to be performed.* . . .<sup>45</sup>

The principle behind the use of prevailing, rather than statutory or mandatory wage rates, is both simple and attractive. Proponents of the laws at the time they were introduced apparently intended them to be a sort of mirror of existing wage conditions

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<sup>45</sup> Davis-Bacon Act, 40 U.S.C. §276(a) (1982).

in a community.<sup>46</sup> The originators apparently thought that by finding wage rates that already existed in a community they would find rates conforming to the community standard of what level of wages was acceptable; and reflecting that back in the form of mandatory minimum rates on government contracts (which might in certain circumstances carry with them monopsonistic powers) would cause no disruptions to the existing wage rates structure in the way that, say, a mandated minimum wage might. By adopting the “prevailing” concept instead of a mandatory minimum wage concept employees on government contracts could be assured that their wages would not be depressed below customary levels by competition among employers, and that they would not be subject to losing their jobs to outsiders from low-wage areas who might be willing to come into the community and work for less than the local standards.<sup>47</sup>

The concept was so attractive that, at least initially, no one seemed to notice that the “prevailing” concept was statistically indeterminate. There is no mechanical way to identify or calculate a “prevailing” rate, in the way that an “average” rate or a “modal” rate can be identified or calculated. In early amendments to the original statute (already reflected, above) the Secretary of Labor in 1935 was granted the authority simply to decide the prevailing rate for each locality (in most states, “locality” was identified as county, in Alaska, judicial division) for each type of similar construction for each category of laborer or mechanic used. The Secretary of Labor decided that “prevailing” was going to be the rate, to the penny, paid to at least 30-percent of the workers in each class as found by a survey, and if there was not a 30-percent plurality, then it was going to be the weighted average of all rates found in the survey. In the 1980s, the 30-percent plurality was changed to a 50-percent plurality, but everything else stayed about the same.

As might be imagined, calculating prevailing rates this way was a daunting task,

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46 For a further discussion of this and other matters relating to the federal Davis-Bacon Act, see A. Thieblot, *Prevailing Wage Legislation: The Davis-Bacon Act, State “Little Davis-Bacon” Acts, the Walsh-Healey Act, and the Service Contract Act*, Labor Relations and Public Policy Series No. 27 (Philadelphia: Wharton Industrial Research Unit, University of Pennsylvania, 1985), p. 1-13.

47 New work for a community with an existing labor supply, such as might be contemplated by the typical public works contract, is the addition of an exogenous demand which, in the parlance of economists, would cause the demand curve for labor to shift upward and to the right. This new demand could only be satisfied, at the going market price for labor, if an excess supply of labor existed in the market. If an excess supply did not exist, higher wage rates would be necessary to induce a larger supply. The only circumstance in which new public works in a community could “drive wages down” is in the circumstance called “monopsony,” a rarely encountered imperfect market condition that is the opposite of monopoly. In a monopsony, there is only one buyer and the only alternative of a labor seller to accepting whatever terms the monopsonist offers is to not work and therefore, if there are no alternative support mechanisms in force, to starve. Although conditions approaching monopsony existed during the depression of the 1930s, when 65 percent of all new building projects were projects for the federal government, that has not been the case since. Before the depression, the federal government was the buyer of about 20 percent of the construction output of the United States. Today, that proportion is about the same.

even for the government. Then as now, there were about 3,100 counties, four different types of construction (residential, commercial, heavy, and highway) and as many as 200 different categories of laborer or mechanic that might appear on a single wage rate. If the Secretary were to make actual surveys for each of these wage rates, and if one were to assume that for each survey at least a half-dozen rates would be required in each subcategory so that statistical operations could be performed on them, then every year or so, the Secretary would have to identify and catalog about 14,800,000 wage payments. These would then have to be grouped, calculated, published, and distributed to each of 3,100 counties.

(Unlike other prevailing wage laws, the Davis-Bacon law required that there be a prevailing rate for each situation, because a contractor was not allowed to hire anyone for whom a prevailing rate did not exist. Thus, even though no one might have worked, say, as a terrazzo setter in Nelson County, Virginia, for many years before a new federal office building was scheduled to be built there, a rate determination for terrazzo setters for that county would have to be issued before a contractor could employ a person in that capacity, because the contractor is not allowed to substitute skills or pay one workman a different workman's rate. So for such a case the Secretary would have to find a rate somewhere else, and impose it locally. Where this is particularly troublesome for open-shop contractors is that often the persons who work for them do not have the same job titles as persons who are associated with organized labor, but the job titles of organized labor are the only ones that show up in prevailing rate schedules. It is a particularly acute problem with respect to subjourneymen. If a rate does not exist for a "helper," for example, persons employed to do helpers' work must be paid their journeymens' rates. The helpers cannot normally be reclassified as apprentices, either, since only registered apprentices may employ that title, or even as "laborers," since laborers are not allowed to use the tools of any journeyman's trade.)

In fact, the Secretary has never prepared this number of surveys or issued this number of determinations. One method of cutting down on their number has been to issue wage rates on a state-wide basis rather than by county, or, in rare instances, issue them for broad geographic areas within a state. This is the case for Alaska, where rates are issued not by judicial division but (for some trades) by whether they are for an area of the state north or south of N63° latitude. Otherwise they cover the whole state. Another shortcut that the Secretary has taken is to accept, from certain states or areas, the union rate as automatically prevailing, based on the fact that surveys in the past had found 30 percent or 50 percent of the wage rates in the state or area to be union rates, so further surveys were considered necessary.



Estimating the General Cost Impact of Davis-Bacon Rates. A 1985 compilation of costs of the Davis-Bacon Act found that estimates of the General Accounting Office, the Congressional Budget Office, independent analysts Goldfarb, Morrall, Thieblot, and Gould, and a survey conducted by the Industrial Research Unit of the University of Pennsylvania of members of the Associated General Contractors, the Associated Builders and Contractors, the American Road Builders Association, the National Electrical Contractors Association, the Associated Independent Electrical Contractors, and the Mechanical Contractors Association, were all consistent with total savings to the federal government on the order of \$1 billion (equivalent to about 1.8 billion of today's dollars), and wage differences on the order of 30 to 35 percent between Davis-Bacon wages and free market wages.<sup>48</sup> Based on the volume of actual federal construction, total project savings for eliminating Davis-Bacon were in the 3–6 percent range.

This is consistent with the results found by other researchers looking at different prevailing rate comparisons. A Canadian study (Globerman, 12/93) reported that British Columbia's prevailing wage law added 6 to 7 percent to the total price of provincial construction projects. Studies and surveys performed in Florida, Iowa, Kentucky, Louisiana, Maryland, Minnesota, and New Hampshire in conjunction with repeal or attempted repeal of state prevailing wage laws in those states found average anticipated construction savings of 9.4 percent from eliminating them—a slightly higher figure, but perhaps justifiable on the basis of the fact that in several of those states, the state's Little Davis-Bacon act prescribed union rather than survey rates, as does Alaska's.<sup>49</sup> Further corroboration is found in Ohio, where the Legislative Budget Office estimated in 1995 that simply raising the threshold below which their Little Davis-Bacon would not apply to \$1 million would save between \$75 million and \$193 million annually, of a construction budget of about \$3 billion.

The National School Boards Association also provided testimony to a 1995 Senate hearing on Davis-Bacon repeal about school construction cost differences between the neighboring states of Kansas, without a state prevailing wage law, and Missouri, with one. "Informal estimates are that school construction costs are 20 percent higher in

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48 See Thieblot, *Prevailing Wage Legislation*, pp. 93–113. As indicated in the source, additionally there was one lower estimate, but it was produced by an apparently flawed econometric model whose results, based on factor substitution and union proportionality not corroborated by available statistics, were not even compatible with the results produced by the same author by a different model.

49 Summarized in A. Thieblot, "State Prevailing Wage Laws, An Assessment at the Start of 1995," Associated Builders and Contractors, Inc., 1995, p. 38.

Missouri.”<sup>50</sup> Furthermore, a study by the association found that 61 percent of the respondents (school districts) thought that the federal or state Davis-Bacon law had increased the construction costs of a recent project in their district, with 55 percent of them placing the increase in the 11–20 percent range.

In summary, a majority of the econometric and sector analyses of the cost of Davis-Bacon put the increases in the range of 6–7 percent, while surveys and less formal analyses find the differences to be somewhat larger. Some of the difference might be explained by the fact that economists tend to work from the bottom up with known statistics, generally measuring or estimating difference in wage rates between Davis-Bacon requirements and the free market, then translating that difference to project cost differences based on assumptions about how much of the final cost is construction labor. Surveys, on the other hand, generally are looking only at the overall cost difference, which may reflect second-order effects in efficiency, manpower utilization, and profit margins that would not be included in straight labor-hour-cost differences. In any event, these data form a rough boundary of what might be expected upon repeal.

Reason for Discussing Davis-Bacon and Its Economic Impact. The Railbelt Utilities intertie projects almost certainly will not be subject to federal Davis-Bacon requirements.<sup>51</sup> But the style and substance of Alaska’s state prevailing wage law is similar to the federal statute, so one can expect at least equivalent costs from it (or savings from not having it). Actually, as will be seen, whereas federal prevailing rates are set by a survey that only sometimes finds the union rate to be prevailing, Alaska’s rate almost always is the union rate. Therefore, the cost differences in Alaska will be greater than those estimated for federal Davis-Bacon. The next section will show why.

## **B. Prevailing Wages and Alaska’s Little Davis-Bacon Act**

The Alaska public contracts statute establishes prevailing wage rates for state work in much the same way that the Davis-Bacon Act does for federal work. Its relevant parts read as follows:

A contractor or subcontractor who performs work on public construction in the state, as defined by AS 36.95.010, shall pay not less than the current

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<sup>50</sup> Boyd W. Boehlje, President, National School Boards Association, “Testimony on Behalf of The National School Boards Association on S.141, Davis-Bacon Repeal Act,” before the Senate Committee on Labor and Human Resources, February 15, 1995, p. 3.

<sup>51</sup> There is a component of the financing for some of the utility participants (Homer, Golden Valley, and Copper Valley Electric associations) that could be supplied by the REA, a federal agency. But state rate requirements would almost certainly be no less than federal ones, and there is little possibility that the federal rates would apply exclusively.

prevailing rate of wages for work of a similar nature in the region in which the work is done. The current prevailing rate of wages is that contained in the latest determination of prevailing rate of wages issued by the Department of Labor. . . . The advertised specifications for a public construction project exceeding \$2,000 to which the state or a political subdivision of the state is a party that requires or involves the employment of mechanics, laborers, or field surveyors shall contain a provision stating the minimum wages to be paid various classes of laborers, mechanics, or field surveyors. . . . Wages may not be less than those stated in the advertised specifications, regardless of the contractual relationship between the contractor or subcontractors and laborers, mechanics, or field surveyors.<sup>52</sup>

The similarities between Alaska's statute and the Davis-Bacon Act are apparent. Both say about the same kind of things, and both leave it up to their respective departments of labor how the prevailing rates will be established. Perhaps for this reason there are those in Alaska who feel that the state prevailing rates are set in some way through a survey process, and are representative of a broad spectrum of wages. They are not. Although the department of labor regulations give the appearance of setting rates based on surveys, they include one word that makes the appearance a sham:

In determining the prevailing wage rate for a region or zone, the Commissioner will consider the prevailing *union* wage for nonpublic construction and local practice . . . <sup>53</sup>

Thus, in practice, there is seldom a difference in Alaska between the prevailing rate and the union rate. In fact, as this report was being prepared, in January 1996, the curious situation exists in the state that the prevailing rate required for outside cable splicers (\$32.40), journeymen linemen (\$30.65), technicians (\$30.65), equipment operators (\$30.65), and groundmen (\$19.45) are all each \$.50 above the union rate.<sup>54</sup> In the present circumstances, a union contractor would have to increase his wage rates on a prevailing rate job; similarly, one who had such a job in progress for less than two years would have to continue paying the previous (higher) union rates.

A case decided by the Alaska Attorney General a few years ago gives an indica-

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<sup>52</sup> Alaska Statutes, Title 36, Public Contracts, Chapter 05, Wages and Hours of Labor, Sections 10, Wage rates on public construction, and 70, Wage rates in specifications and contracts for public works.

<sup>53</sup> AAC 30.050 (a) through (d). [Emphasis added.]

<sup>54</sup> State of Alaska, Department of Labor. *Laborers' & Mechanics Minimum Rates of Pay* Effective October 1, 1995, and International Brotherhood of Electrical Workers, Letter of Agreement, December 26, 1995.

tion of how much difference there can be between the prevailing rates as published by the state of Alaska (the union rate, generally) and the average as might be found by a survey. This was a Fairbanks senior citizens project that involved both federal and state money, and the question was whether it would be built under state or federal wage rates. According to the Attorney General, "while estimates vary, the estimated cost of applying Title 36 [the Alaska prevailing wage statute] to the Fairbanks project is between \$300,000–\$500,000."<sup>55</sup> Since total project costs had been estimated to be \$4.5 million, this difference amounted to 6.7 percent to 11.1 percent of total project cost, solely from using federal as opposed to state prevailing wage standards.

### C. Other Requirements of Prevailing Wage Law

The Alaska "Little Davis–Bacon" act (LDBA) has several minor requirements that affect construction buyers as well as contractors. These have to do with such things as withholding contractor payments to create a fund from which to pay underpaid workmen, posting notices at the worksite, submitting sworn affidavits each Friday for the previous week detailing number of persons employed, wages paid, job classification of each employee, hours worked daily and weekly, and other information required by the department of labor. But it also contains two items that could have devastating effect if enforced (and we have no reason to believe they would not be).

Alaska Statute 36.10 declares the entire state of Alaska as a Zone of Underemployment, and requires that eligible and qualified Alaskan residents be given employment preference for a minimum of 90 percent Alaska resident hires for electricians, equipment operators laborers, and foremen and superintendents. This preference "applies on a project-by-project, craft-by-craft or occupational basis, and must be met each work-week."<sup>56</sup>

Upon employer's request, department shall refer qualified, eligible, and available residents to employer to fill employer's hiring needs. If department is unable to refer sufficient number of qualified, eligible, and available residents, commissioner of labor may approve hiring of residents who are not eligible for preference and non-residents for balance of request. Residents shall be terminated last in any reduction in force (except that

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<sup>55</sup> A.A.G. File # 366-625-83, June 9, 1983.

<sup>56</sup> State of Alaska, Department of Labor, *Laborers' & Mechanics Minimum Rates of Pay*, effective October 1, 1995, p. VI. This is not a new provision, going back to at least 1993, but it does not appear in the 1990 issue of the minimum rates booklet.

non-resident supervisors may be retained).<sup>57</sup>

The other matter shows up as an addendum to the apprentice rates section of the booklet. After the usual discussion that any apprentice (or any other employee) listed on a payroll at an apprentice rate who is not registered with a program approved by the U.S. Bureau of Apprenticeship and Training must be paid the journeyman prevailing minimum wage in that work classification, the paragraph adds this note:

Wage rates are based on prevailing crew makeup practices in Alaska and apply to work performed regardless of titles or classifications which may be assigned to individual employees.<sup>58</sup>

Since prevailing wages in Alaska are taken directly from the collective bargaining agreement, it would seem that this crew makeup practices provision would similarly reflect union practices. As we shall see, the IBEW contract requires the ratio of one journeyman lineman per groundman or apprentice, but the Bradley Lake concessionary agreement allows one journeyman per two groundmen. Which would be the prevailing crew makeup practice would not be known, but it would probably not be the open-shop practice of one lineman per half-dozen laborers and helpers.

#### **D. Comments on Applicability to the Intertie Projects**

The following notes are offered from a nonlegal perspective, based on a reading of Alaska Attorney General (A.A.G.) opinions relating to interpretation and administration of the state prevailing wage law. The Alaska LDBA might apply to the intertie projects for one of two reasons: (1) The state has provided about 50 percent of the funding through a grant approved by the Alaska legislature; (2) The contracting agencies for individual pieces of the intertie projects may be state or municipal agencies.

1. The Alaska Native Brotherhood case (*Alaska State Federation of Labor v. State*, 713 P.2d 1208 (Alaska 1986)) rejected the argument that a "grant contract," the sole purpose of which is to disburse grant monies, is a "construction contract" as that term is used in the public contracts act.<sup>59</sup> Thus, despite state funding of one-quarter of the \$4 million used by the ANB to build a community hall, and despite the fact that the

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<sup>57</sup> Bureau of National Affairs, *State Wage and Hour Laws*, SLL 11:343 No. 867, p. 19, referencing Alaska Statutes, Title 36, Chapter 10, Employment Preferences.

<sup>58</sup> *Ibid.*, p. IV

<sup>59</sup> A.A.G. File #661-92-0383, April 13, 1992.

terms of the grant required ANB to guarantee that monies would be used solely for the building project, the Attorney General held that the actual construction contract was between ANB and the contractor it selected, and so did not require payment of Little Davis-Bacon wages or coverage by the LDBA. In a court case brought by the Alaska State Federation of Labor, the court found that the project was not “under contract for the state” and, therefore, was not “public construction” within the meaning of the LDBA, and that the state was “not a party to a ‘construction contract.’”

There are strong similarities between this case and the structure of the intertie projects. If the state funds already appropriated were, in fact, a grant, that they originated from the state would not seem to be sufficient reason for the projects they are destined to help fund to be considered “public construction” subject to the state prevailing wage, any more so than in the ANB case. Nor would the proportion of funding (about 50 percent of the cost of construction on the interties as compared with about 25 percent of the cost of the ANB community hall) seem determinative, since the logic of the exclusion of the ANB community hall was not that only a minority of the funding was provided by the state grant, but rather that the actual construction contract was between ANB and the contractor it selected. Therefore, it appears that the prevailing wage law would not apply for the reason of source of funds.

2. The only other way the prevailing wage law might apply would be if the group of power companies called the Railbelt Utilities was considered to be an agency of the state (or one of its political subdivisions) in the same way that the Alaska Energy Authority (AEA) is a state agency. This may be a question of fact, or may be determined by the identity of the individual members of the Railbelt Utilities group selected to do the actual contracting, but it does not seem likely that an association of some municipal electric companies, some rural electric cooperatives, and some associations subject to federal control through the Rural Electrification Administration (REA) should be considered a “political subdivision” of Alaska, or the agent of one.

Furthermore, it may be that—to the degree past transmission line construction work was done by rural electric cooperatives, municipal power companies, or by the REA under contract provision requiring the contractor simply to comply with union rules or to honor prevailing rates as published—the state has set a precedent by allowing line work to be done not subject to the LDBA act. Several key provision of the LDBA, including the requirement for “Alaska preference” in 90 percent of its hiring, the requirement that crew makeup follow prevailing practices, and the requirement to submit weekly payroll affidavits, call for things that might be different from (and impose a higher standard than) provisions in the union contract. And if the state has, in fact, not

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required conformance to those requirements in the past, its actions may mitigate against its imposing them on similar new work, regardless of the legal status of the Railbelt Utilities group.

If it were determined, nevertheless, that the Railbelt Utilities group was a “political subdivision” of the state, and the intertie construction project a “public work” as a result, a further complication might enter into the contracting process, since the intertie construction projects—as well as any other construction projects undertaken by group members with any level of mutual support— probably could not be done under a project labor agreement that requires or even prefers the hire of employees who are members of a labor union.

In the relevant attorney general case,<sup>60</sup> the Executive Director of the Alaska Energy Authority had asked the attorney general to determine whether AEA could negotiate and execute a project labor agreement with one or more unions, and whether the authority might then require, as a contract condition, that the successful bidder on a construction procurement operate within the terms of a project labor agreement. While not answering directly, the attorney general suggested that the AEA “probably cannot execute a project labor agreement that prefers the hire of employees who are members of a labor union,” and goes on to state that Alaska procurement statutes require that any construction specifications “must promote overall economy for the purposes intended and encourage competition in satisfying the state’s needs.” The state’s regulations “prohibit the use of specifications that have the effect of exclusively requiring a proprietary . . . construction item, or procurement from a sole source. . . .”

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<sup>60</sup> (A.A.G. File #661-90-0255, January 19, 1990.) See also Alaska Statutes 36.30.9.20, making the offerer or bidder suggesting such an anticompetitive arrangement subject to prosecution of a Class C felony.

## **V. ESTIMATION OF NORTHERN INTERTIE COST BASED ON D&L ANALYSIS AND STANDARD NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION (NECA) CONTRACT RATES AND CONDITIONS, WITH AND WITHOUT SIMULTANEOUS APPLICATION OF THE ALASKA PUBLIC WORKS LAW**

The previous discussion has identified many aspects of union work rules and restrictions on labor use by the IBEW in particular that might have an effect on the costs of construction and also on government requirements in the form of prevailing rates. In this section, we shall concentrate on the provisions of the NECA contract that would apply to outside line construction in Alaska.<sup>61</sup> Subsequently, we will expand the argument to include the combination of NECA and prevailing wage law requirements.

Although competitive pressures might force the IBEW to concede to special project rates, perhaps beyond those offered the Alaska Power Authority for the Bradley Lake Project and incorporated into the Memorandum of Understanding, in this section, we shall review the NECA contract, itself, so that it can be used as a reference point for comparisons among the alternative conditions of labor contracting that might apply to the intertie projects. Before doing so, we need to establish a few parameters from the Northern Intertie, the project used as representative of all of the intertie projects.

### **A. D&L Analysis of Northern Intertie Costs**

The engineering firm of Dryden & LaRue (D&L) prepared in July 1994 a cost estimate for the Northern Intertie project of the type that would be used in soliciting bids for the work from various contractors.<sup>62</sup> Although changes have been made since that time, and the route selected in this study has been superseded, it serves as well as any other reference point for evaluating the potential cost impact of labor contracting alternatives.

In barest essentials, the Northern Intertie project is one requiring clearing of about 2,000 acres in an appropriately wide swath 100 miles long, along which will be erected 605 poles and towers of 5 different types, most of which also require foundations and anchors varying to suit the terrain and landforms, and also the crossing of one major river and the stringing of 100 miles of wire and shield wire. The project is to be complet-

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61 "Outside Agreement, Alaska Electrical Construction Between Local Union 15-17, International Brotherhood of Electrical Workers, and Alaska Chapter, National Electrical Contractors Association, Inc." May 31-1994 - September 30, 1997.

62 "Northern Intertie Project Cost Estimate," Dryden & LaRue, Inc., July 1994.62



ed in 18 months after start. As estimated by D&L in 1994, the anticipated contractor's costs for the project were divided into three pieces:

- materials, \$18,624,384 (about 42 percent)
- labor, \$14,363,386 (about 32 percent)
- general and administrative expense of \$11,329,888<sup>63</sup> (about 26 percent)

Total estimated contractor's cost was \$44,317,655. Contractor's margin was expected to be 15 percent of this total, which, when added in, brought all construction cost to the owner up to \$50,965,303.

This report will not analyze the further costs associated with the overall project, beyond those of the engineering estimate for total line construction. Some other costs, for such items as land and right-of-way acquisition, design, owner's overhead, financing, and the like, would not be affected by differences in the labor provisions offered contractors building the intertie. Others, however, such as the building of substations and installing the energy storage systems, would be influenced by the competitive and labor conditions in the contracts for those aspects of the work, but are beyond our purview. Therefore, our cost savings analysis will be finally stated in percentage terms of the line construction figure. On this basis, the three intertie projects together have "total costs" of about 2-1/2 times the cost of the Northern Intertie, or \$125 million.

Note that a dollar of labor savings in the cost of building the Northern Intertie results in some multiple of savings for the total project costs. This is because some portion of the general and administrative expenses, specifically the expenses for subsistence and materials handling, are also at least indirectly related to labor contract provisions, and the cost of bonding and the calculation of contractor's margin are both percentage numbers, one at 15 percent of labor cost, the other at 5 percent.<sup>64</sup> Thus, at the very least, a dollar of labor savings will reduce total costs by \$1.20 to as much as \$1.50. Stated alternatively, a dollar labor savings on the Northern Intertie will translate to at least 2.5 times \$1.25, or \$3.12 for all the intertie projects, assuming they are all done the same way. Nevertheless, we shall use the more conservative figure of 2-1/2 times \$1.00.

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<sup>63</sup> As presented in Table 1, page 13 of the D&L Northern Intertie Estimate, there is an arithmetical error of \$143,634 in the calculation, understating total job G&A expense. The error is carried forward into the total cost of the project. The figures used here correct that mistake, which is not considered to be significant but which might cause our numbers to differ from those calculated by other parties.

<sup>64</sup> There are, actually, two different considerations with respect to bonding costs. First, the bond is some percentage of a contractor's outlays on a job, which we assume here to be the equivalent of 5 percent of total labor costs, so that with smaller labor costs, the amount to be bonded is less. Secondly, larger, more experienced contractors can get lower rates, so the cost also varies with the nature of the contractor.

In the analysis to be performed, all aspects of the D&L report not directly related to the cost or deployment of labor, or not calculated as a percentage of that cost, will be accepted as given. Thus, materials costs, and all general and administrative costs with the exception of those for subsistence and for material handling, both of which are labor-related issues, and bonding and contractor's margin, which are percentage rather than dollar items, will be taken as given. With respect to labor and its deployment, we shall accept the estimated manhours for each aspect of the work and assume that any qualified contractor would assemble a labor force needed to accomplish the work at those engineering parameters. In assembling the manpower estimates and comparing them with the time horizon of the job it does not appear possible to accomplish the work with a grand crew of less than 40 workmen, since 187,492 direct hours must be prorated over 451 days, necessitating 416 direct work hours per day, or an average of about 42 men working ten-hour days or 46 men working 9-hour days. The problem is that the additional hours of the day, for moving to and from the job site, for example, are not accounted for in the crew count (an hour per man would not be an excessive amount for the purpose), and with expected 5 percent unscheduled overtime and 15 percent of "efficiency" time added, the workweek for such a work crew would become truly oppressive. However, since manpower scheduling is not our requirement here, we shall neglect this aspect of the job.

The estimates for the number of manhours of labor involved in each part of the Northern Intertie project are as follows: clearing, 23,066 manhours; foundations, 36,139 manhours; anchors, 11,850 manhours; structure erection, 66,310 manhours; river crossing, 14,236 manhours, and wire stringing, 35,892 manhours. Total construction manhours are 187,492. Manhour add-ons as estimated for travel, mobilization and demobilization of equipment, and efficiency (a measure of how much labor time will be lost to on-the-job training and other wastage in moving up the learning curve) increase this total by 27 percent, to 236,240 (the total to which labor burden,<sup>65</sup> benefits, and overtime premium are added).<sup>66</sup>

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<sup>65</sup> Although in other instances, we used the D&L estimates without modification, the number we shall use for labor burden (intended to represent the additional cost of labor which is not directly paid to laborers or credited to their personal accounts—the sum of workers compensation insurance [20%], social security [6.2%], medicare [1.45%], federal unemployment insurance [.5 %], and state unemployment insurance [6 %]) is 34 percent for all categories and types of construction rather than D&L's 49 percent. Since the number does not affect cost or savings from various methods of labor contracting we need not dwell upon it, but we shall have occasion to refer to it later.

<sup>66</sup> The most recent D&L estimate of time required for the Northern Intertie, by a different route than that estimated above, was made available late in 1995. It shows a total time required of 136,800 manhours, a 30-percent reduction from the previous estimate. We will use that estimate only for scheduling purposes, not for the manhour or work crew analyses.

The starting point for the analysis will be the current National Electrical Contractors Association contract with the International Brotherhood of Electrical Workers (the NECA contract). This may result in a different labor cost estimate than the D&L analysis. Among other things, we will be using the latest wage rates available. Again, to emphasize, our function is not to validate the D&L engineering analysis, but to create a basis against which to measure alternative contracting labor conditions.

#### **B. Identification of Factors in NECA Contract That Would Add to the Cost of Labor, Other Than the Wage Rate, and the NECA Wage Rate**

As a reference point for comparisons of the four alternative conditions of labor contracting, it is useful to see how the International Brotherhood of Electrical Workers (IBEW) has included a number of its special requirements in its current contract agreement with the National Electrical Contractors Association (NECA). This is a lengthy document (52 pages), and contains many elements that are difficult to assess by anyone not actively engaged in administering it. Nevertheless, analysis of its salient points is essential.

Many of the elements of this contract are such that they could have major impact in some circumstances, but appear unlikely to affect a project such as one of these interties. For example, one section contains what might be called a "union solidarity" provision, requiring employers to support an official policy of the IBEW to promote the use of materials and equipment manufactured by members of organized labor by using such materials whenever possible. Such a contract provision might add seriously to the costs of contractors who might be compelled by it to replace certain brands of trucks or earthmoving equipment, but the nature of its enforcement and its impact, if any, on the intertie projects is not fathomable. Another example, which might affect a union contractor coming from another part of the country (outside of Alaska), is a provision limiting any such contractor from bringing with him more than one journeyman who is not an Alaska resident. This provision might have the effect of "protecting" Alaskan jobs, but it also decreases serious competition, because almost any construction firm, on a job such as this one, would likely bring with it a group of skilled workmen. Nevertheless, such items will not be priced out or included in the discussion, which means that, in certain cases, the estimates of costs presented here as attributable to contract terms may be conservative. These and several similar items in the contract that would only be of significance to certain contractors may affect the level of competition for a job, but otherwise would not affect prices.

The major contract items, which will be discussed briefly in this section and

costed in a subsequent one, may be placed into six categories: 1) those of general significance; 2) those relating to overtime and workweek considerations; 3) subsistence and travel, camps and per-diems, reporting points, transportation to job site, etc.; 4) work crew composition and deployment; 5) pay rates, including special pays for high and helicopter work, and bad weather "show up" pay; and 6) fringe benefits.

### 1. General Requirements

The first major factor to be found in the contract is that, although the IBEW itself is a "craft union" composed of electricians and closely related journeymen and their apprentices, as we discussed in an earlier section the Local 1547 Outside Agreement (the contract under discussion here) is that of an "industrial union." The contract, therefore, covers all aspects of a construction project, not just those parts of it that would normally be done by electricians. Included in addition to the usual work of linemen ("outside" electricians, as opposed to "inside" electricians, who are called "wiremen") and groundmen (the IBEW's name for laborers) are the work of digging and backfilling of holes for poles or anchors, the moving of men, tools, or equipment, the loading, moving, and sorting of materials, the handling and operating of all equipment used to transport men, tools, and materials on the job site, and all other hauling from point of origin to point of installation except when brought by common carrier.

Although it might seem odd to consider land clearing, hole digging, tree trimming, truck driving, and heavy equipment operating to be proper jobs for linemen, their work is to be done under the terms of this agreement, and the only wage rates available to pay them are journeyman lineman, journeyman technician, groundman, foreman, equipment operator, cable splicer, powderman, or apprentice, which job titles do not match up all that well with the services required. Some of the mismatch will be seen to have an impact on wage rates associated with particular aspects of the work to be accomplished.

Related to this point—and important to certain contractors—is that, with limited exceptions noted in the contract, an individual contractor following this agreement does not have the right to select his own employees, nor to pay them based on his estimate of their skill, experience, or potential. All hiring is done through the union hiring hall, and although an employer may reject a particular employee, if he does so, he will be sent the next employee from a list drawn up by the union. The union's list may be from anywhere within its labor market area, covering, in essence, all of Alaska north and west of Fairbanks, or from even farther if its list is too short. Thus workers may be sup-

plied by "travelers" from Anchorage, or even the lower 48, for jobs that, were it up to the contractor, could be supplied from the local area.<sup>67</sup> (It might be noted that Fairbanks, a city of 33,281 population, has an estimated 990 construction workers, according to the 1990 census. This should form at least a good start on an adequate supply for nonunion laborers.) Also note that under a union contract, no journeyman within the same class can be paid more than another, and even though he might be more productive in the eyes of the employer, he can not be rewarded or compensated more highly than others.

## 2. Overtime and Workweek Considerations

The contract provides for several different workday and workweek conditions having to do with the length of lunch hours, shift differentials, the number of hours of work that can or must be provided under various conditions, and the premium pay required for overtime under various conditions. For simplicity, the discussion here requires some assumptions about what sort of workweek will be applicable to a project such as the intertie construction.

Because of the remote working locations and the northern climate, outside work in Alaska makes use of a great deal of overtime, particularly in summer months. Workweeks of 50–70 hours are not uncommon, not only because the economics of fewer workers each working longer hours is advantageous, but also because many Alaskan workers interested in such jobs consider the overtime premium and long workday a benefit in areas where social diversions and non-work activities are limited. Nevertheless, there are limits imposed by such factors as declining productivity in longer work periods, and also the factor that this project is not so remote that a good many of the men would be from reasonably local origins, and might want to have a family life. For these reasons, the workweek assumed here is one of 54 hours, composed of six 9-hour workdays, Monday through Saturday.<sup>68</sup> (This is a simplification in that, because construction of each intertie will go on over a period of time spanning several months, the actual distribution of overtime will be uneven, with some summer months seeing a greater amount of overtime, and some winter ones, less.)

The contract does allow for a standard workweek of four 10-hour days, with overtime at 1-1/2 times one on first 10 hours of the fifth day, and double-time for all other work. Under the simplifying assumptions, above, for a 54-hour workweek of six 9-hour days, a contractor would pay straight time Monday through Thursday (36), 1-1/2 time

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<sup>67</sup> "Travelers" in this context are union members from another local who are adopted by the job site local for the duration of the job. See discussion, above, in Section III.

<sup>68</sup> For the discussion of why an even longer workweek was not chosen, see below at fn. 69, and above at fn. 21.

for 9 hours on Friday (13.5), and double time for 9 hours on Saturday (18), which totals to 67.5 hours pay for 54 hours' work, an overtime premium of 25 percent. This would be a foolish option for a contractor, since he would not be taking advantage of the straight-time rate for the tenth hour on Monday through Thursday, but the contract does not establish otherwise what the overtime rates are for a five-day week of 8 hours each, unless an overtime schedule is agreed upon. However, since the overtime here would be known in advance, it can be assumed that one of the two overtime schedules provided for would be followed. These are:

A. "Five day" overtime schedule. On this schedule, based on five 8-hour days, the 9th hour Monday through Friday would be paid at 1-1/2 times ( $40 + 7.5 = 47.5$ ), and all day Saturday at double time (18). This would total to 65.5 hours' pay for 54 hours' work, yielding a premium of 21 percent.

B. "Six day" overtime schedule. In this schedule, based on six 8-hour days, the 9th hour on Monday through Friday would be at double time ( $40 + 10 = 50$ ), Saturday (if 7 A.M. To 5 P.M.) would be at 1-1/2 times (13.5), and the total would find 63.5 hours' pay for 54 hours' work, and a premium of 18 percent.

Obviously, under these assumptions and the terms of the agreement, a contractor would use the six-day overtime schedule. By comparison, the overtime premium paid either under the terms of the Alaska "Little Davis-Bacon" act (LDBA) or by a nonunion contractor for a 54-hour week, regardless of how arranged, would be 61 hours' pay ( $40 + (1.5 \times 14) = 61$ ) for 54 hours' work, a 13 percent premium. Under a different set of assumptions for the same length workweek, the agreement's overtime premium would be somewhat larger. From October through March there might not be enough light to do overtime, so hours might be reduced. Thus, in summer the workmen might be scheduled for 60 hours a week, or more, and in winter a 40-hour week or less. Under the union agreement, the penalty for the variation increases somewhat, because there is more double time pay. For other contractors, it would matter if the same total work hours per man stayed the same and no week was less than 40 hours.<sup>69</sup>

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<sup>69</sup> It has been suggested that an even longer workweek be established, of six 10-hour days per standard week, but a number of factors mitigate against that. Unless in complete isolation, most persons prefer some time for socialization and personal needs during the week, which such a long workweek almost prohibits. Second, efficiency drops off steadily after 40 hours per week, and declines at an increasing rate. (See above, fn. 21.) Third, unless the work can be performed equally well in the dark, an uneven distribution of hours in different months becomes substantially impossible. Additionally, within the parameters of the Northern Intertie, economics also mitigates against the longer workweek. Assume that in either case, 54 or 60 hours per work week, the number of manhours required to complete the necessary work remains at 187,492, and the project duration remains at 18 months of an average of 25.2 days work days per month. Then, with a 54-hour standard week, 46.1 men are needed to complete the work, working 4,066.2 hours each, or with a 60-hour week, 41.5 men would work 4,518 hours each. At either union overtime schedule, the overtime premium for the 60-hour week is 25 percent, whereas, as shown in the text, on the six-day overtime schedule

### 3. Subsistence and Travel

Analysis of the travel and per-diem expenses that might be called for by the NECA agreement are made complex by the fact that many alternative scenarios are possible where they might apply. All of the intertie construction projects are spread out over many miles of rough terrain, much of it accessible only by helicopter. When told of the approximate routing of the Northern Intertie and asked how men and materials would be based and transported to the actual, moving site of the work, different contractors suggested different staging methods, but all agreed that in the part of the country where the lines would be constructed, no labor camps as such would have to be erected or maintained by the contractor. For simplicity's sake, it is assumed, therefore, that a single, mid-point staging area, accessible by state highway and helicopter, would be established, and that workers would report to that point at the start of the workday and be transported to the actual job site by company-provided vehicle. Thus, whatever travel costs are from the staging area, they would be the same (except for differences in wage rates) for all types of contractors.

The NECA contract, however, specifies three levels of payment to workers in such an environment: per-diem expenses for room and board, travel time for the travel between where "hired" or domiciled and the staging area, and travel expenses for the one-way distance of the same trip. These are not necessary, or even likely, expenses to a nonunion contractor or a contractor subject only to the LDBA.

Using one of the possible routes of the Northern Intertie as an example, the construction work would be spread out over 100 miles from Fairbanks to Healy on a path roughly parallel to the Nenana River, also parallel to a paved highway and a railroad track. About equally spaced between Fairbanks and Healy are the towns of Nenana and Anderson, with populations of 508 and 650, respectively. Each of these towns has one year-round motel and one B & B or boarding house, so it is here plus at the endpoints (or in campgrounds or RV parks) that workmen would likely take up lodgings. Assume, therefore, that workers would travel an average of about 20 miles from their point of lodging to the work staging area. About 40 percent of the 451 days of the total project time, however, are for activities taking place within 15 miles of Fairbanks.

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for the 54-hour week, the overtime premium is 18 percent. The cost per dollar of wage rate for the 60-hour week would thus be  $41.5 \times 4,518 \times 1.25 = 234,371$ . For the 54-hour week,  $46.1 \times 4,066.2 \times 1.18 = 221,193$ . The shorter work week is substantially cheaper. Similarly, for any LDBA or open-shop employer, where the overtime rate is 1.5 times for any hours over 40 per week, the 60-hour week yields  $41.5 \times 4,518 \times 1.13 = 211,872$ , and for the 54-hour week,  $46.1 \times 4,066.2 \times 1.13 = 211,821$ , a wash (as expected). If the additional personnel needed for the shorter workweek are personnel who can be hired at less than the average crew rate (if, in other words, they can be predominantly laborers rather than journeymen), the shorter workweek is economically preferential.

Section 3.23 of the NECA contract would provide two levels of payment (as follows) for such employees, and Section 3.25 provides another:

a. (Section 3.23) All actual expenses, such as car, etc. The established rate of compensation for road travel by car (See section 3.18) is \$.60 per one-way mile. For the 20-mile trip, this would be \$12 per day for 271 days away from Fairbanks. This would be \$3,252 per project man.

b. (Section 3.23) The actual cost of board and lodging or, at employee's option, \$64 per day (with a few exceptions). Assume \$64 per day for 451 days, \$28,864 per project man.

c. (Section 3.25) Straight-time wage rate for time consumed for travel. Assume 40 minutes per day for 271 days and 20 minutes per day for 180 days. Anticipating our later discussion about wage rates, assume that average of straight time wage and benefits is about \$38 per hour. Then this would average \$10,298 per project man.

In total for travel and subsistence, then, we have the sum of the above, totalling \$42,414 per project man. If the size of the average work crew is 42 (based on a 60-hour week), the total travel and subsistence would be \$1,781,388. If the crew size is 46 (based on a 54-hour week), then the **total for travel and subsistence would be \$1,951,044**. (This figure could be substantially more, up to twice as much, if travel expense and time were based on "point of hire," probably the Fairbanks post office.)

There are other contract provisions having to do with employees going home on leave, the conditions under which employees are to be housed, transportation of employees' tools, employees' options for accepting Sunday work, and the like, but these have not been costed out.

#### 4. Work Crew Composition and Deployment.

The basic NECA rules for crew makeup start with Section 3.37 of the contract, which establishes that one foreman must be appointed if four or more journeymen work on a job. (There follows a requirement that on jobs requiring more than five journeymen, every fifth journeyman hired must be at least 50 years old, which we did not attempt to deal with.) Section 4.08 then begins the determinations of crew makeup. The most stringent are those for framing poles or structures (408.a), which requires that the ratio of one groundman to each journeyman lineman shall not be exceeded, and for tamping and clipping crews (408d), which specify that a foreman shall be used, and also that journeymen linemen shall be in the majority. Other parts of this section specify that the usual crew for framing and erecting poles, digging of holes and trenches,



erection of poles by hand, and erecting towers will be done by crews that contain a foreman as well as journeymen and groundmen, and that tree trimming and traffic barricading and flagging will be done by journeymen linemen, apprentice linemen, and groundmen, although journeymen tree trimmers can also be used. Although there is an overall scale of apprentices to journeymen (roughly in the one apprentice-to-two journeymen range) the only place where apprentices are specifically mentioned as being allowed to work is in the tree trimming and flagging.

Based on these requirements, we estimate a possible crew assignment as shown in Table 8.

**Table 8**  
**Estimated Crew Assignments - 46-Person Crew**  
**PER NECA Outside Agreement**

	Re- quired	Fore- men	Splic- ers	Line- men	Equip. Opera- tors	Ground- men	Appren- tices
Foundations	8	1		3		4	
Anchors	4	1		1	1	1	
Clearing	5			2	1	1	1
Structure Erect.	14	2		6		6	
Wire Stringing	10	1	1	4		4	
River Crossing	5	1		2		2	
<b>Total</b>	<b>46</b>	<b>6</b>	<b>1</b>	<b>18</b>	<b>2</b>	<b>18</b>	<b>1</b>

Source: Derived from D&L Estimates and NECA Contract.

#### 5. Pay Rates and Fringe Benefits

The standard rates of pay and fringe benefits of the NECA Contract for the time period beginning January 1, 1996, have been superseded by a letter of agreement between the IBEW and NECA, dated December 26, 1995, giving rates \$.50 lower across-the-board from the 1995 level. The new rates are shown in the first column of Table 9. The second column shows the rates in effect in accordance with the prevailing rate determination now in effect. One curious effect that might be apparent from the table is that if the contract were to be let at this time for the Northern Intertie, and it were determined

**Table 9**  
**Applicable Wage Rates Under NECA Special Agreement of 12/26/95,**  
**Under Current Alaska Prevailing Rate (10/1/95), and Both**

	NECA Special 12/26/95	LDBA (Prevailing) 10/1/95	NECA and LDBA
<b>Wages</b>			
Lineman	30.15	30.65	30.65
Technician	30.15	30.65	30.65
Groundman	18.95	19.45	19.45
Foreman	32.40	?	32.40
Equip. Op.	30.15	30.65	30.65
Cable Splicer	31.90	32.40	32.40
Powderman	28.15	?	28.15
<b>Fringes</b>			
Hlth & Welf.	4.75	varies	4.75
Pension Fund I	4.67	varies	4.67
Pension Fund II	.65	0	.65
Legal Trust	.15	.15	.15
Apprenticeship Trust	.30	.30	.30
NEBF Defined Ben- efit	3% gross	0	3% gross
<b>Total</b>			
Lineman	41.67	41.09	41.67
Technician	41.67	41.09	41.67
Groundman	30.04	29.55	30.04
Foreman	43.89	?	43.89
Equip. Op.	41.67	41.09	41.67
Cable Splicer	43.38	42.89	43.38
Powderman	38.67	?	38.67

that both the NECA contract terms and the job were subject to the prevailing rate law, the rates actually paid by a union contractor would not only be at the higher, Little Davis-Bacon act (LDBA) level, but also at the higher level of fringe benefits required by the NECA contract. This combined rate is shown in the third column.

At these rates of pay and fringe benefits, the grand crew average straight wage rate (plus the 3% for NEBF Defined benefit, which is on gross, rather than by the hour) and the separately stated average fringe benefit rate per hour are as follows:

<b>Grand crew average rate, NECA:</b>	<b>\$25.77 + \$10.52 fringes</b>
<b>Grand crew average rate, NECA and LDBA:</b>	<b>\$26.20 + \$10.52 fringes</b>

#### 6. Special Pay Conditions

Three special pay conditions appear in the NECA contract. These are for working under or with a helicopter, working more than 70 feet above the ground, and attending the weekly safety meeting.

a. The NECA contract at Section 3,42 specifies that men working with a helicopter crew engaged in construction work be paid \$1.00 an hour hazard pay. It also specifies that men assigned to working under a helicopter on structures or towers be paid one additional hour over the applicable hourly rate when so working. According to the engineering estimate, the helicopter might be working for 321 days at 4 hours per day, or for about 1,200 hours. If 12 men are assigned to work with it (an estimate), the excess cost from the **first portion of the helicopter requirement would cost \$14,400**. If work on towers under the helicopter involves the 10-man crew involved in wire stringing for some time on each of the 176 days allotted to wire stringing, at an average crew rate of \$26.07 per hour, this **second portion of the helicopter requirement would cost \$45,883**.

b. At Section 4.05, the NECA contract spells out the requirement of special pay for high work for linemen at the rate of one additional straight-time hour per hour while working above those heights. All of the structures to be installed on this route are more than 70 feet high—about 172 of them of 76-foot height, and the rest of 97-foot height.<sup>70</sup> Basically, two operations happen at the top of these structures. First, travelers are hung to

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<sup>70</sup> These figures are taken from *Alaska Energy Authority Railbelt Intertie Feasibility Study Final Report*, March 1991, which was for a 230 kV project along roughly the same route. It is assumed that the height of the supporting towers remained the same in the 1994 D&L analysis.

accept the wire and shield, and second, the wire is clipped into place. Starting with the second, our engineering estimate for the wire stringing (clipping) time is for 176 days' work. Five of the crew are linemen, and if we assume they spend half their time in the air and their average straight wage rate is \$31.35, then the special high pay to these linemen will be  $176 \times 5 \times 4.5 \times 31.25 = \$124,146$ . We have no estimate of the time necessary to hang the travelers, but since it is expected that one crew will be able to keep pace with the other, we shall assume the total extra is about the same. Thus we estimate the **total extra pay for high work to be \$248,292.**

c. Safety meeting pay is the third special pay consideration, found in Section 4.02 of the contract. It requires a half-hour safety and educational meeting to be held for all employees at the start of the day once each week, and authorizes but does not mandate a second half-hour. The entire program can be for this purpose only. Since this half-hour can only be made up out of additional overtime, we shall assign to it the overtime cost of 1.18 times the average grand crew rate of \$13.00 for a half-hour, times 46 in the crew, times 78 weeks. Thus, the **cost of the contract-required safety meeting is \$55,040.**

The sum of the above items constitutes the reasonably identifiable special cost and deployment issues associated with the NECA contract. The biggest costs are those that cannot be quantified, namely those arising from labor-management relations as adversarial instead of cooperative. On the other side, most union journeymen are very highly skilled in the work they do that requires skill, and often bring with them vast experience and the ability to solve problems that might otherwise be left to management.

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## VI. HOW BRADLEY LAKE CONCESSIONS, WITH OR WITHOUT PREVAILING WAGE REQUIREMENTS, WOULD IMPACT CONSTRUCTION COSTS FOR THE NORTHERN INTERTIE

The Bradley Lake Agreement outlines seven concessions granted by Local 1547 to Newbery, Alaska, for an earlier transmission line job. Those concessions are referenced in the Memorandum of Agreement between Local 1547 and the Railbelt Utilities.

### 1. General Requirements

The general requirements of the NECA contract are not changed by the Bradley Lake Concessions. Linemen are still to be assigned to do menial work such as digging holes or clearing trees, and workmen are still hired through the hiring hall maintained by the IBEW.

### 2. Overtime and Workweek Considerations

The Bradley Lake overtime concession is an important one, in that it specifies time and one-half for all hours over a standard 40-hour week (with the minor exception of double time for work on five designated annual holidays, two fewer than the NECA agreement). Under this determination, the **overtime multiplier is 1.13**, the same as for LDBA or open-shop work.

### 3. Subsistence and Travel

Here is found by far the largest concession. Travel expense and travel time are given up completely, and the employer is allowed to require the employees to report for work to a designated job headquarters on any state or borough maintained road. The entire subsistence and travel cost comes down to a per-diem payment of \$24 per work-day. At 451 days, 46 men, and \$24 per day, **total subsistence is \$497,904**.

### 4. Work Crew Composition and Deployment.

All of the "crew consist" rules of NECA contract remain in effect, with one concession with respect to tower assembly. For that particular case, the ratio of two groundmen is allowed per journeyman. The effect of this change is seen in Table 10.



## VII. EVALUATION OF HOW ALASKA LITTLE DAVIS-BACON ACT REQUIREMENTS ALONE WOULD IMPACT CONSTRUCTION COSTS FOR THE NORTHERN INTERTIE, AND HOW THIS WOULD DIFFER FROM “BUILDING UNDER LDBA RATES”

### 1. General Requirements

As previously discussed, one of the greatest imponderables of the Alaska “Little Davis-Bacon” act (LDBA) is the hiring preference requirement, under which 90 percent of workmen and supervisors would have to be eligible residents of Alaska. Although perhaps not that much of a cost factor, its impact could be devastating on the ability of either a union or an open-shop contractor from the lower 48 or even one from Alaska to find a sufficient staff at the skilled end of the spectrum. There are also the nuisance provisions that require wage postings and weekly submissions of affidavits of payroll.

### 2. Overtime and Workweek Considerations

LDBA is silent on the matter of overtime, but the federal and state standard is for time and one-half for all hours over a standard 40-hour week (with no double time). Under this determination, the **overtime multiplier is 1.13**.

### 3. Subsistence and Travel

No subsistence or travel pay is required by LDBA.

### 4. Work Crew Composition and Deployment.

Two different crew assignment deployments are possible under the LDBA, depending upon whether the job is done subject to the act, or if it is done “with prevailing rates.” The difference is that if the work is done under the act, crew deployment must follow “prevailing crew makeup practices of Alaska,” (interpreted to mean no more than two groundmen per journeyman), whereas otherwise any crew makeup is permissible, except in wire stringing (where a two-groundmen-to-one-journeyman ratio is apparently required), and except that apprentices may not be used in either case unless registered. Table 11 gives the crew makeup for the first case, and Table 12, the open-shop table for the second. (The name of groundmen has been changed to laborers/helpers.)





## VIII. ESTIMATION OF NORTHERN INTERTIE COST BASED ON OPEN-SHOP PRACTICES

In the case of the open shop, there are no special provisions except that we have been told the State of Alaska requires that there be no more than two laborers or helpers per journeyman in wire stringing work, so we have held to that ratio. The estimated crew makeup is in Table 12.

**Table 12**  
**Estimated Crew Assignments - 46-Person Crew**  
**Open Shop**

	Re- quired	Fore- men		Line- men	Equip. Opera- tors	Laborers Helpers	
Foundations	8	1			2	5	
Anchors	4			1	1	2	
Clearing	5				1	4	
Structure Erect.	14	1		2	1	10	
Wire Stringing	10	1		3	1	5	
River Crossing	5			1		4	
<b>Total</b>	<b>46</b>	<b>3</b>	<b>0</b>	<b>7</b>	<b>6</b>	<b>30</b>	<b>0</b>

Where the big difference is in open-shop work, of course, is in wage rates. As previously discussed, a large open-shop contractor on a job like this one would be likely to bring with him his own linemen and foremen, or might hire them locally if available. Either way, he would likely pay them at or near the union rate. Therefore, in calculating the grand crew average cost for the open-shop contractor, we shall use union rates for the 3 foremen and 7 linemen. However, they would undoubtedly be receiving open-shop fringe benefits, as also discussed earlier.

Two sets of data are available from PAS Publications on merit shop wages, one reporting on the full national survey of merit shop (nonunion) firms and containing the average wages and fringe benefits for foremen, journeymen, and laborers in general contracting throughout the country,<sup>71</sup> and the other concentrating on the high-rate section of California employers.<sup>72</sup> Where available, we shall use the California numbers here, since the situation in California is more like that of Alaska. However, for the foremen and linemen who might be used by an open-shop contractor on the Northern Intertie project, we shall use union rates, to forestall challenges that sufficient skilled linemen could not be found at other rates.

Equipment operators' rates are not available from California, but the median wage rate of 2,701 equipment operators in heavy construction found nationwide in the larger survey in 1994 was \$14.60, expected to increase by 4.2 percent in 1995 (to \$15.21). To ensure compatibility with the other rates, we shall assume a further differential of 10 percent in wage rate (to \$16.73). Finally, the median wage rate of California construction laborers in the survey was \$14.50. Also from the California survey, maximum journeymen's fringe benefits were 16.8 percent of wage, and laborers' were 13.5 percent. Thus, wage rates in the open shop can be summarized thus:

Foremen	\$32.40 plus	\$5.44 fringes
Linemen	\$30.65 plus	\$5.15 fringes
Equip. Ops.	\$16.73 plus	\$2.68 fringes
Laborers	\$14.50 plus	\$1.96 fringes

**Average crew cost for open-shop work is thus: \$18.42, plus \$2.77 in fringes.**

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<sup>71</sup> See "1995 Merit Shop Wage and Benefit Survey," *PAS Publications*, p. 8 ff. And the discussion, above, in Section III.

<sup>72</sup> See above, Table 7, for a display of the California wage rates and fringe benefits found.

## IX. COST AND SAVINGS COMPARISONS ON THE NORTHERN INTERTIE

Table 13

## Cost Comparisons For Northern Intertie and Project Savings Under Various Labor Conditions

	NECA Contract With LDBA	NECA Contract (No LDBA)	Bradley Concession With LDBA	Bradley Concession (No LDBA)	Bradley Concession (No LDBA) 22% pay cut	Prevailing Rate With LDBA	Prevailing Rate (No LDBA)	Open Shop
Number of manhours	187,472	187,472	187,472	187,472	187,472	187,472	187,472	187,472
Travel, mobilization, and efficiency	27%	27%	27%	27%	27%	27%	27%	27%
Expanded manhours	236,240	236,240	236,240	236,240	236,240	236,240	236,240	236,240
Overtime multiplier	18%	18%	13%	13%	13%	13%	13%	13%
Grand crew average wage	\$ 26.20	\$ 25.77	\$ 25.50	\$ 25.06	\$ 19.55	\$ 23.83	\$ 23.35	\$ 18.42
Grand crew average wage, with overtime	\$ 30.92	\$ 30.41	\$ 28.82	\$ 28.32	\$ 22.09	\$ 26.93	\$ 26.39	\$ 20.81
<b>TOTAL CREW WAGE BILL</b>	<b>\$ 7,303,596</b>	<b>\$ 7,183,728</b>	<b>\$ 6,807,256</b>	<b>\$ 6,689,797</b>	<b>\$ 5,218,896</b>	<b>\$ 6,361,447</b>	<b>\$ 6,233,311</b>	<b>\$ 4,917,241</b>
Fringe benefits	\$ 10.52	\$ 10.52	\$ 10.52	\$ 10.52	\$ 10.52	\$ 10.23	\$ 10.22	\$ 2.77
Total fringe benefits	\$ 2,485,245	\$ 2,485,245	\$ 2,485,245	\$ 2,485,245	\$ 2,485,245	\$ 2,416,735	\$ 2,414,373	\$ 654,385
Social security, workers comp, UI	34%	34%	34%	34%	34%	34%	34%	34%
<b>TOTAL REGULAR LABOR COST</b>	<b>\$ 13,117,046</b>	<b>\$ 12,956,423</b>	<b>\$ 12,451,951</b>	<b>\$ 12,294,556</b>	<b>\$ 10,323,549</b>	<b>\$ 11,762,764</b>	<b>\$ 11,587,896</b>	<b>\$ 7,465,979</b>
Special helicopter pay	\$ 59,883	\$ 59,883	\$ 44,880	\$ 44,880	\$ 34,406	\$ -	\$ -	\$ -
Special high work pay	\$ 248,292	\$ 248,292	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Special safety meeting pay	\$ 55,040	\$ 55,040	\$ 55,040	\$ 55,040	\$ 42,931	\$ -	\$ -	\$ -
<b>TOTAL EXPANDED LABOR COST</b>	<b>\$ 13,480,261</b>	<b>\$ 13,319,638</b>	<b>\$ 12,551,871</b>	<b>\$ 12,394,476</b>	<b>\$ 10,400,886</b>	<b>\$ 11,762,764</b>	<b>\$ 11,587,896</b>	<b>\$ 7,465,979</b>
Bond cost (at 5 percent)	\$ 674,013	\$ 665,982	\$ 627,594	\$ 619,724	\$ 520,044	\$ 588,138	\$ 579,395	\$ 373,299
Subsistence	\$ 1,951,044	\$ 1,951,044	\$ 497,904	\$ 497,904	\$ 497,904	\$ -	\$ -	\$ -
<b>SUBTOTAL LESS MARGIN</b>	<b>\$ 16,105,319</b>	<b>\$ 15,936,664</b>	<b>\$ 13,677,368</b>	<b>\$ 13,512,104</b>	<b>\$ 11,418,834</b>	<b>\$ 12,350,902</b>	<b>\$ 12,167,290</b>	<b>\$ 7,839,278</b>
Margin on labor (15 percent)	\$ 2,415,798	\$ 2,390,500	\$ 2,051,605	\$ 2,026,816	\$ 1,712,825	\$ 1,852,635	\$ 1,825,094	\$ 1,175,892
<b>TOTAL LABOR-RELATED COST</b>	<b>\$ 18,521,116</b>	<b>\$ 18,327,164</b>	<b>\$ 15,728,973</b>	<b>\$ 15,538,920</b>	<b>\$ 13,131,659</b>	<b>\$ 14,203,538</b>	<b>\$ 13,992,384</b>	<b>\$ 9,015,169</b>
Materials and other non-variables	\$ 31,974,912	\$ 31,974,912	\$ 31,974,912	\$ 31,974,912	\$ 31,974,912	\$ 31,974,912	\$ 31,974,912	\$ 31,974,912
<b>TOTAL JOB</b>	<b>\$ 50,496,028</b>	<b>\$ 50,302,076</b>	<b>\$ 47,703,885</b>	<b>\$ 47,513,832</b>	<b>\$ 45,106,571</b>	<b>\$ 46,178,450</b>	<b>\$ 45,967,296</b>	<b>\$ 40,990,081</b>
Labor savings from highest		\$ 193,953	\$ 2,792,143	\$ 2,982,197	\$ 5,389,457	\$ 4,317,578	\$ 4,528,732	\$ 9,505,947
Labor Savings as percentage of total cost		0.4%	5.5%	5.9%	10.7%	8.6%	9.0%	18.8%
Savings Expanded to All Intertie Projects		\$ 484,882	\$ 6,980,358	\$ 7,455,492	\$ 13,473,643	\$ 10,793,946	\$ 11,321,831	\$ 23,764,868

## X. SUMMARY AND FINAL NOTE

It is quite clear from Table 13 that the potential amount of savings available from constructing the intertie projects, depending on the nature of the labor contracting associated with their construction, is immense. It is also clear that it follows a progression.

The most expensive way to build the Northern Intertie would be under the combined assumptions of "standard contract" union rules and prevailing wage law applicability. Under these conditions, by our estimate, the project would cost about \$50.5 million.<sup>73</sup> The prevailing rate inclusion is responsible for a portion of the cost, because, improbable though it may seem, at the time the estimate was prepared the wage rates required by Alaska department of labor and said to be those "prevailing" in the community (indeed, they are sometimes called the "prevailing minimum wages") were higher than the union rate, and since when prevailing rates apply they are the lowest that can be paid, they would supersede contract terms. Even a union contractor working such a project would have to pay his people more (for at least two years after the start of the project). If the Alaska prevailing rate statute did not apply, even a union contractor could save about \$200,000 on the job. (The other side of that coin is that, once the job is undertaken, regardless of the state of the prevailing wage levels, if union contract rates increase to back above them, union contractors would have to pay them. For a project that extends over a couple of years, the contract rate increases built into the NECA contract might well apply, and any union contractor who failed to anticipate them could wind up in trouble over his estimate.)

As we discussed, the IBEW had adopted something of a retail "Sale!!" mentality to combat the increased inroads of the merit shop, and in Alaska has been rather free to offer "discount rates" from its contract prices and terms. Various concessions have been offered by the IBEW for projects on the North Slope, for the Healy Clean-Coal plant, for Alyeska pipeline jobs, for the Sheep Mountain job—indeed, for seemingly any time that a "work recovery" rate might be useful to keep competitors away. Maintaining a

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<sup>73</sup> By happenstance, the total cost of the Northern Intertie as estimated by D&L is the same amount, about \$50.5 million. However, as seen at fn. 65, above, this would not have been the case had we used the D & L estimate for labor overhead, 49 percent, rather than what we feel is a more realistic number of 34 percent in our calculations in Table 13. Had the 49 percent number been used there, total contract cost for the Northern Intertie would have been \$52.3 million, but the percentage changes in costs from condition to condition of labor contracting would remain approximately the same. (The cost of open-shop contracting under this circumstance would have risen from \$41 million to \$42.0 million, and the percentage savings from the NECA contract would have increased from 18.8 percent to 20.0 percent.)

high “list” price and offering an almost automatic discount is so much the standard practice in many parts of the retail industry that photography magazines, for example, have taken to talking about the “street price” for cameras as opposed to the “list,” and only rubes are expected to pay the latter. In Alaska, it seems the only ones paying list price for outside line work are captive customers where end users like the ratepayers of regulated utilities have no market alternative. Otherwise, discounting on a grand scale, though a fairly new practice in the labor market, seems to be well on its way towards normalcy in the Alaska area.

The particular concessions offered by the IBEW in the Memorandum of Understanding, called the “Bradley Lake” or the “Newbery Alaska” concessions, do provide a substantial discount from the “list” price of the NECA contract. When applied to the Northern Intertie project, that discount would result in overall project savings of between 5.5 percent and 5.9 percent, depending, again, on whether the prevailing wage law also applied. Most of those savings come from differences in the contract provisions for subsistence and travel which, per man working on the project, would fall from an average payout of \$42,414 above wages, overtime, and any special pay during the 18-month project time, to “only” \$10,824 per man. There are also some savings in other labor costs from the freeing of one restriction on crew deployment, from eliminating double time on most overtime and replacing it with the more standard time and one-half, and from some lessening of special pays for working with helicopter crews or up high. Overall, under this “discount special,” the overall price of the job would fall by about \$2.8 million, to \$47.7 million—a bit more if the prevailing wage law did not apply.

The more serious concessions, such as those now in effect for the Alyeska work, involve actual wage rate concessions by the IBEW, and a number frequently seen is on the order of 22 percent discount from the current contract terms, whatever they happen to be. If this were possible for the Northern Intertie construction, along with the other concessions of the Bradley Lake project agreement, labor savings of almost \$5.4 million would be possible, and overall project cost could decrease by about 10.7 percent, to the \$45 million range. There are two reasons, however, that this level of concession would not be used to build the project: first, if one assumes that the Alaska prevailing wage law applies, then the savings evaporate, because regardless of the contract terms, at least the prevailing rates would have to be paid, and we would be back at the previous “Bradley Lake concession with LDBA” level; second, if in the alternative, one assumes that the prevailing wage rates do not apply, either the Memorandum of Agreement is binding, in which case there would be no need or motivation for the IBEW to grant the additional concession, or it is not, in which case there would be no need for the concession,

since the job would be bid open-shop by any reasonable owner.

This leaves three more conditions to be discussed. If this project is covered by the Alaska public works statute, because either the source of some of the funding or the quasi-public nature of some of the members of the Railbelt Utilities requires it to be, it may be that the Memorandum of Understanding is not permissible. (See discussion in Section IV, above.) In this case, the job could be bid by either merit shop or union contractors under LDBA requirements, and considerable savings would be achieved from eliminating the subsistence pay, the special pay conditions associated with helicopter work, high work, and safety meeting attendance, and at least some of the obstructions to crew deployment. Under these circumstances, labor savings on the order of \$4.3 million (8.6 percent of the job) could be expected.

The final two conditions are those under which it might be found that neither the Memorandum of Understanding nor the Alaska public works statute applied. In that case the project could be bid "with prevailing rates" (as apparently has been done on various transmission line jobs in the past—that is, under the rates of the prevailing wage law but not under the law, itself) or it could be bid open. In both of these cases the competition would be opened up to both merit shop and union contractors, and union contractors might be able to get special "job recovery" rates from the IBEW to be competitive. Of the two, however, there would seem to be little sense to bid the job "with prevailing rates" if they were not mandatory, since this would simply limit the options of bidding contractors in forming their overall labor strategy to complete the job, and would unnecessarily deprive the construction buyer of the fruits of competition among bidders. Therefore, if neither the Memorandum of Understanding nor the prevailing wage law applied, the proper strategy for the project would be to open it up to competitive bidding on an open basis. In that case, potential savings on the order of 18.8 percent could be realized, and savings of over \$9.5 million in the cost of the Northern Intertie. (Incidentally, the average member of the 46-man work crew on the open-shop job would receive, in wages, overtime, benefits, and social insurances, \$108,743 per year [although he might see less than \$81,000 of that in cash and personal benefits] during the project life, seemingly enough incentive to attract workers to the effort.)

Not all of the savings possible under the last three conditions have been included in Table 13, either because insufficient data are available, or because they derive from areas outside the purview of the table. For example, substantial costs in the category of "general and administrative expense," considered constant in Table 13, are actually variable with labor contracting provisions. Supervisory labor and support labor for off-site assembly, loading and unloading, materials handling, and transportation of men and

materials other than by helicopter or common carrier will be cheaper under open-shop contract terms, but by how much we cannot say. Savings from areas outside the purview of the table are for such items as the construction of the three planned substations for the Northern Intertie and the installation of the energy storage facilities. These facilities and their construction will add about \$19.5 million to the costs we have already seen for the Northern Intertie, and if they are as much subject to savings because of the various conditions of labor contracting, \$3.67 million (18.8 percent of \$19.5 million) could be saved in open-shop work, about \$1.7 million in LDBA work, or about \$1.1 million under the Bradley Lake concessions. For the whole intertie project, then, savings could be \$9.2 million for open-shop, \$4.3 million for LDBA, or \$2.8 million for Bradley Lake concession.

Another source of savings that cannot be tabularized is that which comes about because of competitive bidding, and because at least some of the competitors will likely be large, experienced open-shop firms from the lower 48. Regardless of whether those firms are successful in winning the bids, their presence in the competition will affect its terms. As an example, the labor overhead figure used in Table 13 to account for social security, unemployment insurance and workers compensation was 34 percent of gross wages. Included in that total was a 20 percent estimate for the cost of workers compensation insurance, which was applied equally to all labor contract categories. But workers compensation insurance premiums are substantially lower for large, experienced firms. Such firms might pay only 12–15 percent for such insurance, lowering their cost by about \$375,000 compared with smaller firms, a project-wide total of \$933,000. Since all competitors for the bid would know that the large, experienced open-shop firms among them would have these reduced costs, to be competitive, they would have to adjust their bids accordingly.

There are a few other areas, as well, subject to similar analysis, but they all require higher levels of speculation. Table 14 is a summary of potential savings already discussed, applied to the data in Table 13, and restated using estimated open-shop costs as the base. It shows that if all the intertie projects could be built for approximately \$166 million at the open-shop rate, almost \$18 million additional would be needed to do the work under prevailing wage conditions, \$26 million more would be needed to build them under Bradley Lake concessions, and \$34 million more under full union conditions.

**Table 14**  
**Estimated Total Intertie Costs**  
**Under Various Labor Contract Terms**

CONTRACTING CONDITION	COST, ALL INTERTIE PROJECTS (\$ MIL)	INCREASED COST WITH RESPECT TO OPEN-SHOP (\$ MIL)	PERCENTAGE INCREASE WITH RESPECT TO OPEN-SHOP
OPEN-SHOP	\$165.8	-	-
PREVAILING WAGE	\$183.6	\$17.8	11%
BRADLEY LAKE CONCESSIONS	\$190.4	\$24.6	15%
FULL UNION	\$200	\$34.2	21%

Source, See text.

### Final Note

Could the Northern Intertie transmission line be built for \$41 million instead of \$50 million just by changing the conditions of labor use by contractors? The figures, which have been reality-checked by the authors, indicate that it certainly could. As a final note, however, it must be pointed out that in an actual bid competition, especially one in which the labor costs of the union "opposition" are pretty well known and the expectations of the buyer reflect them in engineering estimates, merit shop contractors might strive to strike a price low enough to win the bid but not so low as to give up profits unnecessarily—while simultaneously trying to outdo other merit shop contractors and union contractors with "job recovery" rates. Taking all of this into account, it appears most likely that were the Northern Intertie transmission line construction work to be bid open, project savings would be somewhere between the 10.7 percent of the Bradley Lake concession with lowered union contract rates and the 18.6 percent of the open-shop rate, perhaps in the 14 to 16 percent range. If the Railbelt Utilities aggressively foster an environment of free and open competition that generates interest from as many contractors as possible, even greater savings might obtain.





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## RESUME

### FORMER WHARTON POSITIONS:

1961 - 1988      Professor of Industry  
1964 - 1988      Director, Industrial Research Unit  
1968 - 1985      Chairman, Labor Relations Council  
1964 - 1969      Chairman, Department of Industry (now Department of Management)

**PERSONAL:**      Born - New Jersey, March 6, 1918  
Married, five children

**EDUCATION:**    A.B., Duke University, 1939  
A.M., Harvard University, 1941  
Ph.D., Harvard University, 1942 (Economics)

### PREVIOUS EMPLOYMENT:

1958 - 1961      Employee Relations Manager  
General Electric Company

Full staff responsibility for all aspects of employee relations covering seventy-one General Electric plants employing 100,000 employees. Member, national negotiating committee and handled third-stage grievances under national contracts.

1955 - 1958      Vice President, Industrial Relations  
Penn-Texas Corporation (now Coltec, Inc.)

Full staff responsibility for all phases of personnel and union relations in multiplant diversified company of 15,000 employees, including management organization of subsidiaries, executive recruitment, relations with ten unions, pensions, insurance, and plant security.

1952 - 1955      Industrial Relations Consultant  
Ebasco Services Incorporated

Consultation with industrial clients on a variety of management and personnel problems including organization and controls, union relations, communications, and executive recruitment. Developed more consulting and business than anyone in history of department.

(Also served as consultant, U.S. Salary Stabilization Board during 1952.)

**Herbert R. Northrup**

- 1949 - 1952      Labor Economist  
National Industrial Conference Board
- Research and consultation on various economic and personnel problems.
- 1945 - 1949      Assistant Professor, Industrial Relations, Columbia University; Visiting  
Professor, Summer Sessions, New York University and University of  
California (Berkeley)
- In addition to teaching, considerable time spent in research, publication and  
management consultation.
- 1943 - 1945      Economist and Senior Hearing Officer, National War Labor Board, Detroit  
and New York Regions
- 1942 - 1943      Instructor in Economics, Cornell University

**CONSULTANT** in industrial relations, labor, and manpower policies and programs to numerous  
"Fortune 500" companies.

**ARBITRATOR** in labor disputes.

**MEMBERSHIPS:** American Economic Association; Industrial Relations Research Association;  
Society for Human Resources; American Arbitration Association; Academy of  
International Business; International Industrial Relations Association.

**BIBLIOGRAPHY:** Author of over 300 articles in various professional, business, and popular  
journals and of 35 books and monographs, including co-author of The  
Economics of Labor Relations, 1st Edition, 1950, 9th Edition, 1981, for many  
years the most widely used college text in the field. Other major studies  
include Union Corporate Campaigns and Inside Games As a Strike Form,  
1994; The Railway Labor Act: Time for Repeal, 1990; Government Protection  
of Employees Involved in Mergers and Acquisitions, 1989; Personnel Policies  
for Engineers and Scientists: An Analysis of Major Corporate Practice, 1985;  
Open Shop Construction Revisited, 1984; The Rise and Demise of PATCO,  
1984; The International Transport Workers' Federation and Flag of  
Convenience Shipping, 1983; Employee Relations and Regulation in the 80s,  
1982; Multinational Collective Bargaining Attempts, 1979; The Impact of  
Government Manpower Programs, 1975; Negro Employment in Basic  
Industry, 1970; Restrictive Labor Practices in the Supermarket Industry, 1967;  
Compulsory Arbitration and Government Intervention in Labor Disputes,  
1965; Boulwarism, 1964; Government and Labor, 1963; Unionization of  
Professional Engineers and Chemists, 1946; and Organized Labor and the  
Negro, 1944, reprinted 1971.

## HERBERT R. NORTHROP

Construction Industry Employee Relations Publications  
1944-A. Books and Monographs

1. Open Shop Construction, Wharton Industrial Research Unit, 1975.
2. Open Shop Construction Revisited, Wharton Industrial Research Unit, 1984.
3. Skill and Supervisory Training Programs of Large Open Shop Companies, Wharton Industrial Research Unit, 1985.
4. Doublebreasted Operations and Pre-Hire Agreements in Construction: The Facts and the Law, Wharton Industrial Research Unit, 1987.
5. Organized Labor and the Negro, Harper and Brothers, 1944. Reprinted 1971, Kraus Reprint Co. Chapter II -- "The Building Trades."

B. Articles

6. "Restrictive Practices in Construction," in Papers Presented at the National Conference on Construction Problems, Chamber of Commerce of the United States, 1968, pp. 1-12. Also published in Daily Labor Report for November 19, 1968, and Contractor, January 1969.
7. "Construction Labor Crisis," Wharton Quarterly IV (Winter 1969).
8. "Construction Doublebreasted Operations and Pre-Hire Agreements: Assessing the Issues," Journal of Labor Research, X (Spring 1989), 215-238.
9. "Arizona Construction Labor: A Case Study of Union Decline," Journal of Labor Research, 11 (Spring 1990), 161-180.\*
10. "The Status and Future of Unionized Construction in New Jersey: A Preliminary Analysis," New Jersey Building Contractor, 4 (December 1990), 9-12.\*
11. "The 'Helper' Controversy in the Construction Industry," Journal of Labor Research, XIII (Fall 1992), 421-435.
12. "'Salting' the Contractors' Labor Force: Construction Unions Organizing with NLRB Assistance," Journal of Labor Research, XIV (Fall 1993), 470-492.
13. Reply: "'Salting' the Contractors' Labor Force," Journal of Labor Research, XV (Summer 1994), 312-313.

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14. "Doublebreasted Operations and the Decline of Construction Unionism," Journal of Labor Research, XVI (Spring 1995), 379-385.

15. "Construction Union Use of Environmental Legislation to Win Jobs: Cases, Impact, and Legal challenge," Harvard Journal of Law & Public Policy, XIX (Fall 1995), 55-119.

16. "Subsidizing Contractors to Gain Employment: Construction Union 'Job Targeting,'" Berkeley (Univ. of California) Journal of Employment & Labor Law, XVII (Winter 1996) 501-529.

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## EMPLOYMENT HISTORY

**Academic:** Associate Professor of Management, 1972-84, University of Maryland, College Park. Tenured member of Graduate Faculty. Assistant Professor of Management, University of Maryland, 1969-72; Teaching Fellow, Instructor in Industry, Lecturer in Industry, Wharton School, University of Pennsylvania, 1965-68; Research Associate, Senior Research Associate, Industrial Research Unit, University of Pennsylvania, 1969-86. Part-time Instructor, The Johns Hopkins University Graduate School of Continuing Education, 1988-91. Instructor, Maryland Institute College of Art 1992-94.

**Academic Administration:** Director of Management Development Program, College of Business and Management, University of Maryland, 1970-74.

**Industrial:** Research Assistant, Flame Lab, Solid Propellant Division, James Forrestal Research Center, Princeton; Draftsman and Test Lab Statistician, Thieblot Aircraft Co.

**Military Service:** U.S. Navy, 1961-63. Highest rank held, Lieutenant (jg).

## EDUCATION

Doctor of Philosophy, 1969, University of Pennsylvania.  
Master of Business Administration, 1965, Wharton School, University of Pennsylvania.  
Bachelor of Science (Aeronautical Engineering), 1961, Princeton University.  
Graduate, Cum Laude, 1957, Mercersburg Academy, Mercersburg, Pennsylvania.

## MONOGRAPHS

(Published by the Industrial Research Unit of the University of Pennsylvania.)

- Prevailing Wage Legislation: The Davis-Bacon Act, State "Little Davis-Bacon Acts," the Walsh Healey Act, and the Services Contract Act*, 1986; 279 pages.
- Union Violence: A Study of the Record and the Response By Courts, Legislatures, and the NLRB*, 1983; 540 pages. (With T. Haggard)
- The Davis-Bacon Act*, 1975; 239 pages.
- Welfare and Strikes; The Use of Public Funds to Support Strikers*, 1972; 276 pages. (With R. Cowin.)
- "Public Support for Strikers," *Collective Bargaining, Survival in the '70s*. Richard Rowan, ed., 1972.
- The Negro in Finance*, 1970; 359 pages. (With Dr. L. Fletcher.)
- The Negro in the Air Transportation Industry*, 1970; 146 pages. (With Drs. H. Northrup and W. Chernish.) Also appears in *Negro Employment in Land and Air Transport*, Northrup et al., 1971.
- The Negro in the Banking Industry*, 1969; 211 pages.

## PUBLISHED RESEARCH REPORTS

- Port Development: "The Port of Richmond at the Crossroads," 1981. By Dr. H. Northrup. (Contributor, 30 pages of 130.); "The Economic Impact of the Port of Baltimore on Maryland," 1975; 129 pages. College of Business and Management, University of Maryland. (With M. McGee and Drs. S. Hille and C. Taff.)
- Transportation: "Pilotage Costs and Their Impact on Sea Transportation and Port Usage," 1980; 33 pages. The Association of Maryland Pilots. (With G. Chow.); "Evaluated Data Base for Maryland Freight Transportation Planning," 1975; 93 pages. College of Business and Management, University of Maryland. (With Dr. C. Taff and M. McGee.)
- Construction: 'State Prevailing Wage Laws, An Assessment at the Start of 1995,' in press, 1995; "Prevailing Wage Laws of the States," *Government Union Review* Vol. 4, No. 4 (Fall, 1983), p. 1-64 [Entire Issue]; "Prevailing Wage Laws of the States and the District of Columbia," newly revised, 1980. (First edition, 1975; revised edition, 1977.) 40 pages. Merit Shop Foundation; "Prevailing Wage Laws and School Construction Costs," 1977; 20 pages. Merit Shop Foundation. "The Davis-Bacon Act: Is It As Cheap As They Say It Is?" *Construction Labor Report*, No. 1099 (November 17, 1976).
- Industrial Relations: "An Analysis of the Data on Union Membership," 1978; 24 pages. Center for the Study of American Business, Washington University, St. Louis; "Recent Trends in Workforce Organization by Labor Unions," 1978; 40 pages. National Association of Manufacturers.
- Small Business: "Government Interference in the Development of Small Firms," 1975; 26 pages. Center for the Study of American Business, Washington University, St. Louis.
- Management: "Management Philosophy and Merger: A Study of Institutional Change in the United-Capital Merger," 1966; 352 pages. I.R.U. (With Drs. H. Northrup, G. Parks, and D. Berry.)

## MISCELLANEOUS PUBLICATIONS

"A New Evaluation of Impacts of Prevailing Wage Law Repeal," *Journal of Labor Research* XVII (forthcoming Spring 1996). Annual "State of the Industry" reports on economics, demographics, and management for *Education Market Forum* 1976-1984; articles or reviews published in *Merit Shop Contractor*, *Maryland*, *Vital Speeches of the Day*, *Nation's Business*, *Air Progress*, *Flying*, *Industrial and Labor Relations Review*, and elsewhere.

## CONSULTANCY

**Consultant** to National Association of Manufacturers, U.S. Chamber of Commerce, Associated Builders and Contractors of America, Institute for Justice, Heritage Foundation, Maryland Department of Economic and Community Development, National Right to Work Legal Defense Foundation, Merit Shop Foundation, Oklahoma Citizens for a Sound Economy Foundation, General Motors Corporation, Grinnell Corporation, Dow Chemical Company, Broen Armatur A/S (Denmark), BE&K, Inc., various marine pilots' associations, and numerous small firms.

## EXPERT WITNESS

On welfare and strikes: to Pennsylvania District Court, 1985; for General Motors Corporation, 1974; for National Association of Manufacturers, before House Committee on Agriculture, 1973 and 1976, House Appropriations Committee, 1977, and Senate Agriculture Committee, 1975; to Rhode Island District Court, 1972; to Maryland District Court, 1971.

On prevailing wage legislation: to Senate Committee on Banking, Housing, and Urban Affairs, May 1979 and July 1979, Senate Committee on Government Affairs, 1979, Senate Committee on Labor and Human Relations, 1995, House Sub-Committee on Labor Standards, 1979, and House Committee on Education and Labor, 1977, 1993, House Sub-Committee on Labor Protection, 1995; to Maryland Legislature, 1979, 1985, Florida Legislature, 1979, Minnesota Legislature, 1979, and Texas Legislature, 1981; to New Jersey District Courts, 1979 and 1982; to D.C. District Court, 1983; to Ohio Legislature, 1995.

On business management: for American National Bank, 1974 (two cases); to Senate Banking Committee, 1976, Senate Small Business Committee, 1977 (small business); to Maryland State Senate Finance Committee, 1979 (port development).

On labor violence: to Maryland Legislature, 1984

On the economics of sea pilotage: to Administrative Law Judge, San Francisco, 1992,1993; to Harris County Board of Pilot Examiners (Houston), 1990, 1991; to International Maritime Pilots Association, IX International Congress, Melbourne, Aus., 1988; to Maryland Board of Pilot Examiners, 1980, 1984, (New York) Governor's Committee on Pilotage Rates, 1982, 1994; and Maryland Public Service Commission, 1985, 1991, and 1994.

## MISCELLANEOUS

Member, Chairman's Panel on Welfare Reform Proposals, National Association of Manufacturers, 1976-78.  
Member of Legislative Committee, Small Business Council, U.S. Chamber of Commerce, 1978-79.  
Member of Committee on Labor Relations, U.S. Chamber of Commerce, 1979-81.  
President, Mount Royal Improvement Association, Baltimore 1977-79.  
President, (Washington) Society for the Advancement of Management, 1973-74.  
Director, Kiwanis Club of Baltimore City, 1990-93, 1995.  
Private pilot, with commercial multi-engine privileges and instrument ratings.

## PERSONAL DATA

Born Hagerstown, Maryland, September, 1940. Wife, Bernice Ashby Thieblot, President, The NCSDO (a graphic design/communications consulting firm). Son, A.J.-P. Louis, born 1979.