

SUMMARY REPORT

2003 Assessment of the William S. Lee Tax Act

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2003 Assessment OF THE WILLIAM S. LEE ACT

This report was prepared for the North Carolina Department of Commerce in response to the General Assembly's requirement to conduct a biennial assessment of the William S. Lee Act. The full report is organized into four sections: a general background, a summary of the Act's provisions and a review of changes since the last report to the legislature, an overview of the Act's costs to the state, and a discussion of data issues. This summary is limited to the section on the Act's costs to the state, and provides some recommendations regarding data for future analyses. Technical notes and data sources are included in the full report only.

THE COST OF THE WILLIAM S. LEE ACT FOR NORTH CAROLINA

The report addresses the following questions:

- What has been the total cost-to-date of the Act in terms of foregone tax revenues, and what is the cost likely to be in the future?
- How have the provisions of the Act been utilized?
- How have the tax credits been distributed among businesses:
 - located in different tiers and
 - in different general industry groups

The Cost of the Act

Table 1 summarizes the gross cost of the Lee Act over its lifetime, in terms of its tax expenditure (credits utilized) and future liability for businesses. The table also shows the distribution of the tax expenditure among the types of credits. There are additional costs to the state from tax expenditures made to individual taxpayers to whom the credits are passed via the estate, individual, partnership, and trust taxation. We show those tax expenditures in table 2.

Despite the fact that there are many thousands of potentially eligible businesses in the state, table 1 indicates that the Act has been used by a relatively small number of taxpayers. The machinery and equipment credit has had the most interest in terms of number of claims and dollars expended. But even in the most active year (2000) there were just over 700 claims. Less than a thousand claims in total were made in the 1997, 1998, and 1999 tax years. There was a jump in 2000 to 1698, but the economic slowdown in 2001 again reduced the number (to 1144). The concentration of use is even more pronounced when the value of credits taken is considered. According to the DOR: "in recent years, five or six corporations have utilized nearly one-third of the credits claimed under the program. An additional 15-20 corporations account for almost another third of the total credits claimed." In short: a few dozen firms, at most, account for two-thirds of the Lee Act tax expenditure, or approximately \$35 million per year.

TABLE 1
William S. Lee Act Cost (Tax Expenditure), 1996-2001*

	Number of returns with new credits generated**	Value of credits generated	Credits utilized	Max. credits available to be claimed in future tax years***	Credits generated as percent of all credits	Credits utilized as a percent of all credits*
Machinery and equipment (M&E)						
1996		\$84,186,322				
1997	94	\$198,085,000	\$4,142,674		84.4%	37.0%
1998	163	\$183,446,028	\$11,091,833		76.5%	51.7%
1999	360	\$194,093,583	\$40,695,976		71.8%	60.9%
2000	706	\$121,444,892	\$31,196,977		65.1%	61.7%
2001	529	\$78,033,859	\$28,828,896		63.9%	65.4%
Total M&E credit		\$859,289,684	\$115,956,356	\$743,333,328	74.3%	55.6%
Jobs						
1996		\$17,616,545				
1997	112	\$26,140,199	\$821,684		11.1%	7.3%
1998	185	\$35,873,672	\$2,635,298		15.0%	12.3%
1999	317	\$43,812,130	\$11,092,044		16.2%	16.6%
2000	536	\$25,646,953	\$11,185,008		13.7%	22.1%
2001	400	\$13,169,730	\$7,839,928		10.8%	17.8%
Total jobs credit		\$162,259,229	\$33,573,962	\$128,685,267	14.0%	16.1%
Worker training						
1996						
1997	3	\$764,593	\$340,304		0.3%	3.0%
1998	9	\$546,794	\$268,306		0.2%	1.2%
1999	55	\$3,877,010	\$2,979,658		1.4%	4.5%
2000	111	\$4,668,223	\$1,804,887		2.5%	3.6%
2001	31	\$2,892,582	\$1,711,880		2.4%	3.9%
Total worker training credits		\$12,749,202	\$7,105,035	\$5,644,167	1.1%	3.4%
Research and development (R&D)						
1996						
1997	108	\$9,761,260	\$5,888,973		4.2%	52.6%
1998	111	\$17,754,244	\$7,452,720		7.4%	34.7%
1999	158	\$21,701,902	\$10,427,813		8.0%	15.6%
2000	216	\$32,062,869	\$5,511,222		17.2%	10.9%
2001	141	\$26,409,775	\$4,919,961		21.6%	11.2%
Total R&D credit		\$107,690,050	\$34,200,689	\$73,489,361	9.3%	16.4%
Central administrative offices (CAO)						
1996						
1997			\$0		0.0%	0.0%
1998	7	\$2,315,169	\$17,605		1.0%	0.1%
1999	35	\$6,959,343	\$1,658,032		2.6%	2.5%
2000	129	\$2,864,926	\$851,924		1.5%	1.7%
2001	43	\$1,684,951	\$794,819		1.4%	1.8%
Total adm offices credit		\$13,824,389	\$3,322,380	\$10,502,009	1.2%	1.6%
All credits						
1996		\$101,802,867				
1997	317	\$234,751,052	\$25,403,062		20.3%	12.2%
1998	475	\$239,935,907	\$21,465,762		20.8%	10.3%
1999	925	\$270,443,968	\$66,853,523		23.4%	32.1%
2000	1698	\$186,687,863	\$50,550,018		16.2%	24.3%
2001	1144	\$122,190,897	\$44,095,484		10.6%	21.2%
Total all credits, all years		\$1,155,812,554	\$208,367,849	\$947,444,705	100.0%	100.0%

The economic slowdown that affected the number of claimants also shows up in the pattern of credits generated and utilized. We can see in the third column of the table an increase in credits generated through 1999, and then a falling-off. The 2001 generated figure is artificially low; late filers for 2001 will show up in the batch of returns that are part of the 2002 processing year, just as the 2001 and 2000 processing years included 2000 and 1999 year returns, respectively. The fourth column shows a slow-down in credits claimed or utilized. That is not surprising since businesses need to have taxable income to offset, and are subject to the 50 percent rule. So, as the bottom line weakens for businesses, the less useful the credits become.

The state has to consider not only the year-to-year tax expenditure (credits utilized), but also the future tax expenditure liability (the fifth column of table 1). Credits that cannot be utilized because of the lack of taxable income and the 50 percent rule can be carried forward, currently for five years in most cases for the jobs, M&E, worker training, and CAO credits, and fifteen years for the R&D credit. And, the credits utilized in any one tax year do not reflect future installments. So, if the Act were to be terminated today, the state would still have *up to* \$947.4 million in future tax expenditure liability.

The words “up to” are important. That \$947.4 million is an upper bound to the future liability because businesses that now qualify for installments and carryovers may not end up receiving them, for four principal reasons:

- (1) their behavior may not be as required under the terms of the Act, making them ineligible for some of the remaining credits,
- (2) the firm may cease to exist (close or move or be merged and not seek tax credits in North Carolina),
- (3) the firms may never be able to offset some of its taxes either because it runs out of time to use carryovers, or never generates net revenue, and
- (4) firms may decide it is too bothersome to fill out the forms required in order to get a relatively small amount of remaining credits.

We do not have enough experience with the William S. Lee Act to be able to detect patterns in businesses’ long-term utilization of tax credits. Therefore, we cannot predict with certainty the share of the outstanding liability that will be used by businesses.

Table 1 also shows the distribution of tax expenditures among the five categories of Lee Act credits. That is summarized graphically for 1996-2001 for credits generated and 1997-2001 for credits utilized. The machinery and equipment tax credit is the largest in terms of generated tax expenditures in each of the years, and in four of five years for credit utilization. Worker training and central administrative office credits are small in relative terms, in terms of generation and use.

Lee Act tax credits go to businesses and individual taxpayers filing personal, estate, and partnership returns, for income passed through from businesses in which they had ownership shares. In the 1999-2001 period alone, that tax expenditure amounted to \$8,332,515.

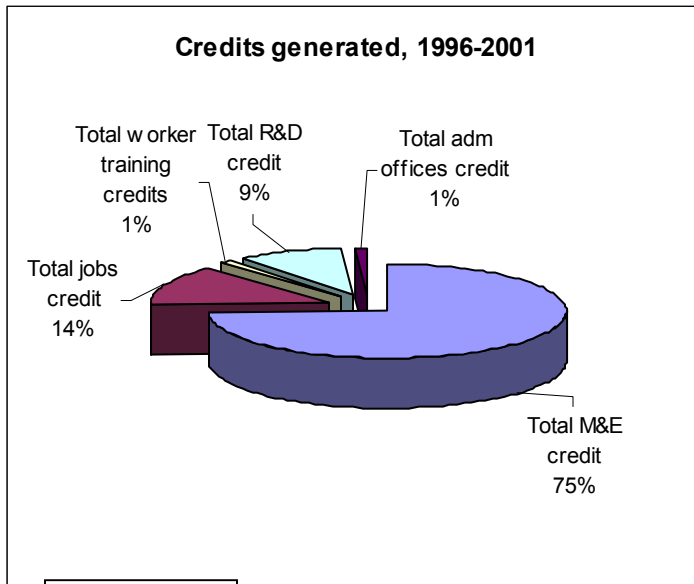


Figure 1A

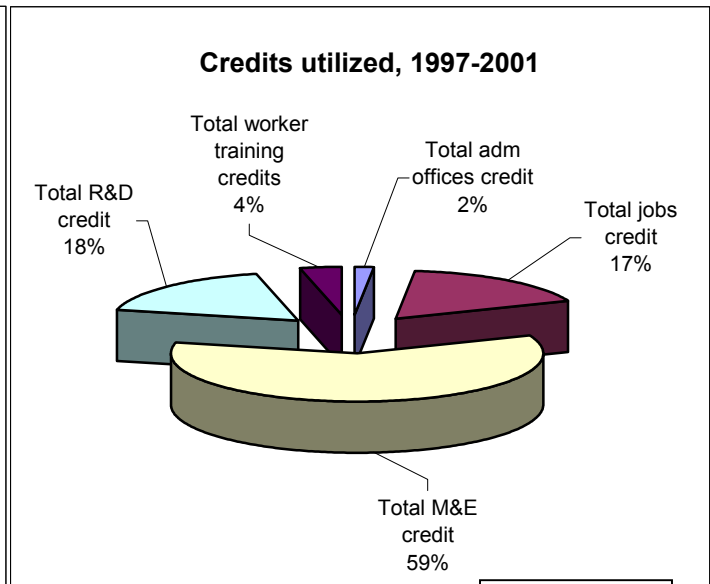


Figure 1B

Utilization of Lee Act credits

Table 2 shows part of the benefits side of the Lee Act credits: the *gross* economic activity *directly* associated with the Act’s provision. The two italicized words are important in the previous sentence. “Gross” refers to the reported activity that triggered the tax credit. Undoubtedly, some of that activity would have occurred anyway. Even in that case, however, the Act has an economic effect, by making the recipient businesses more profitable after taxes. That may enable them to attract more capital, compete better in global markets, and ultimately, hire more North Carolina workers than they otherwise would have. Of course, that effect depends on the use of after-tax profits – specifically, whether they remain in the state or are expatriated to a headquarters or branch plant location elsewhere. “Directly” refers to the correspondence between the Act and any changes in output, investment, and employment by the participating businesses. If there were such a change in behavior, there also would be indirect effects, due to what economists call the “multiplier.” As company A increases output (and increases its own input use accordingly), it would demand more inputs from its suppliers, who, in turn, would increase their output, investment, and employment.

Gross effects

Table 2 indicates that the tax expenditure (credits claimed) in 2001 (for example) of \$28,828,896, on machinery and equipment credits is associated with approximately \$1.1 billion in qualified investments. We constructed the \$1.1 billion figure by dividing the amount of credits generated in the tax year by 7 percent (the value of the credit per dollar of qualified investment). Hence, the dollars invested per dollar of credit generated is \$14.29 (1/0.07).

The value of gross new activity associated with the Act per dollar of tax expenditure can be used as a measure of gross effectiveness. Unfortunately, the data we were provided are not ideal

for that purpose. The credits claimed are not for a single year's new activity, but for all previous activity (and includes carryovers and installments). But, the credits generated values – which are used to generate associated activity -- are for the tax year indicated. To deal with that problem, we estimate a single number for gross effectiveness, aggregating all years' credits claimed and dividing by all associated activity. When we do that, we have the following indicators:

- dollars of associated M&E investment per dollar of credits claimed: \$105.86
- tax expenditures per dollar of associated employment from jobs credit: \$206-\$327
- tax expenditures per dollar of associated trained worker: \$287.26
- dollars of associated R&D spending per dollar of credits claimed: \$62.98
- dollars of associated CAO investment per dollar of credits claimed: \$59.44

By the indicators in table 2 the Lee Act appears to be effective. However, to gauge economic efficiency we need to answer the counterfactual question: how much of the new activity is induced, i.e., would not have occurred anyway? In a scholarly paper based on 2001 Lee Act Report, Luger and Bae (2003) estimate that only around 4 percent of the jobs claimed to be created with Lee Act incentives actually were induced. That means the cost of induced job per credit dollar is much higher than what is shown above and in table 2 – in the \$5150 to \$8175 range. Whether that is too high is a value question which has been debated with regard to many different approaches to job creation. In any case, one could argue that the Lee Act is not intended just to induce hiring by the firms using the incentives. One interpretation of its broader purpose is to make North Carolina businesses more competitive. Having more money after taxes may induce recipient businesses to expand within North Carolina, perhaps at another location, or could increase dividend payouts to shareholders. Or the recipient businesses could use the additional liquidity to modernize – enabling them to produce more goods and services with fewer workers. Those businesses will increase in capital value, benefiting their shareholders.

Finally, a relevant issue is how many tax credit dollars have gone to individual claimants. Given the cost of the application and the time and effort required to qualify and follow-up, businesses would need to get a large payoff to make the pursuit of tax credits worthwhile. The data we had accessible were not ideal to answer the question. DOR reported to us the number of new claimants in each year. Assuming that each new claimant stays in the system to collect future carryovers and installments, we could simply aggregate the numbers in the following way:

- in 1997, 94 new claimants received \$4,142,674 in credits
- in 1998, those 94, plus 163 new claimants received \$11,091,833
- in 1999 those 257, plus 360 new claimants received \$40,695,976
- in 2000, those 617, plus 706 new claimants received \$31,196,977, and
- in 2001, those 1323, plus 529 new claimants, received \$28,828,896

That would generate average tax expenditures of approximately \$44,000, \$43,000, \$66,000, \$23,500, and \$15,500 in each succeeding year, 1997-2001.

Those estimates suffer two problems, however. First, as previously discussed, there is a fall-off each year in the number of taxpayers still receiving credits from previous years' activity – because they do not invest or employ the resources they did initially, go out of business, or move, for example. We do not know what that is rate of erosion is. So, of the 94 new claimants in 1997, some smaller number would carryover to 1998, and so on. Second, as noted above, the distribution of Lee Act credits among taxpayers is skewed toward a few large companies, so “averages” are misleading. A relatively small number of companies receive much larger amounts of tax credits, and hundreds of companies receive smaller amounts than are indicated above. We did not have the data to calculate the median and standard deviation, which would be more useful indications.

DOR also provided data on the number of tax returns in a given year which specify some credit to be allowed in that year, whether or not the credit was newly generated. The figures in the fifth column of the table (for 1999-2001) include taxpayers receiving previous years' installments and carryovers, as well as first-time claimants. These numbers also are flawed because they are based only on returns processed in 2001 and 2002. Therefore, the 1999 number does not reflect 1999 returns processed in 2000, and the 2000 and 2001 numbers do not reflect returns to be processed in 2003 and later. Nonetheless, we calculate dollars claimed per claimant using these data, as well, reported in the second-to-last column. Whether the numbers in that column are an under- or over-estimate depends on whether the uncounted returns have a higher or lower average amount of credits claimed per claimant than the counted returns.

No matter how it is calculated, the tax expenditure per claimant has fallen from a 1999 year high for almost every credit. That parallels the slowing-down of the annual addition to unclaimed liability since 1998. That is both good and bad news. It certainly is good that the state is losing less revenue because of the Act, at a time when the budget already is tight. But the immediate-term forecast for revenue loss is worrisome: as the state's economy picks up in 2003-04, so will the tax expenditure due to the Act. That must be taken into consideration by state budget planners.

Distribution of tax credits among different tiers and types of businesses

For each of the credits – jobs, machinery and equipment (M&E), research and development (R&D), worker training, and central administrative office – we analyzed data provided by the NC Department of Revenue on aggregates of businesses claiming credits. The recipients were grouped in the following ways:

- by location, tier 1 – 5, and
- by industry group
 - *traditional manufacturing* including agricultural and tobacco, textile and apparel, and furniture
 - chemical and paper manufacturing and printing
 - *medium capital intensive*, including manufacture of rubber, stones, jewelry, and electrical machinery
 - *heavier and high-tech manufacturing*
 - other

TABLE 2*
Effectiveness of the William S. Lee Tax Act

Year	Value of credits generated	Value of credits claimed	# of returns with new credits generated	total number of returns claiming credit	Amount of activity reported in/ based on data in column 2*	Dollars of credits claimed per new claimant	Dollars of credits claimed per claimant****	Effectiveness measures
Machinery and equipment (M&E)								\$ invested per \$ credit claimed
1996	\$84,186,322				\$1,202,661,743			
1997	\$198,085,000	\$4,142,674	94		\$2,829,785,714	\$44,071		
1998	\$183,446,028	\$11,091,833	163		\$2,620,657,543	\$43,159		
1999	\$194,093,583	\$40,695,976	360	254	\$2,772,765,471	\$65,958	\$160,220	
2000	\$121,444,892	\$31,196,977	706	941	\$1,734,927,029	\$23,580	\$33,153	
2001	\$78,033,859	\$28,828,896	529	793	\$1,114,769,414	\$15,566	\$36,354	
All years	\$859,289,684	\$115,956,356			\$12,275,566,914			\$96.25
Jobs (J)**								cost in claimed tax credits per job created****
1996	\$17,616,545				15,688			
1997	\$26,140,199	\$821,684	112		30,519	\$7,336		
1998	\$35,873,672	\$2,635,298	185		27,833	\$8,873		
1999	\$43,812,130	\$11,092,044	317	204	13,302 - 52,539	\$18,065	\$54,373	
2000	\$25,646,953	\$11,185,008	536	686	8,884 - 21,590	\$9,726	\$16,305	
2001	\$13,169,730	\$7,839,928	400	579	6,448 - 14,975	\$5,058	\$13,540	
All years	\$162,259,229	\$33,573,962			104,275			\$227- \$349
Worker training (WT)***								cost in claimed tax credits per worker trained
1996								
1997	\$764,593	\$340,304	3		765	\$113,435		
1998	\$546,794	\$268,306	9		1094	\$22,359		
1999	\$3,877,010	\$2,979,658	55	61	7754	\$44,473	\$48,847	
2000	\$4,668,223	\$1,804,887	111	151	9336	\$10,140	\$11,953	
2001	\$2,892,582	\$1,711,880	31	35	5785	\$8,191	\$48,911	
All years	\$12,749,202	\$7,105,035			24734			\$287.26
Research and development (R&D)								\$ R&D spending per \$ credit claimed
1996								
1997	\$9,761,260	\$5,888,973	108		\$195,225,200	\$54,528		
1998	\$17,754,244	\$7,452,720	111		\$355,084,880	\$34,031		
1999	\$21,701,902	\$10,427,813	158	92	\$434,038,040	\$27,660	\$113,346	
2000	\$32,062,869	\$5,511,222	216	280	\$641,257,380	\$9,294	\$19,683	
2001	\$26,409,775	\$4,919,961	141	203	\$528,195,500	\$6,703	\$24,236	
All years	\$107,690,050	\$34,200,689			\$2,153,801,000			\$62.98
Central administrative offices (CAO)								\$ invested per \$ credit claimed
1996								
1997		\$0						
1998	\$2,315,169	\$17,605	7		\$33,073,843	\$2,515		
1999	\$6,959,343	\$1,658,032	35	59	\$99,419,186	\$39,477	\$28,102	
2000	\$2,864,926	\$851,924	129	157	\$40,927,514	\$4,982	\$5,426	
2001	\$1,684,951	\$794,819	43	57	\$24,070,729	\$3,714	\$13,944	
All years	\$13,824,389	\$3,322,380			\$197,491,271			\$52.20

* See Appendix for notes

Table 3A: Generated tax credits, by tier, year, and type of credit*

	1996	1997	1998	1999	2000	2001	All years
Jobs							
<i>Tier 1</i>	\$6,243,707	\$4,924,824	\$8,170,719	\$7,535,290	\$7,561,891	\$2,165,759	\$36,602,189
<i>Tier 2</i>	\$1,744,303	\$1,393,716	\$6,758,281	\$2,071,360	\$2,310,457	\$1,126,067	\$15,404,184
<i>Tier 3</i>	\$2,791,972	\$5,920,299	\$4,117,671	\$4,909,420	\$4,946,320	\$1,101,084	\$23,786,766
<i>Tier 4</i>	\$2,242,137	\$5,579,610	\$9,536,600	\$8,809,441	\$2,897,971	\$3,400,003	\$32,465,762
<i>Tier 5</i>	\$4,594,427	\$8,321,750	\$7,290,401	\$20,486,619	\$7,930,314	\$5,376,818	\$54,000,328
<i>All tiers</i>	\$17,616,545	\$26,140,199	\$35,873,672	\$43,812,130	\$25,646,953	\$13,169,730	\$162,259,229
Machinery and Equipment							
<i>Tier 1</i>	\$2,985,686	\$16,188,654	\$18,249,898	\$14,091,049	\$9,205,422	\$4,503,068	\$65,223,778
<i>Tier 2</i>	\$1,687,810	\$8,436,671	\$3,080,221	\$3,180,629	\$2,571,327	\$6,521,687	\$25,478,346
<i>Tier 3</i>	\$10,084,460	\$16,751,291	\$21,518,029	\$12,777,963	\$10,410,754	\$4,456,484	\$75,998,981
<i>Tier 4</i>	\$14,774,455	\$38,629,686	\$32,926,792	\$31,513,432	\$20,423,069	\$19,614,143	\$157,881,577
<i>Tier 5</i>	\$54,653,910	\$118,078,697	\$107,671,088	\$132,530,510	\$78,834,319	\$42,938,477	\$534,707,002
<i>All tiers</i>	\$84,186,322	\$198,085,000	\$183,446,028	\$194,093,583	\$121,444,892	\$78,033,859	\$859,289,684
Worker Training							
<i>Tier 1</i>		\$50,280	\$268,813	\$266,940	\$260,806	\$124,411	\$971,251
<i>Tier 2</i>		\$14,255	\$0	\$77,555	\$96,221	\$43,843	\$231,874
<i>Tier 3</i>		\$155,838	\$91,975	\$1,475,292	\$591,387	\$272,923	\$2,587,415
<i>Tier 4</i>		\$189,136	\$171,290	\$565,727	\$1,461,459	\$786,698	\$3,174,310
<i>Tier 5</i>		\$355,083	\$14,716	\$1,491,496	\$2,258,350	\$1,664,707	\$5,784,352
<i>All tiers</i>		\$764,593	\$546,794	\$3,877,010	\$4,668,223	\$2,892,582	\$12,749,202
Research and Development							
<i>Tier 1</i>		\$57,223	\$9,309	\$124,221	\$113,667	\$67,424	\$371,843
<i>Tier 2</i>		\$14,274	\$3,753	\$48,718	\$83,041	\$7,879	\$157,665
<i>Tier 3</i>		\$52,745	\$304,712	\$424,484	\$312,398	\$685,341	\$1,779,680
<i>Tier 4</i>		\$8,744,669	\$411,867	\$972,780	\$1,432,028	\$536,777	\$12,098,120
<i>Tier 5</i>		\$892,349	\$17,024,603	\$20,131,699	\$30,121,735	\$25,112,354	\$93,282,741
<i>All tiers</i>		\$9,761,260	\$17,754,244	\$21,701,902	\$32,062,869	\$26,409,775	\$107,690,050
Central Administrative Office							
<i>Tier 1</i>			\$0	\$0	\$7,405	\$0	\$7,405
<i>Tier 2</i>			\$264,223	\$0	\$0	\$51,351	\$315,574
<i>Tier 3</i>			\$0	\$0	\$13,098	\$0	\$13,098
<i>Tier 4</i>			\$0	\$297,818	\$0	\$0	\$297,818
<i>Tier 5</i>			\$2,050,946	\$6,661,525	\$2,844,423	\$1,633,600	\$13,190,494
<i>All tiers</i>			\$2,315,169	\$6,959,343	\$2,864,926	\$1,684,951	\$13,824,389

* Notes to accompany tables 3 and 4 are in the Appendix.

Table 3B: Distribution of generated tax credits, by tier, year, and type of credit

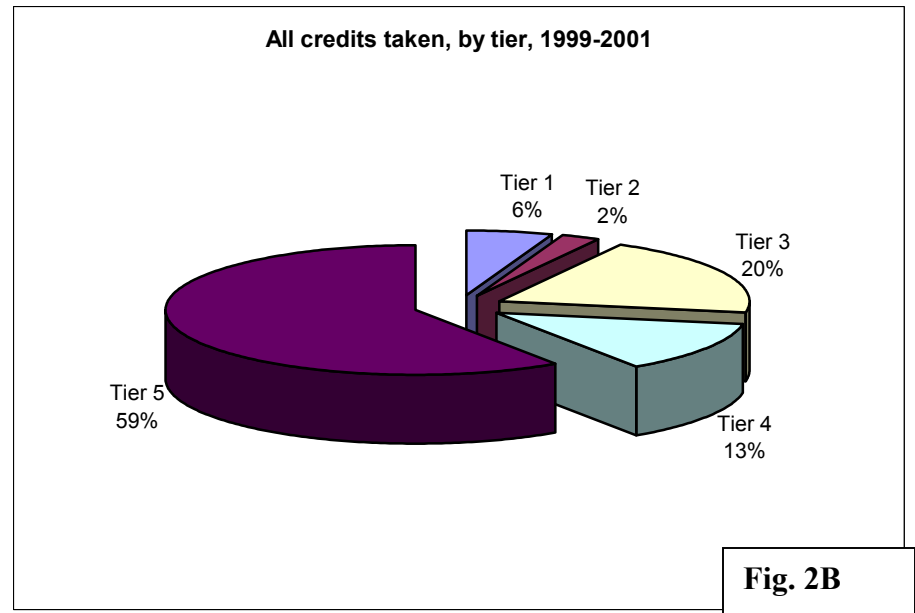
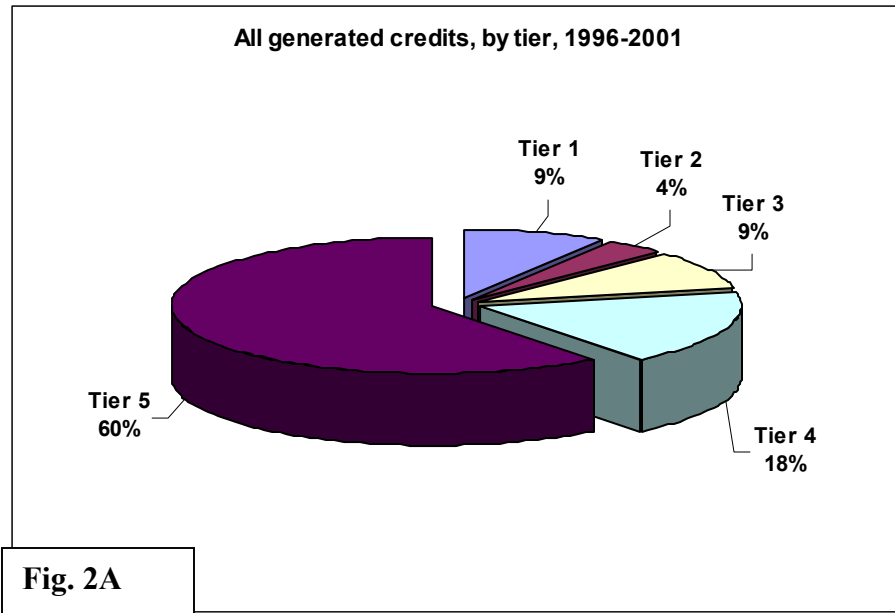
	1996	1997	1998	1999	2000	2001	All years
All credits							
<i>Tier 1</i>	9.1%	9.0%	11.1%	8.1%	9.2%	5.6%	8.9%
<i>Tier 2</i>	3.4%	4.2%	4.2%	2.0%	2.7%	6.3%	3.6%
<i>Tier 3</i>	12.6%	9.7%	10.8%	7.2%	8.7%	5.3%	9.0%
<i>Tier 4</i>	16.7%	22.6%	17.9%	15.6%	14.0%	19.9%	17.8%
<i>Tier 5</i>	58.2%	54.4%	55.9%	67.0%	65.3%	62.8%	60.6%
<i>All tiers</i>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	1996	1997	1998	1999	2000	2001	All years
<i>Jobs</i>	17.3%	11.1%	15.0%	16.2%	13.7%	10.8%	14.0%
<i>M&E</i>	82.7%	84.4%	76.5%	71.8%	65.1%	63.9%	74.3%
<i>Worker Training</i>	0.0%	0.3%	0.2%	1.4%	2.5%	2.4%	1.1%
<i>R&D</i>	0.0%	4.2%	7.4%	8.0%	17.2%	21.6%	9.3%
<i>CAO</i>	0.0%	0.0%	1.0%	2.6%	1.5%	1.4%	1.2%
<i>Total</i>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4A: Credits taken, by tier and type of credit, 1999-2001

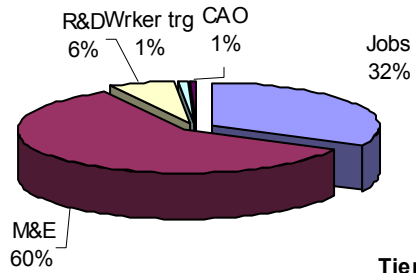
	Jobs	M&E	R&D	Wkr Trg	CAO	Total
<i>Tier 1</i>	\$2,186,316	\$4,038,986	\$435,174	\$74,050	\$35,334	\$6,769,860
<i>Tier 2</i>	\$857,783	\$1,573,925	\$4,047	\$250,167	\$111,279	\$2,797,200
<i>Tier 3</i>	\$6,116,753	\$15,371,413	\$1,079,556	\$280,757	\$985,651	\$23,834,129
<i>Tier 4</i>	\$5,847,015	\$8,109,058	\$736,851	\$519,054	\$110,390	\$15,322,367
<i>Tier 5</i>	\$9,018,498	\$47,465,928	\$10,759,754	\$3,076,125	\$1,498,038	\$71,818,343
<i>All tiers</i>	\$24,026,364	\$76,559,310	\$13,015,382	\$4,200,153	\$2,740,691	\$120,541,900

Table 4B: Distribution of credits taken, by tier and type of credit, 1999-2001

	Jobs	M&E	R&D	Wkr Trg	CAO	Total
Tier 1	9.1%	5.3%	3.3%	1.8%	1.3%	5.6%
Tier 2	3.6%	2.1%	0.0%	6.0%	4.1%	2.3%
Tier 3	25.5%	20.1%	8.3%	6.7%	36.0%	19.8%
Tier 4	24.3%	10.6%	5.7%	12.4%	4.0%	12.7%
Tier 5	37.5%	62.0%	82.7%	73.2%	54.7%	59.6%
Among tiers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
All tiers among credits	19.9%	63.5%	10.8%	3.5%	2.3%	100.0%



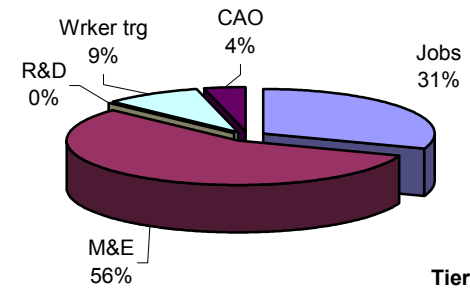
Tax credit types, by tier, 1999-2001



Tier 1

Fig. 3A

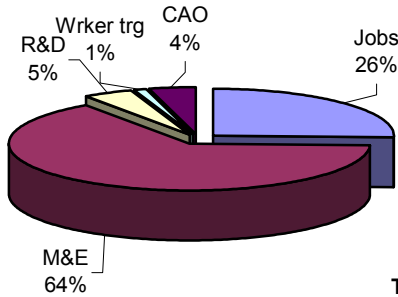
Tax credit types, by tier, 1999-2001



Tier 2

Fig. 3B

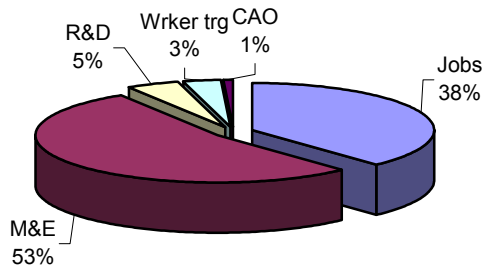
Tax credit types, by tier, 1999-2001



Tier 3

Fig. 3C

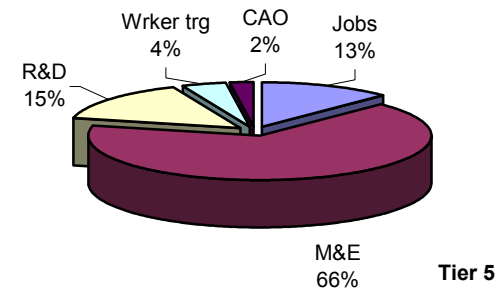
Tax credit types, by tier, 1999-2001



Tier 4

Fig. 3D

Tax credit types, by tier, 1999-2001



Tier 5

Fig. 3E

Credits taken, by tier, 1999-2001

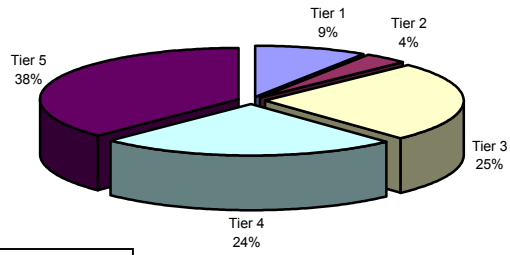


Fig. 4A: Jobs

Credits taken, by tier, 1999-2001

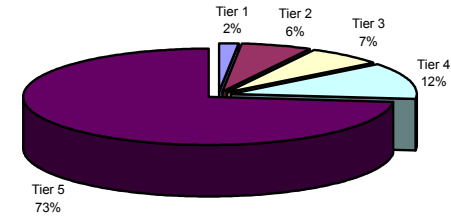


Fig. 4B: M&E

Credits taken, by tier, 1999-2001

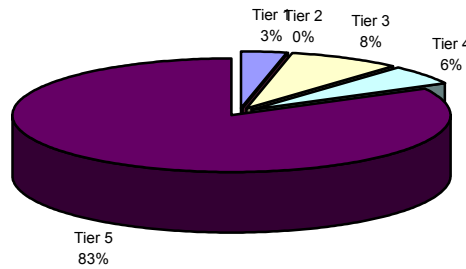


Fig. 4C: R&D

Credits taken, by tier, 1999-2001

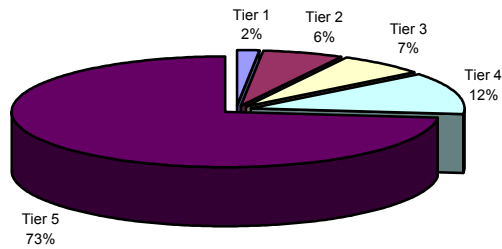


Fig. 4D: Wkr trg

Credits taken, by tier, 1999-2001

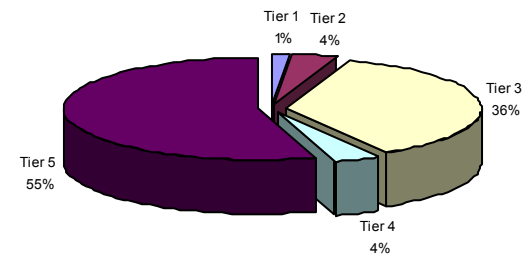


Fig. 4E: CAO

By tier

Over the history of the Act, more than 70 percent of all credits generated and claimed have gone to businesses in tiers 4 and 5. 13 percent of the generated credits, and 8 percent of the claimed credits went to businesses in tiers 1 and 2. The lower percentage for credits claimed is not surprising since businesses in more distressed areas are likely to be less profitable, and therefore, have less tax liability to offset.

There is also a concentration of credits by corporation. DOC's analysis of individual tax returns for the 1999-2001 period indicates that 25 companies account for 40 percent of all credits taken.

In all tiers, the M&E tax credit accounted for most tax expenditures, representing 53-66 percent of all credit dollars. The jobs tax credit accounted for 26-38 percent of all tax expenditures in tiers 1-4, but only 13 percent in tier 5. The R&D credit was only sizable in tier 5 (15 percent of tax expenditures).

Another way to slice the data is among the tiers, by type of credit. 62 percent of jobs credit expenditures go to tier 4 and 5 businesses, while only 13 percent go to taxpayers in tiers 1 and 2. Most other credit programs are even more skewed toward the better-off tiers. For the M&E, R&D, and worker training credits, the percentages of tax credits going to businesses in tiers 4 and 5 are 85 percent, 89 percent, and 85 percent, respectively. For the CAO credit, the percentage is 59 percent.

One reason more credits go to tiers 4 and 5 is that they have more population and businesses. Table 5 shows the distribution of credits among tiers for 2000 and 2001, normalizing for population and personal income. The patterns are unstable from year-to-year because of differences in credits claimed and tier assignments. But in some years, for some credits, lower tier counties appear to get more of the credits per capita. Similarly, there is no clear pattern when we account for differences in personal income among the tiers, as in the bottom panels of table 5.

There is no objective, right answer to the question: "are Lee act dollars distributed fairly among the tiers?" In absolute dollars, there is a distinct bias toward the better-off counties. But when we account for existing income differences, the pattern is not as clear.

By industry group

We grouped industries into four clusters that roughly correspond to traditional manufacturing; chemical, paper, and printing; medium capital-intensive manufacturing; and heavier manufacturing and high tech. Table 6 summarizes the distribution of tax credit types among industry groups and of industry types within credit categories. As before, we combine all tax returns processed in 2000 and 2001, including some from 1999. Two categories – other and unknown – represent a sizable share of the returns, so we did not allocate them among the known responses, as we did in the tier analysis.

Table 5A: Tax credits among tiers, normalized by population and personal income, 2000

<i>Tax credits per capita, by tier</i>					
	<i>Jobs</i>	<i>M&E</i>	<i>R&D</i>	<i>Wrker trg</i>	<i>CAO</i>
Tier 1	\$1.93	\$3.92	\$0.19	\$0.02	\$0.00
Tier 2	\$0.49	\$0.82	\$0.01	\$0.14	\$0.10
Tier 3	\$1.66	\$2.15	\$0.06	\$0.11	\$0.07
Tier 4	\$2.78	\$3.28	\$0.23	\$0.20	\$0.06
Tier 5	\$0.82	\$5.07	\$1.22	\$0.31	\$0.15

<i>Tax credits per \$100,000 of personal income, by tier</i>					
	<i>Jobs</i>	<i>M&E</i>	<i>R&D</i>	<i>Wrker trg</i>	<i>CAO</i>
Tier 1	9.37	19.01	0.94	0.12	0.00
Tier 2	2.39	3.98	0.03	0.71	0.49
Tier 3	7.23	9.34	0.28	0.48	0.32
Tier 4	11.71	13.82	0.96	0.86	0.25
Tier 5	2.64	16.32	3.92	0.98	0.48

Table 5b: Tax credits among tiers, normalized by population and personal income, 2001

<i>Tax credits per capita, by tier</i>					
	<i>Jobs</i>	<i>M&E</i>	<i>R&D</i>	<i>Wrker trg</i>	<i>CAO</i>
Tier 1	\$1.45	\$2.32	\$0.64	\$0.10	\$0.08
Tier 2	\$0.65	\$0.47	\$0.00	\$0.14	\$0.00
Tier 3	\$1.41	\$2.24	\$0.75	\$0.07	\$0.00
Tier 4	\$0.48	\$1.11	\$0.17	\$0.06	\$0.00
Tier 5	\$0.94	\$5.28	\$0.77	\$0.33	\$0.18

<i>Tax credits per \$100,000 of personal income, by tier</i>					
	<i>Jobs</i>	<i>M&E</i>	<i>R&D</i>	<i>Wrker trg</i>	<i>CAO</i>
Tier 1	7.12	11.37	3.16	0.47	0.37
Tier 2	3.14	2.28	0.00	0.67	0.00
Tier 3	6.10	9.69	3.27	0.29	0.00
Tier 4	2.04	4.74	0.71	0.25	0.00
Tier 5	3.03	16.99	2.47	1.06	0.57

Tables 5A and 5B reflect different tier composition of counties, as per table 1.

Sources: Tax credits claimed data from DOR. Population and personal income data from NC LINC and U.S. Bureau of Labor Statistics..

Table 6: Distribution of credits by type of industry, 1999-2001

Industry group		Pct of credits going to industry type		Pct of credits within credit type		
		Generated	Taken	Generated	Taken	
Jobs						
NAICS 311-321, 337 & 339	traditional mfg	16.5%	20.0%	16.8%	26.0%	7994000
NAICS 322-325	chemical, paper, printing	13.7%	11.6%	7.9%	4.4%	3742500
NAICS 326-333	medium capital intensive	14.4%	17.3%	7.4%	9.8%	3526500
NAICS 334-336	heavier and high tech	11.1%	25.6%	17.5%	17.2%	8345602
Other		11.1%	20.9%	22.9%	29.6%	10881500
Unknown		12.8%	19.0%	27.5%	13.0%	13100000
Machinery and equipment						
NAICS 311-321, 337 & 339	traditional mfg	75.7%	71.9%	14.7%	29.3%	36747002
NAICS 322-325	chemical, paper, printing	60.0%	56.2%	6.5%	6.7%	16385689
NAICS 326-333	medium capital intensive	78.0%	73.4%	7.6%	13.1%	19132454
NAICS 334-336	heavier and high tech	57.3%	39.9%	17.1%	8.4%	42905601
Other		69.9%	59.8%	27.2%	26.5%	68250031
Unknown		65.5%	74.2%	26.8%	16.0%	67245949
R&D						
NAICS 311-321, 337 & 339	traditional mfg	4.0%	4.7%	2.9%	11.3%	1933813
NAICS 322-325	chemical, paper, printing	23.7%	29.3%	9.8%	20.5%	6457753
NAICS 326-333	medium capital intensive	2.3%	3.4%	0.9%	3.6%	569068
NAICS 334-336	heavier and high tech	27.7%	22.7%	31.6%	28.1%	20748552
Other		16.2%	12.5%	24.2%	32.7%	15852768
Unknown		19.5%	3.0%	30.5%	3.8%	20018562
Worker training						
NAICS 311-321, 337 & 339	traditional mfg	2.7%	3.0%	16.2%	22.6%	1314811
NAICS 322-325	chemical, paper, printing	2.1%	1.3%	6.9%	2.7%	560559
NAICS 326-333	medium capital intensive	3.2%	4.8%	9.8%	15.6%	793387
NAICS 334-336	heavier and high tech	3.9%	11.8%	35.9%	45.4%	2915102
Other		0.3%	0.7%	3.8%	5.9%	310315
Unknown		2.2%	2.0%	27.5%	7.8%	2232781
Central administrative offices						
NAICS 311-321, 337 & 339	traditional mfg	1.1%	0.4%	14.8%	4.1%	551351
NAICS 322-325	chemical, paper, printing	0.6%	1.6%	4.0%	5.2%	150197
NAICS 326-333	medium capital intensive	2.0%	1.1%	13.4%	5.5%	500000
NAICS 334-336	heavier and high tech	0.0%	0.0%	0.0%	0.0%	0
Other		2.4%	6.0%	63.8%	74.6%	2372493
Unknown		0.1%	1.8%	3.9%	10.6%	146351
TOTAL for ALL CREDITS						
NAICS 311-321, 337 & 339	traditional mfg			12.9%	25.9%	48540977
NAICS 322-325	chemical, paper, printing			7.3%	7.5%	27296698
NAICS 326-333	medium capital intensive			6.5%	11.3%	24521409
NAICS 334-336	heavier and high tech			19.9%	13.4%	74914857
Other				26.0%	28.2%	97667107
Unknown				27.3%	13.7%	102743643

The percentages for a single NAICS grouping can be summed across credit types to get 100%, in columns 3 and 4. The entries within a credit type can be summed across NAICS groups to get 100% in columns 5 and 6.

Taking all credits together, heavier and high tech manufacturing account for a greater share of tax credits generated than the other known industry groups, but the state's traditional industries account for the most credits taken. Traditional manufacturing businesses take greatest advantage of the jobs and M&E credits. Not surprisingly, heavier manufacturing and high tech make most use of the R&D and worker training credits.

DATA ISSUES

The quality of the biennial analyses of the Lee Act rests upon the quality of data that exist and are made available to the contractor. This year, we confronted various data problems that are addressed in the full report. A number of general comments are in order.

- The Lee Act is very complicated. It has multiple types of tax credits within it, subject to many different rules regarding eligibility, installments, carryovers, thresholds, etcetera. That makes the Act difficult for taxpayers to understand and use, and cumbersome to report on their tax returns. So even though the law requires recipients of those credits to provide complete information, there is a high incidence of taxpayer error and omission.
- The tax forms given to businesses to report the Lee Act activity are not user-friendly. Even professional accounting firms have difficulty following instructions and being complete. There are sub forms for detailed information on each type of credit, and summary form where tax credits are aggregated for each year. In many instances, there are inconsistencies between the figures listed on the sub and summary forms due to taxpayer error. In the past, DOR personnel have used their best judgment to reconcile errors and omissions, and that introduces subjectivity bias.
- The data required for a thorough and accurate analysis of the Lee Act (or any tax program in North Carolina, for that matter) are not all available at the DOR; some are in records maintained by the N.C. Employment Security Commission. ES-202 files do not cover all businesses in the state. The need to match and merge information, by taxpayer ID number, from two different sources introduces a further source of error and incompleteness.

The quality of data is of considerable concern to DOR and NCDOC. For NCDOC, the big problem is its inability to assess the real costs of the Lee Act as a central component of the state's economic development arsenal. And poor data limit DOR's ability to efficiently audit the use of credits by taxpayers and to evaluate the fiscal effects of possible changes to the tax credits. (from interviews)

Because of data limitations must be cautious about pushing the results of this analysis too far. At the very best, we are measuring gross trends. In any case, these difficulties require evaluators to take extra care in assembling the data and verifying its accuracy. Without some simplifications in the law, reformatting of tax forms, and better monitoring of returns, care alone may not be sufficient to produce a credible report.

Our major recommendation in this report is to improve the data collection, recording, and reporting procedures. The partnership that developed around this year's report, among NCDOC, which is concerned about the effectiveness of tax incentives for economic development, DOR, whose Tax Research Division is developing the analytic capacity to track the fiscal impacts, and UNC's Office of Economic Development, which is positioned to put the technical questions into a broader perspective, and provide objectivity, is very promising for future analyses. But sufficient resources are required to conduct the analysis in a timely and complete manner.

REFERENCES

Luger, Michael I. and Suho Bae (2003). "The Effectiveness of State Business Tax Incentives: The Case of North Carolina." Submitted to *Economic Development Quarterly*

APPENDIX

Notes for table 2

* M&E, R&D, and CAO activity estimated as credits utilized divided by applicable tax credit rate. Jobs and worker training activity estimated by applying benefits that apply to activity in different tiers.

** Reported data for the jobs credit, by tier, included \$441,709 (0.3 percent) as "unknown". We allocated those to the tiers in the same proportion as the 99.7 percent of credits whose tier location was known.

*** Reported data for the worker training credit, by tier, included a "multiple" tier amount only for 1997, and a "multiple" category along with tier data in 1998. For the former, we allocated the credits to tiers based on the (1997-2001) distribution. For the latter we used the proportion of credits by tier for that year

**** These estimates are based on returns processed in 2001 and 2002. Therefore, the 1999 number does not reflect 1999 returns processed in 2000, and the 2000 and 2001 numbers do not reflect returns to be processed in 2003 and later.

***** The lower bound of the ranges indicated for 1999 - 2001 was calculated by James Haag, accounting for the additional tax credits provided taxpayers in those years who had activity in development zones. Mr. Haag calculated an average tax credit generated per job for the 1996-1998 period (prior to the development zone legislation), using data in the table and then applied that to the 1999-2001 credit generated dollars to get estimated number of jobs in period.

Notes for tables 3A, 3B

Data compiled by James Haag, Division of Policy, Research, and Strategic Planning, NCDOC, June 17, 2003

Generated credits for 1997 for worker training and R&D credits taken from M. Luger, *Economic Effects of the William S. Lee Tax Act: A First Cut Analysis* (Chapel Hill, NC: Office of Economic Development, 1999). Generated credits for 1998 for worker training, R&D, and CAO, from NCDOC, *William S. Lee Quality Jobs and Business Expansion Act: Assessment of Results* (Raleigh, NC: NCDOC, June 2001), Table B-2. All other data from NCDOC database assembled from DOR form 478 returns for 1999, 2000, and 2001, and verified by author.

Notes for tables 4A, 4B

The tier associated with credits claimed is the tier reported on that year's sub form for credits generated. The claims themselves may be for credits generated by activities in other tiers.