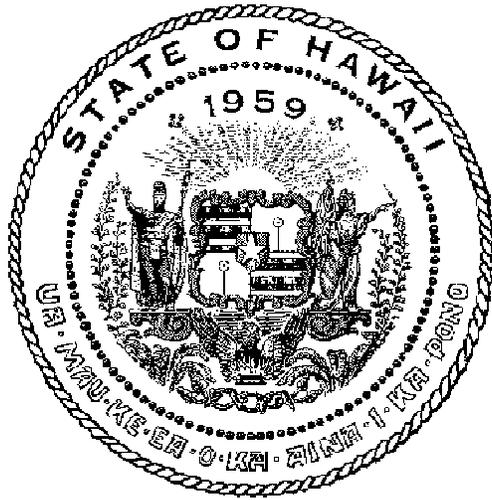


**The Impact of the High  
Technology Business Investment Tax  
Credit on Hawaii's Economy for  
Calendar Year 2007**



**Department of Taxation  
State of Hawaii  
December 2008**

STATE OF HAWAII

Linda Lingle, Governor

DEPARTMENT OF TAXATION

Kurt Kawafuchi, Director

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RULES OFFICE

Johnnel Nakamura, Rules Officer

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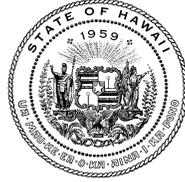
**Department of Taxation  
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December 2008**

**Web Site: [www.hawaii.gov/tax](http://www.hawaii.gov/tax)**



LINDA LINGLE  
GOVERNOR

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December 18, 2008

The Honorable Linda Lingle  
Governor, State of Hawaii  
State Capitol  
Honolulu, Hawaii 96813

Dear Governor Lingle:

Enclosed is **The Impact of the High Technology Business Investment Tax Credit on Hawaii's Economy for Calendar Year 2007** report. This report is required by Act 206, Session Laws of Hawaii (SLH) 2007.

On June 21, 2007, House Bill 1631 was signed into law as Act 206 (the "Act"). The purpose of the Act is to measure the effectiveness of the high technology business investment tax credit (investment credit) established by Act 178 of 1999 as amended by Act 221 of 2001 and Act 215 of 2004.

Act 206, passed last year, requires a qualified high technology business (QHTB), that accepts an investment for which a State investment credit may be claimed, to complete and file with my office an annual electronic survey prepared by the Department of Taxation (Department). The survey must be filed before June 30 of each year for the five years following the year of the investment.

The Act also requires the Department to take two actions with the data obtained from this survey. First, the Department is required to compile the information in the survey, tax return, and related documents and submit that information for review to the Legislature. This was completed on September 1, 2008. Second, the Act asks the Department to study the effectiveness of the investment credit and to issue a report on its findings. The attached report responds to this requirement.

The Act applied to QHTBs who received investments after June 30, 2007. It required these QHTBs to report on investments received between calendar years 2000 and 2007. A total of 177 QHTBs filed the survey.

Based on this information, this report sought to evaluate the following four key questions: 1) what is the size of the investment made in QHTBs since the passage of Act 178 in 1999; 2) how much in State tax credits was granted to attract this investment; 3) what type of jobs and how many jobs were created as a result of these investments; and 4) are these investments creating viable companies with the ability to contribute on an on-going basis to the economic diversification of the State.

The findings for these key questions include:

1. Total Investment. The 177 QHTBs that filed reported receiving a total of \$1.2 billion in cash investments between calendar years 2000 and 2007, for an average of \$6.78 million per QHTB.
2. Tax Credit Costs. The cumulative cost of State tax credits through 2007 is estimated to be \$657.5 million for investments made in QHTBs.
3. Number and Types of Jobs. The 177 QHTBs reported creating 2,245 jobs, of which 1,450 were full-time positions, for an average per QHTB of 12.7 jobs of which 8.2 were full-time positions. The reported average salary for a full-time position was \$76,790, with an indicative acquisition cost per position of approximately \$535,000.
4. Viability of the Companies. The 177 QHTBs reported that their expenses were almost double their revenues (\$440.9 million in costs; \$228.3 million in revenues). 47 had been in business for five years or more and 38 had revenues greater than expenses in 2007.

This report was prepared under the direction of Dr. Tu Duc Pham, Tax Research and Planning Officer, with the assistance of the Tax Research and Planning Staff: Yvonne Chow, Chief Economist; Hamid Jahanmir, Senior Economist; Lester G. Lau, Research Statistician; Glenn K. Ifuku, High Technology Study Technical Coordinator; Cathleen Tokishi, Tax Information Specialist; the Rules Office staff: Johnnel Nakamura, Rules Officer; Donald Rousslang, Income Tax Specialist; and Jason P. Healey, Administrative Rules Specialist; and Titin L. Sakata, Special Assistant to the Director.

Respectfully submitted,



KURT KAWAFUCHI  
Director of Taxation

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## **I. INTRODUCTION**

In 1999 the Hawaii State Legislature passed Act 178 that encouraged Hawaii taxpayers to invest in high technology companies by granting a credit against taxes owed the State. Act 178 limited the amount of the tax credit to 10% of the investment, with a maximum allowable credit of \$500,000 per year.

Act 178 also encouraged taxpayers to invest in research activities by establishing a separate "research activities" tax credit. The research might be conducted by a high technology company or a non-technology firm engaged in a research project. The amount of the credit was limited to 2.5% of the expenses incurred by the firm to actually conduct new research over and above the research the company was already doing (called a base amount).

In 2001 Act 221 amended the 1999 law and allowed a taxpayer to claim 100% of their investment in a high technology firm, allowing the taxpayer to claim 35% of the amount in the first year, 25% in the second year, 20% in the third year, and 10% in the fourth and fifth tax years after their initial investments. This bill also revised the maximum allowable credit to \$700,000 in the first year, with declining amounts in the subsequent four years.

Act 221 also changed the research activities tax credit by deleting the reference to a base amount of research the company was already doing and allowed expenses in any research being done in the State of Hawaii to qualify for the research tax credit. The amount of research tax credit that can be claimed each year was limited to 20% of the company's research expenditures.

In 2004 the original statute was further amended by Act 215 to place a cap on the ratio of credits a taxpayer could claim for a high technology tax investment. If a taxpayer was claiming \$1.50 in credits for \$1.00 invested in a technology firm, then the tax claim would likely not be reviewed by the Department of Taxation. If the taxpayer claimed a higher amount (such as \$2.00

in credits for each \$1.00 invested), this Act stated that those investments would be subject to review by the Department of Taxation.

Act 215 also changed the research activities tax credit by limiting it to only qualified high technology businesses, effective July 1, 2004.

This report was prepared pursuant to Act 206, Session Laws of Hawaii (SLH) 2007. The purpose of this Act is to measure the effectiveness of Act 178 high technology business investment tax credit, as amended, by requiring:

- " (1) Qualified high technology businesses receiving an investment for which a credit may be claimed under section 235-110.9, Hawaii Revised Statutes, to submit investment, employment, job creation, wage, revenue, expense, and other information to the department of taxation;
- (2) The department of taxation to annually report this information in aggregate form to the legislature; and
- (3) The department of taxation to use the information to study the effectiveness of the tax credit and report the department's findings to the legislature."

In September 2008 the Department of Taxation reported on (1) the amounts invested in the qualified high technology businesses (QHTBs), (2) the number of QHTBs in each industry sector, (3) the salaries/wages the QHTBs paid to their employees, and (4) the activities the QHTBs performed.<sup>1</sup> The study conducted for this report utilized data from the September 2008 report, as well as data from other available sources including tax certifications and aggregate tax return data.

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<sup>1</sup> See the report *Descriptive Statistics on the Operations of Qualified High Technology Businesses From 2002 Through 2007*, Department of Taxation, State of Hawaii, September 2008.

In measuring the effectiveness of the investment credit, this report sought to answer the following four questions: (1) how much investment has been made in Hawaii high technology companies since the passage of the original high tech credit statute (Act 178) in 1999, (2) how much in State tax credits was granted to attract this level of capital investment, (3) what type of jobs and how many jobs were created as a result of these investments, and (4) are these investments creating viable companies with the ability to contribute to the economic diversification of the State.

## **II. BACKGROUND ON THE HIGH TECHNOLOGY BUSINESS INVESTMENT TAX CREDIT AND THE RESEARCH ACTIVITIES TAX CREDIT**

The investment credit is a nonrefundable credit claimed by persons investing in QHTBs who owe Hawaii State taxes in one of three categories: Hawaii income taxes (§235-110.9, HRS), Hawaii franchise taxes (§241-4.8, HRS), and Hawaii insurance premiums taxes (§431.7-209, HRS). In its present form, investors may claim 100% of their qualifying cash investments, up to a maximum of \$2 million per investment per QHTB. The tax credits can be claimed over a five year period. The credit is computed as a percentage of the cash investment made: 35% in the year the investment is made, 25% in the second year, 20% in the third year, and 10% in both the fourth and fifth years. Because it is a nonrefundable credit, the amount of the allowable credit used cannot exceed the taxpayer's tax liability for that year. However, any excess unused credit may be carried forward to future years until it is used in its entirety.

The research activities tax credit is a refundable credit. Refundable means the amount of the allowable credit used can exceed the amount of taxes owed by the QHTB for that year. As stated earlier, the credit is capped at no more than 20% of the QHTB's qualified research expenditures in Hawaii.

In enacting these two tax credit programs, the Legislature stated that the primary purpose of the legislation was to "encourage the continued growth and development of high technology businesses and associate industries" in Hawaii.

### **III. DATA SOURCES**

Each year qualified high technology businesses are required to file Department of Taxation Form N-317, "Statement by Qualified High Technology Business." The QHTBs are asked to provide data for the previous calendar year. The deadline to file is no later than June 30th of each year. QHTBs began filing the N-317 form for calendar year 2002 operations. The form was significantly improved for the calendar year 2007 reporting period to include more detail on the operations of high technology firms qualifying for tax credit investments.

As shown in Table 1, a total of 333 QHTBs have filed Form N-317 since the form was introduced for the 2002 reporting period. Of these, 34.0% specified that their qualifying activity was computer software development, 20.7% specified performing arts activities, 18.9% specified multiple activities, 10.8% stated they were involved in biotechnology activities, and 7.8% were involved in non-fossil fuel energy-related technology activities.

**Table 1 -- Summary Data on QHTB Operations**

Activity	Number of QHTBs Filing N-317		Cash Investments (\$)	
	2002 - 2007	2007	2000 - 2007	2007
Research As Defined In IRC Section 41 (d)*	26	17	\$78,316,702	\$11,850,012
Biotechnology	36	22	111,447,296	22,900,860
Computer Software	113	48	179,752,553	50,391,216
Non-Fossil Fuel Energy	26	20	94,298,713	67,250,337
Performing Arts	69	33	445,089,994	100,557,977
Multiple Activities and Others	63	37	322,963,999	54,183,826
<b>Grand Total</b>	<b>333</b>	<b>177</b>	<b>\$1,231,869,257</b>	<b>\$307,134,228</b>

\*Qualified research as defined in Internal Revenue Code Section 41(d)

#### **IV. INVESTMENT IN HAWAII**

The 177 qualified high technology businesses who filed the 2007 N-317 form reported receiving over \$1.2 billion in cash investments from calendar years 2000 through 2007. Based on data from the investment credit certifications, comfort letter rulings, tax returns, and related source documents, the Department is able to estimate that about 31% of the \$1.2 billion was from out-of-state investors.

QHTBs involved in performing arts received 36.1% of the total funds invested over the eight year period covered in the Table 1 data, a cumulative total of \$445.1 million. QHTBs reporting that they were involved in multiple high technology activities received 26.2% of the investments (\$323.0 million). Computer software firms received investments totaling \$179.8 million, or 14.6% of the total. Companies engaged in biotechnology received \$111.4 million,

9.0% of the total. Non-fossil fuel energy-related technology firms received \$94.3 million or 7.7% of the total during this eight year period.

It is worth noting that for 2007 investments only, non-fossil fuel energy-related technology companies received 21.9% of the total investments made that year, reflecting an increased interest in investing in firms that may address Hawaii's future alternative energy needs.

**V. COSTS IN STATE TAX CREDITS TO ATTRACT HIGH TECHNOLOGY**

**INVESTMENTS**

**a. Cumulative Costs for Investments Through 2007**

For investments in QHTBs made through 2007, it is estimated that the investment credit will cost the State of Hawaii a cumulative amount of \$657.5 million in lost tax revenues (Table 2). The \$657.5 million amount is comprised of (a) \$301.1 million actually claimed from tax years 1999 through 2006 (Table 3), (b) \$136.0 million in estimated claims for tax year 2007 (this amount is estimated because the deadline to claim the 2007 credit is December 31, 2008), and (c) \$220.4 million in estimated credits to be claimed in 2008 through 2011 since taxpayers may claim these credits over a five year period, or may carry over prior year credits that they did not use because their tax liability was lower than the amount of credits in the taxable year.

**Table 2 -- Estimated Investment Credit Claims for Tax Years  
1999 - 2008**

Cumulative Investment Credit Claims, Tax Years 1999 - 2006	\$301,142,437
Estimated Investment Credit Claims, Tax Year 2007	136,000,000
Estimated Investment Credit Claims, Tax Year 2008 1/	220,400,000
<b>Total Investment Credit Claims, Tax Years 1999 - 2008</b>	<b>\$657,542,437</b>

1/ This \$220.4 million is an estimate of carryovers for years 2-5 credits for investments made prior to 2008. This estimated amount does not include new investments that may be made in these same companies in calendar year 2008 or in future years while Act 221 is still in effect.

**Table 3 -- High Technology Business Investment Tax Credits Claimed for Tax Years 1999 through 2006**

<b>Year</b>	<b>Total No. of Claims</b>	<b>Total Credit<sup>1</sup></b>	<b>Individuals<sup>2</sup></b>	<b>Corporations<sup>3</sup></b>	<b>Insurance Underwriters</b>
1999	23	\$162,208	\$152,493	\$9,715	n/a
2000	103	393,633	387,633	6,000	n/a
2001	268	9,579,923	3,336,752	229,414	\$6,013,757
2002	493	26,185,181	11,417,244	1,710,041	13,057,896
2003	652	38,870,301	13,522,682	5,955,855	19,391,764
2004	1,040	50,543,285	27,234,850	2,594,229	20,714,206
2005	1,216	70,000,770	38,985,903	5,721,821	25,293,046
2006	1,842	105,407,136	60,054,421	18,619,845	26,732,870
<b>Totals</b>	<b>5,637</b>	<b>\$301,142,437</b>	<b>\$155,091,978</b>	<b>\$34,846,920</b>	<b>\$111,203,539</b>

Source: Tax Research and Planning Office, *Tax Credits Claimed by Hawaii Taxpayers -- 2006*.

<sup>1</sup> Tax credits actually used (deducted from Hawaii income taxes due).

<sup>2</sup> Includes fiduciaries

<sup>3</sup> Includes financial corporations and exempt organizations

n/a: not applicable

**b. Who Made Investments in QHTBs and Claimed the Investment Credit**

In tax year 2006, the latest year for which complete data is currently available, 1,842 taxpayers claimed investment credits of \$105.4 million (Table 4). Of this \$105.4 million, individual tax filers claimed \$60.1 million, corporations including banks claimed \$18.6 million, and insurance underwriters claimed \$26.7 million.

Individual tax filers (1,713 returns) claimed an average of \$34,806 in tax credits during tax year 2006 (see Table 4). However, when this data is broken down by the income level of the taxpayer, over 95% of the total amount of credits claimed was by individuals with adjusted gross incomes of \$200,000 or more (1,033 returns). The average claim of these higher income filers was \$54,995 per tax return.

Corporations represent a small percentage of those who filed Act 178, as amended tax credit claims (2.3% of the total tax returns). Their average tax claim per return was \$197,018. The four financial corporations that claimed Act 178, as amended in 2006 claimed tax credits averaging over \$2.5 million.

**Table 4 -- Returns Claiming the Investment Credit: 2006**

Type of Returns	Number of Returns	Tax Credits Claimed (\$)	Average Credit per Return (\$)
Individuals	1,713	\$59,622,619	\$34,806
Corporations	43	8,471,761	197,018
Financial Corporation	4	10,146,111	2,536,528
Insurance	34	26,732,870	786,261
Fiduciary	45	431,802	9,596
Exempt	3	1,973	658
<b>TOTAL</b>	<b>1,842</b>	<b>\$105,407,136</b>	<b>\$57,224</b>

**Table 5 -- Individuals Claiming the Investment Credit by Hawaii AGI: 2006**

Adjusted Gross Income		High Tech Invest. Credit		Percent	
At least	But less than	Number of Returns	Total Credit Claimed (\$)	Returns	Total Credit Claimed
	5,000	11	\$490	0.6%	0.0%
5,000	10,000	11	1,886	0.6%	0.0%
10,000	20,000	20	9,596	1.2%	0.0%
20,000	30,000	21	16,410	1.2%	0.0%
30,000	40,000	26	28,555	1.5%	0.0%
40,000	50,000	34	58,081	2.0%	0.1%
50,000	60,000	39	82,277	2.3%	0.1%
60,000	70,000	27	47,963	1.6%	0.1%
70,000	80,000	39	115,223	2.3%	0.2%
80,000	90,000	45	153,904	2.6%	0.3%
90,000	100,000	41	129,408	2.4%	0.2%
100,000	150,000	208	1,017,017	12.1%	1.7%
150,000	200,000	158	1,151,822	9.2%	1.9%
200,000		1,033	56,809,987	60.3%	95.3%
<b>TOTAL</b>		<b>1,713</b>	<b>\$59,622,619</b>	<b>100.0%</b>	<b>100.0%</b>

**c. The Research Activities Tax Credit**

Cumulative claims of the research credit totaled \$74.7 million from tax years 2000 through 2006. As stated in the introduction section of this report, the research credit is a refundable credit available to qualified high technology businesses that engage in research activities as defined by the Internal Revenue Code. The Department estimates that the QHTBs will claim research credits of \$14.8 million for tax year 2007, bringing the cumulative total for the research credits for 2000 through 2007 to \$89.5 million (Table 6).

**Table 6 -- Estimated Research Credit Claims for Tax Years 2000 - 2007**

Cumulative Research Credit Claims, Tax Years 2000 - 2006	\$74,652,968
Estimated Research Credit Claims, Tax Year 2007	14,800,000
<b>Total Research Credit Claims, Tax Years 2000 - 2007</b>	<b>\$89,452,968</b>

For tax year 2006, the research credit was claimed by 401 tax filers, as compared to 224 claims filed in tax year 2005. The total amount of research credits paid out for tax year 2006 was \$14.4 million.

Table 7 shows that the bulk of the research credits (85.6%) were claimed by corporations rather than individual taxpayers.

**Table 7 -- Tax Credit for Research Activities Claimed for  
Tax Years 2000 through 2006**

<b>Year</b>	<b>No. of Research Credit Claims</b>	<b>Research Credit</b>	<b>Individuals<sup>1</sup></b>	<b>Corporations<sup>2</sup></b>
2000	36	\$1,766,558	\$12,765	\$1,753,793
2001	118	12,423,638	1,793,948	10,629,690
2002	153	9,155,582	2,502,664	6,652,918
2003	165	11,482,395	544,295	10,938,100
2004	245	12,204,576	2,054,926	10,149,650
2005	224	13,237,569	1,012,006	12,225,563
2006	401	14,382,650	2,810,178	11,572,472
<b>Totals</b>	<b>1,342</b>	<b>\$74,652,968</b>	<b>\$10,730,782</b>	<b>\$63,922,186</b>

*Source: Tax Research and Planning Office, Tax Credits Claimed by Hawaii Taxpayers -- 2000 to 2006.*

<sup>1</sup> Includes fiduciaries.

<sup>2</sup> Includes exempt organizations who may have taxable business income.

## **VI. JOB CREATION**

### **a. Jobs Reported by QHTBs**

Data from the 177 QHTBs that filed Form N-317 for calendar year 2007 show that these firms paid wages to 2,245 Hawaii workers in calendar year 2007, including full-time, part-time, and temporary workers. Full-time workers earned an average annual wage of \$76,790, part-time workers earned an average annual wage of \$38,084, and temporary workers earned an average annual wage of \$15,276 (Table 8). These 177 firms reported spending \$94.0 million to hire 2,118 independent contractors in Hawaii with an average wage of \$44,376 per contractor (Table 9).

**Table 8 -- Average Wages for QHTB Employees**

Salary Range	Full-time		Part-time		Temporary	
	Jobs	Wages (\$)	Jobs	Wages (\$)	Jobs	Wages (\$)
Under 30,000	119	\$2,975,000	107	\$2,675,000	641	\$9,792,023
30,000 to 59,999	560	28,000,000	33	1,650,000	n/a	n/a
60,000 to 99,999	504	40,320,000	8	640,000	n/a	n/a
100,000 and over	267	40,050,000	6	900,000	n/a	n/a
Total	1,450	\$111,345,000	154	\$5,865,000	641	\$9,792,023
Average Wage		76,790		38,084		15,276

n/a: not available

**Table 9 -- 2007 QHTB Hawaii Payroll Expenses, Research Credits and Contractors Hired and Expenses (2007 Filers)**

Activity	Payroll Expenses (\$)	Research Credits Claimed (\$)	Indep. Contractors Hired	Contractor Expenses (\$)
Research As Defined In IRC Section 41(d)	\$14,491,828	\$1,990,349	75	\$12,480,319
Biotechnology	15,856,391	3,075,364	175	7,069,636
Computer Software	38,921,173	2,673,761	229	6,100,983
Non-Fossil Fuel Energy	4,470,695	491,458	152	4,844,972
Performing Arts	8,420,871	-	1,240	55,528,033
Multiple Activities and Others	44,841,065	6,618,587	247	7,964,383
<b>Grand Total</b>	<b>\$127,002,023</b>	<b>\$14,849,519</b>	<b>2,118</b>	<b>\$93,988,326</b>

**b. Estimated Impact of the High Technology Business Investment Tax Credit and the Tax Credit for Research Activities on Technology Employment in Hawaii**

Good reference data now exists for the overall growth of the Hawaii technology sector in the HISciTech Institute's measure of the number of technology jobs in its 2007 Report,

"Innovation and Technology in Hawaii: An Economic and Workforce Profile."<sup>2</sup> The HISciTech Report estimated that Hawaii's technology sector employed 31,106 people earning an average annual salary of \$68,935 (Table 10). Of the 31,106 total technology positions, the HISciTech Report estimated 23,985 of these jobs were with private sector companies and 7,121 positions were in public sector agencies.

Notably, between 2002 and 2007, the HISciTech Report estimated that the number of technology jobs in Hawaii increased by 3,557 in the private sector and 601 in the public sector, or a total increase of 4,158 positions in technology fields. The HISciTech Report utilized data from Economic Modeling Specialists Inc. (EMSI) that is based upon U.S. Bureau of Economic Analysis (BEA) data. The technology jobs identified by the HISciTech Report is very inclusive, covering private, county, State, and civilian federal government positions, jobs in the military, and self-employed individuals, as well as other positions not covered by unemployment insurance (UI), usually part-time employees working less than 20 hours per week.

The Department of Taxation revised the N-317 form to better capture technology job creation data from Act 178, as amended. Data provided in prior years (2002-2006) cannot be accurately compared to the data reported by the 177 Qualified High Technology Businesses that filed reports for calendar year 2007.

Overlaying the 2,245 jobs reported by the 177 QHTBs with the 3,557 jobs in the HISciTech Report provides a *prima facie* case that these 177 QHTBs were responsible for 63% of total private sector technology job creation in Hawaii between 2002 and 2007. This presumes that the broader non-QHTB technology sector, comprising 1,964 companies, grew 1,313 technology jobs between 2002 and 2007, when the overall State employment rate grew by 14.1%

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<sup>2</sup> The study by HISciTech is available at [http://www.hiscitech.org/data/n\\_0001/resources/live/Innovation+Tech+Hawaii+Report+Sept30.pdf](http://www.hiscitech.org/data/n_0001/resources/live/Innovation+Tech+Hawaii+Report+Sept30.pdf).

over this time period. As only partial jobs creation data is available at the present time, conclusions regarding the effectiveness of Act 178, as amended, in creating long term employment opportunities in Hawaii's technology sector are premature until additional data is collected in future years.

**Table 10 -- Comparison of Estimates of Technology Jobs in Hawaii**

Source	Year	QHTB or Technology						All Industries			NOTES
		Businesses	Jobs		Total QHTB or Tech	Avg QHTB or Tech Wage (\$)	Percent of All Jobs	Establishments	Jobs	Avg Wage (\$)	
			Private	Public							
Hawaii State Department of Taxation (QHTB) 1/	2007	177	2,245	0	2,245	56,571	n/a	n/a	n/a	n/a	Jobs include full-time, part-time, and temporary jobs for which a Form W-2 is generated. Payroll includes the aggregate amount of all wages and all other expenses traditionally paid from a payroll account.
The Hawaii Science & Technology Institute 2/	2007	1,964	23,985	7,121	31,106	68,935 Total 63,623 Private only	3.6	39,280 calculated	861,608	45,963	Jobs include sole proprietorships, military and other uncovered workers. Wage includes wage & salary plus retirement pay and fringe

n/a: not available.

1/ Descriptive Statistics on the Operations of Qualified High Technology Businesses From 2002 Through 2007

2/ Innovation and Technology in Hawaii: An Economic and Workforce Profile

## **VII. VIABILITY AND SUSTAINABILITY OF QHTBs**

To measure the viability of the QHTBs, the Department reviewed the QHTBs' patents, revenues, expenses, and the length of time a QHTB has been in business. Of the 177 companies that filed reports in 2007, 55 filers owned 200 patents and had an additional 610 patents pending; 74 owned copyrights, 65 owned trade secrets, 64 owned licenses, and 58 owned trademarks. Note the same company could own more than one of these types of intellectual property.

Qualified high technology companies, in aggregate, are experiencing negative cash flows. In 2007, the worldwide gross revenue of the QHTBs totaled \$228.3 million, which was substantially less than their worldwide total expenses (excluding capital expenditures) of \$440.9 million.<sup>3</sup> It should be noted that losses are not unusual for businesses in the early stages of their development.

Of the 177 filers of Form N-317 for calendar year 2007, only 85 were engaged in their qualifying activity for more than three years and only 47 were engaged in the qualifying activity for more than 5 years.<sup>4</sup>

Table 11 provides summary data on Hawaii revenues, expenses, and jobs for the 2007 QHTB filers. It shows that these QHTBs reported Hawaii revenues of \$205.8 million, Hawaii expenditures (excluding capital expenditures) of \$384.5 million, and Hawaii payroll expenses of \$127.0 million (Table 9) for calendar year 2007. Of the 177, only 38 had revenues greater than or equal to their expenses during 2007. Of the 2,245 jobs created by all QHTBs in 2007, only 529 jobs (or 23.6%) are associated with companies that made a profit. However, it should be noted that firms, even those experiencing a negative cash flow, may hold assets of value, such as patents not yet commercialized or trade secrets that could be sold at a future date.

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<sup>3</sup> See Department of Taxation, September 2008, *Op. cit.*, Table 4.1a.

<sup>4</sup> *Ibid*, Table 3.4a.

**Table 11 -- 2007 Hawaii Revenues, Expenses and Jobs (2007 filers)****A. QHTBs with Worldwide Revenue Greater than or Equal to Worldwide Expenses**

<b>Activity</b>	<b>Number of QHTBs</b>	<b>Hawaii Revenue (\$)</b>	<b>Hawaii Expenses<sup>1</sup> (\$)</b>	<b>Number of Jobs</b>
Research As Defined In IRC Section 41(d)	5	16,997,666	11,965,948	90
Biotechnology	4	*	*	*
Computer Software	7	27,904,045	25,013,324	185
Non-Fossil Fuel Energy	4	*	*	*
Performing Arts	7	958,203	519,021	7
Multiple Activities and Others	11	37,279,729	25,237,225	213
<b>Total</b>	<b>38</b>	<b>92,484,321</b>	<b>71,174,853</b>	<b>529</b>

**B. QHTBs with Worldwide Revenue Less than Worldwide Expenses**

<b>Activity</b>	<b>Number of QHTBs</b>	<b>Hawaii Revenue (\$)</b>	<b>Hawaii Expenses<sup>1</sup> (\$)</b>	<b>Number of Jobs</b>
Research As Defined In IRC Section 41(d)	12	6,493,981	22,625,589	91
Biotechnology	18	*	*	*
Computer Software	41	29,125,337	49,848,502	440
Non-Fossil Fuel Energy	16	*	*	*
Performing Arts	26	5,225,992	93,852,364	522
Multiple Activities and Others	26	41,123,540	74,933,897	431
<b>Total</b>	<b>139</b>	<b>113,360,659</b>	<b>313,368,344</b>	<b>1,716</b>

**C. All QHTBs that Filed in 2007**

<b>Activity</b>	<b>Number of QHTBs</b>	<b>Hawaii Revenue (\$)</b>	<b>Hawaii Expenses<sup>1</sup> (\$)</b>	<b>Number of Jobs</b>
Research As Defined In IRC Section 41(d)	17	23,491,647	34,591,537	181
Biotechnology	22	12,509,167	43,170,002	199
Computer Software	48	57,029,382	74,861,826	625
Non-Fossil Fuel Energy	20	28,227,320	37,377,325	67
Performing Arts	33	6,184,195	94,371,385	529
Multiple Activities and Others	37	78,403,269	100,171,122	644
<b>Total</b>	<b>177</b>	<b>205,844,980</b>	<b>384,543,197</b>	<b>2,245</b>

<sup>1</sup> Hawaii Expenses are expenses incurred for property or services consumed or for use in Hawaii.

\* Suppressed to prevent disclosure of confidential taxpayer information.

## **VIII. CONCLUSION**

To the extent Act 178, as amended, is intended as a capital raising tool for Hawaii QHTBs, those filing in 2007 reported raising over \$1.2 billion in cash investments from 2000 to 2007. The Department estimates that one-third of this investment was raised from off-shore investors.

Losses in tax revenues to the State of Hawaii for all QHTB investments to date total \$657.5 million in *investment* credit claimed and likely to be claimed in future years, and \$89.5 million in *research* tax credits.

To the extent Act 178, as amended, is intended to support creation of higher-paying technology jobs, 177 QHTBs reporting data in 2007 indicated an employment level of 2,245 positions comprised of 1,450 full-time positions. Additional data is required to reconcile this QHTB job creation data with the HISciTech Institute's estimated 3,557 new technology jobs added between 2002 and 2007 by the broader technology sector comprised of 1,964 companies.

Taking the total investment, State tax credit costs, and full-time job numbers together, indicatively the acquisition cost per full-time position is approximately \$535,000. The average per QHTB is 12.7 jobs, of which 8.2 were full-time positions.

To the extent Act 178, as amended, is intended to create viable high technology companies contributing long-term to Hawaii's economy, 47 of the 177 QHTBs have been in business for five years or more and 38 had revenues greater than expenses. Assuming this proportion remains consistent over the entire life-cycle of the 177 QHTBs, the indicative State acquisition cost for each successful QHTB who received funds between July 1, 2007 and December 31, 2007 is \$31.6 million.