

# How to calculate real labor costs

## Measure benefits and unproductive time

By Bob Lawrence



What do your employees really cost you?

Few business decisionmakers take the opportunity to examine what an hourly employee really costs. Besides not knowing actual hourly costs, we often don't recognize the amount of nonproductive time employees accumulate every day.

Think about it. How much are we paying employees for nonproductive time, in other words,

time spent with daily instructions on how to accomplish their duties? How about daily time-wasters we pay for—time on the phone, in the

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### Employee Cost Calculator 2004

With 254 paid working days in an average year, employees will be paid 2,032 hours at eight hours per day. Allowing an average of 1½ hours for travel, bathroom and coffee breaks, telephone, getting instructions and so forth, employees will typically contribute only 6½ *productive* hours per day. Therefore, the employee's yearly productive hours are: 254 days times 6.5 hours equals 1,651 hours; overtime is extra. "If paid" assumptions: businesses usually

Base Rates Per Hour	\$7	\$8	\$9	\$10	\$11	\$12	\$13	\$14	\$15	\$16	\$17	\$18
Equates to annual rate of	\$14,224	\$16,256	\$18,288	\$20,320	\$22,352	\$24,384	\$26,416	\$28,448	\$30,480	\$32,512	\$34,544	\$36,576
Social Security plus Medicare tax (all wages up to \$87,900) 7.65%	1,088	1,244	1,399	1,554	1,710	1,865	2,021	2,176	2,332	2,487	2,643	2,798
Federal unemployment tax (at 0.8%) (wage base \$7,000)	56	56	56	56	56	56	56	56	56	56	56	56
State unemployment tax (at 2.43% - maximum 8.47%) (wage base \$9,000)	219	219	219	219	219	219	219	219	219	219	219	219
Workers' compensation insurance (glaziers) 14%	1,991	2,276	2,560	2,845	3,129	3,414	3,698	3,983	4,267	4,552	4,836	5,121
Hourly rate before allowances, see all options below	8.65	9.87	11.08	12.30	13.52	14.73	15.95	17.17	18.38	19.60	20.82	22.03
Annual cost: no holiday pay, or vacation pay, or benefits	17,578.20	20,050.12	22,522.05	24,993.98	27,465.91	29,937.84	32,409.76	34,881.69	37,353.62	39,825.55	42,297.48	44,769.40
Eight-hour cost per day (with nonproductive time included)	69.21	78.94	88.67	98.40	108.13	117.87	127.60	137.33	147.06	156.79	166.53	176.26
Cost per productive hour	10.65	12.14	13.64	15.14	16.64	18.13	19.63	21.13	22.62	24.12	25.62	27.12
Six paid holidays added	17,986.94	20,517.26	23,047.58	25,577.90	28,108.22	30,638.54	33,168.86	35,699.18	38,229.50	40,759.82	43,290.14	45,820.46
Eight-hour cost per day (with nonproductive time included)	70.81	80.78	90.74	100.70	110.66	120.62	130.59	140.55	150.51	160.47	170.43	180.40
Cost per productive hour	10.89	12.43	13.96	15.49	17.02	18.56	20.09	21.62	23.16	24.69	26.22	27.75
Six paid holidays plus two weeks vacation and sick pay	17,986.94	20,517.26	23,047.58	25,577.90	28,108.22	30,638.54	33,168.86	35,699.18	38,229.50	40,759.82	43,290.14	45,820.46
Eight-hour cost per day (with nonproductive time included)	73.72	84.09	94.46	104.83	115.20	125.57	135.94	146.31	156.68	167.05	177.42	187.79
Cost per productive hour	11.34	12.94	14.53	16.13	17.72	19.32	20.91	22.51	24.10	25.70	27.30	28.89
Six paid holidays plus three weeks vacation and sick pay	17,986.94	20,517.26	23,047.58	25,577.90	28,108.22	30,638.54	33,168.86	35,699.18	38,229.50	40,759.82	43,290.14	45,820.46
Eight-hour cost per day (with nonproductive time included)	75.26	85.85	96.43	107.02	117.61	128.19	138.78	149.37	159.96	170.54	181.13	191.72
Cost per productive hour	11.58	13.21	14.84	16.46	18.09	19.72	21.35	22.98	24.61	26.24	27.87	29.49
Six paid holidays plus two weeks vacation and sick pay plus health insurance	20,986.94	23,517.26	26,047.58	28,577.90	31,108.22	33,638.54	36,168.86	38,699.18	41,229.50	43,759.82	46,290.14	48,820.46
Eight-hour cost per day (with nonproductive time included)	86.01	96.38	106.75	117.12	127.49	137.86	148.23	158.60	168.97	179.34	189.71	200.08
Cost per productive hour	13.23	14.83	16.42	18.02	19.61	21.21	22.81	24.40	26.00	27.59	29.19	30.78
Six paid holidays plus three weeks vacation and sick pay plus health insurance	20,986.94	23,517.26	26,047.58	28,577.90	31,108.22	33,638.54	36,168.86	38,699.18	41,229.50	43,759.82	46,290.14	48,820.46
Eight-hour cost per day (with nonproductive time included)	87.81	98.40	108.99	119.57	130.16	140.75	151.33	161.92	172.51	183.10	193.68	204.27
Cost per productive hour	13.51	15.14	16.77	18.40	20.02	21.65	23.28	24.91	26.54	28.17	29.80	31.43

Source: Craftsman Fabricated Glass Ltd., Houston

bathroom, getting coffee, loading trucks, running to the store, unloading vendor delivery trucks, smoking or waiting for you to get off the phone? And, of course, travel time.

To help determine what an employee really costs, I've developed the employee cost calculator, a chart designed to provide a more accurate productive cost, in this case, for Texas employees. Most states are similar. Here is a brief example of how to use this chart.

Say an installer's base pay is \$10 per hour; following down the chart under \$10, we find that the total minimum daily cost (where minimum means no additional benefits) is \$98.40 for an eight-hour day after including government-mandated taxes and workers' compensation. Considering that employees might average 6½ productive hours per day, and we are still paying for 1½ hours of "nonproductive" time, the cost for a \$10 per hour employee must be adjusted to \$15.14 per hour actual cost.

Two frightening things come to light: The first is that a \$10 per hour person with no benefits actually does cost \$15.14 per hour. Even with no overhead, and no profit added, \$15.14 equates to a 51 percent markup over the employee hourly base rate just to

recover cost. This is scary enough: Scarier still, what is the rookie or "uninformed" estimator down the street using as a real labor cost for his \$10 per hour installers, or as a markup?

Now comes the enlightening part.

How should we identify the proper labor and material selling price? It's simple arithmetic.

Business accounting will always measure a percentage of costs evaluated against a selling price of 100 percent. Assuming the company overhead is traditionally 30 percent of a sale, and the target profit is 10 percent before taxes, then we can determine that the actual labor and material cost must equal 60 percent, which is the balance of 100 percent. You should substitute your traditional overhead and targeted profit percentages to figure your own percentage that actual labor and material must be. As a matter of interest, the higher or lower the company overhead percentage is to sales, the higher or lower the respective selling price would be to follow this plan.

To calculate the selling price per hour for labor, including overhead and profit, do this: divide the actual labor cost of \$15.14 by 0.60 (the percent-

offer six paid holidays; health insurance for employees will probably cost \$250 per month if the employees pay their own dependent coverage; you should substitute your state taxes and workers' compensation rates; overtime, uniforms and 401(k) contributions are extra. This chart is an approximation.

Base Rates Per Hour	\$19	\$20	\$21	\$22	\$23	\$24	\$25	\$26	\$27	\$28	\$29	\$30
Equates to annual rate of	\$38,608	\$40,640	\$42,672	\$44,704	\$46,736	\$48,768	\$50,800	\$52,832	\$54,864	\$56,896	\$58,928	\$60,960
Social Security plus Medicare tax (all wages up to \$87,900) 7.65%	2,954	3,109	3,264	3,420	3,575	3,731	3,886	4,042	4,197	4,353	4,508	4,663
Federal unemployment tax (at 0.8 %)(wage base \$7,000)	56	56	56	56	56	56	56	56	56	56	56	56
State unemployment tax (at 2.43 % - maximum 8.47 %)(wage base \$9,000)	219	219	219	219	219	219	219	219	219	219	219	219
Workers' compensation insurance (glaziers) 14%	5,405	5,690	5,974	6,259	6,543	6,828	7,112	7,396	7,681	7,965	8,250	8,534
Hourly rate before allowances, see all options below	23.25	24.47	25.68	26.90	28.11	29.33	30.55	31.76	32.98	34.20	35.41	36.63
Annual cost: no holiday pay, or vacation pay, or benefits	47,241.33	49,713.26	52,185.19	54,657.12	57,129.04	59,600.97	62,072.90	64,544.83	67,016.76	69,488.68	71,960.61	74,432.54
Eight-hour cost per day (with nonproductive time included)	185.99	195.72	205.45	215.19	224.92	234.65	244.38	254.11	263.85	273.58	283.31	293.04
Cost per productive hour	28.61	30.11	31.61	33.11	34.60	36.10	37.60	39.09	40.59	42.09	43.59	45.08
Six paid holidays added	48,350.78	50,881.10	53,411.42	55,941.74	58,472.06	61,002.38	63,532.70	66,063.02	68,593.34	71,123.66	73,653.98	76,184.30
Eight-hour cost per day (with nonproductive time included)	190.36	200.32	210.28	220.24	230.20	240.17	250.13	260.09	270.05	280.01	289.98	299.94
Cost per productive hour	29.29	30.82	32.35	33.88	35.42	36.95	38.48	40.01	41.55	43.08	44.61	46.14
Six paid holidays plus two weeks vacation and sick pay	48,350.78	50,881.10	53,411.42	55,941.74	58,472.06	61,002.38	63,532.70	66,063.02	68,593.34	71,123.66	73,653.98	76,184.30
Eight-hour cost per day (with nonproductive time included)	198.16	208.53	218.90	229.27	239.64	250.01	260.38	270.75	281.12	291.49	301.86	312.23
Cost per productive hour	30.49	32.08	33.68	35.27	36.87	38.46	40.06	41.65	43.25	44.84	46.44	48.04
Six paid holidays plus three weeks vacation and sick pay	48,350.78	50,881.10	53,411.42	55,941.74	58,472.06	61,002.38	63,532.70	66,063.02	68,593.34	71,123.66	73,653.98	76,184.30
Eight-hour cost per day (with nonproductive time included)	202.30	212.89	223.48	234.07	244.65	255.24	265.83	276.41	287.00	297.59	308.18	318.76
Cost per productive hour	31.12	32.75	34.38	36.01	37.64	39.27	40.90	42.53	44.15	45.78	47.41	49.04
Six paid holidays plus two weeks vacation and sick pay plus health insurance	51,350.78	53,881.10	56,411.42	58,941.74	61,472.06	64,002.38	66,532.70	69,063.02	71,593.34	74,123.66	76,653.98	79,184.30
Eight-hour cost per day (with nonproductive time included)	210.45	220.82	231.19	241.56	251.93	262.30	272.68	283.05	293.42	303.79	314.16	324.53
Cost per productive hour	32.38	33.97	35.57	37.16	38.76	40.35	41.95	43.55	45.14	46.74	48.33	49.93
Six paid holidays plus three weeks vacation and sick pay plus health insurance	51,350.78	53,881.10	56,411.42	58,941.74	61,472.06	64,002.38	66,532.70	69,063.02	71,593.34	74,123.66	76,653.98	79,184.30
Eight-hour cost per day (with nonproductive time included)	214.86	225.44	236.03	246.62	257.21	267.79	278.38	288.97	299.55	310.14	320.73	331.32
Cost per productive hour	33.05	34.68	36.31	37.94	39.57	41.20	42.83	44.46	46.09	47.71	49.34	50.97

## Selling Price for Labor

*At a \$10 Base Rate Per Hour, No Benefits*

Labor hour sell	\$25.23 =	100 %
Hourly rate, including government-mandated costs	-15.14	60 %
Overhead	<u>-7.57</u>	30 %
Profit before taxes	\$ 2.52	10 %

## Loss Per Hour

*If \$10 Base Rate Is Marked Up 40 % Under Same Overhead Conditions*

Labor per hour sold	\$14.00
Hourly rate, including taxes and workers' compensation insurance costs	-15.14
Overhead	<u>-7.57</u>
Loss per hour	\$ -8.71

age). This equals \$25.23 per hour, the target selling price, given a 30 percent overhead plus a target 10 percent profit before taxes for a base rate of \$10 per hour for an installer with no benefits. Given this information, the top table above shows how your certified public accountant would account for each hour's sale, following this company's traditional overhead and profit percentages.

### What a "Rookie" Does

What if that "uninformed" estimator marked up the \$10 per hour installer base rate by 40 percent? If asked for a breakdown, the bottom table above shows

what the accountant would have to report.

The uninformed estimator had better hope there was a lot of high-dollar material sold on this job to help make up for this labor loss!

Now suppose we are one of the successful shops that offer benefits to attract and keep quality employees: holiday pay, a combination of three weeks vacation and sick pay, plus health insurance. Using the

same chart, this same \$10 per hour employee's productive time, including benefits, actually costs the company \$18.40 per hour. What is the target selling price, given a 30 percent overhead and a target 10 percent profit before taxes for a \$10 per hour installer with full benefits? Using our calculations, \$18.40 divided by 0.60 equals \$30.66 per hour.

Going up the scale on the chart, a \$15 per hour base-paid employee with full benefits would cost \$26.54 per hour and sell for \$44.23 per hour, and a \$20 per hour base-paid employee would cost \$34.68 per hour and sell for \$57.80 per hour.

Yes, it is enlightening, isn't it? 