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**Report on**  
**Hawaii Tax Credit for Research Activities**  
**for Tax Year 2013**

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**August 2014**

**Department of Business, Economic Development and Tourism**

**State of Hawaii**



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## **Executive Summary**

A total of ten qualified high technology businesses (QHTBs) completed the survey with the State Department of Business, Economic Development and Tourism (DBEDT) for the Hawaii research tax credit for tax year 2013. The ten QHTBs reported that they spent an aggregated amount of \$25.7 million in research activities in Hawaii in 2013. Among those, \$17.3 million (67.2%) were eligible for the research tax credit, and a total of \$1.1 million was reported as tax credit in State of Hawaii tax form N346.

All of the ten QHTBs were established more than five years ago and have been undertaking the research activities for more than five years.

More than 100 patents were owned or filed by the QHTBs as of December 2013 (59: owned, 48 pending). However, not all QHTBs owned or have filed patents. Of the ten QHTBs, five QHTBs had no patent owned or filed as of December, 2013. Seven out of the ten QHTBs indicated that they owned intellectual property other than patents.

“Biotechnology/Life Science”, “Defense/Aerospace”, and “Information/Communication Technology” were the three most popular industry sectors with four QHTBs doing business in them. There were two QHTBs doing businesses in each of “Ocean Sciences” and “Energy” sectors.

In 2013, the ten QHTBs made a total of \$54.5 million revenue from all goods and services produced in Hawaii, of which 66.2% was derived from out-of state sales or activities. About 30% of this total revenue was earned from intellectual properties that QHTBs produced in Hawaii.

The ten QHTBs spent \$45.8 million in 2013 as operating expenses or capital expenditures for sales and activities performed in Hawaii, of which 49.6% (\$22.7 million) was incurred in the “Information/Communication Technology” sector.

As of December 2013, the ten QHTBs had a total of 315 regular employees (280 full-time and 35 part-time employees) working for the companies. The majority of these employees, 78.4%, were employed in research activities that the QHTBs were undertaking.

Almost three quarters of regular employees in the QHTBs got paid more than \$60,000 annually, and 32% paid more than \$100,000 annually as wage.

Job creation due to the enactment of new research tax credit was not observed in 2013.

Although job loss/gain varied by individual QHTB, the aggregated number of regular jobs in the ten QHTBs in 2013 was about 6% lower than they had a year ago. Jobs in research activities also decreased.

Eight QHTBs reported a positive independent contractor expense in 2013. The eight QHTBs spent a total of \$1.74 million in 2013 as independent contractor expenses for services performed in Hawaii. In 2013, one company was established to commercialize the intellectual property owned by the QHTBs.

According to the State Department of Taxation, thirteen claims were processed as of August 20, 2014, for the state research tax credit for tax year 2013. The total amount of the thirteen claims is \$386,221.

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## 1. Introduction

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Many states have been implementing a state research tax credit, in conjunction with the federal research tax credit, to further promote research activities of businesses in the state.

Hawaii's effort to encourage research activities through tax incentives started as early as 1999. Act 178 in 1999 contained a state tax credit for research activities. However, the tax credit was limited to 2.5% of new research expenses in Hawaii and was non-refundable.

Benefits of the Hawaii research tax credit increased substantially when Act 297 in 2000 raised the Hawaii research tax credit from 2.5% to 20% of the qualified research expenses to match the federal standard and made the credit refundable. Act 221 in 2001 further augmented the benefits by allowing the credit to be claimed for all qualified research expenses, not just the incremental increase. Hawaii research tax credit was amended one more time in 2004 when Act 215 limited credit eligibility to qualified high technology businesses (QHTBs) only. This old research credit sunsetted in 2010.

Act 270, Session Laws of Hawaii 2013, re-established Hawaii's research tax credit for the tax year from 2013 to 2019. The credit remains to be 20% of the qualified research expenditures and continues to be refundable. However, it defined QHTB more narrowly and adopted federal rules again for eligibility, which means that qualified research expenses are limited to incremental amount only.

Act 270 also enhanced reporting requirements. It mandated all QHTBs that claim the state research credit to complete an annual survey with DBEDT. Based on the survey result, DBEDT is required to submit a report to the legislature on the activities of the QHTBs to measure the effectiveness of the research tax credit.

This report was prepared pursuant to Act 270 based on the survey that QHTBs completed. This report includes statistics on various activities of QHTBs that claimed the research tax credit for their taxable year 2013. Most statistics reported in this report are for activities undertaken in calendar year 2013.

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## 2. Characteristics of QHTBs

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For tax year 2013, a total of ten QHTBs completed the survey with DBEDT on the Hawaii tax credit for research activities. QHTBs in this report refer to the ten companies unless otherwise stated.

### Age of QHTBs

QHTBs that submitted the Hawaii research credit survey for tax year 2013 have been doing business in Hawaii for a while. All of the ten QHTBs were established more than five years ago. Three QHTBs were established in or before 1990, while the other seven companies were established after 2000.

History of research activity was also long. All of the ten QHTBs reported that they have been undertaking the research activities for more than five years.

Table 1. QHTBs by year established

Year established	~ 1990	1991-2000	2001-2007	2008~
No. of QHTBs	3	0	5	2

### Intellectual Properties

More than 100 patents were owned or filed with the U.S. Patents and Trademark office by the QHTBs. As of December 31, 2013, a total of 59 patents were owned by the QHTBs while another 48 patents were filed and pending. However, not all QHTBs owned or have filed patents. Of the ten QHTBs, five QHTBs had no patent owned or filed as of December 31, 2013.

Table 2. Patents owned or filed by QHTBs (as of Dec 31, 2013)

No. of Patents owned or filed by the 10 QHTBs			No. of QHTBs with at least one patent owned or filed	No. of QHTBs with more than 20 patents owned
Total	Owned	Pending		
107	59	48	5	2

Seven out of the ten QHTBs indicated that they owned intellectual property other than patents. All QHTBs with patents also owned intellectual properties other than patents. Among the five QHTBs that had no patent owned or filed, three QHTBs reported that they owned other intellectual properties, such as copyright and trade secret.

Table 3. Other intellectual property owned by QHTBs (as of Dec 31, 2013)

Total QHTBs that Filed tax credit surveys	No. of QHTBs with other intellectual property			
	Copyrights	Trade Secrets	Licenses	Trademarks
10	4	4	3	3

Business sector of QHTBs

The survey asked each QHTB to indicate all industry sectors in which the QHTB conducted business in 2013. Three QHTBs indicated that their business area was in “Biotechnology/Life science” while two QHTBs indicated “Information/Communication technology” and another two indicated “Defense/Aerospace” as their business area. The three remaining QHTBs indicated that they conducted business in more than one industry sector.

Figure 1. Business sectors of QHTBs in 2013

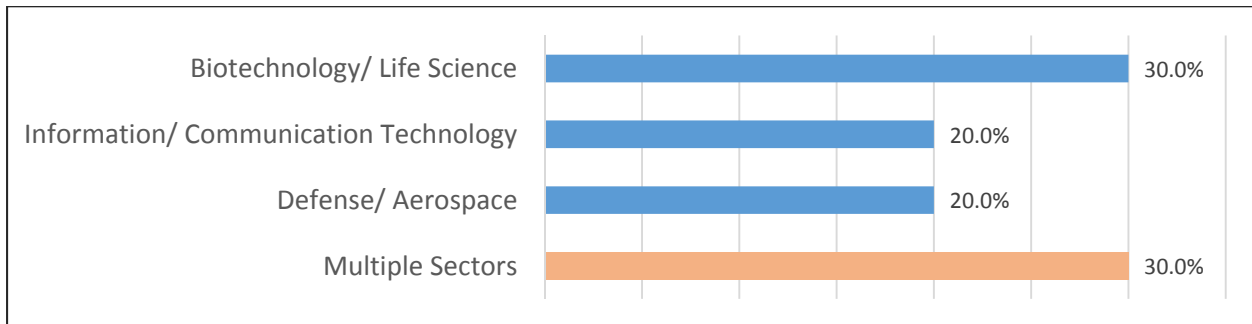


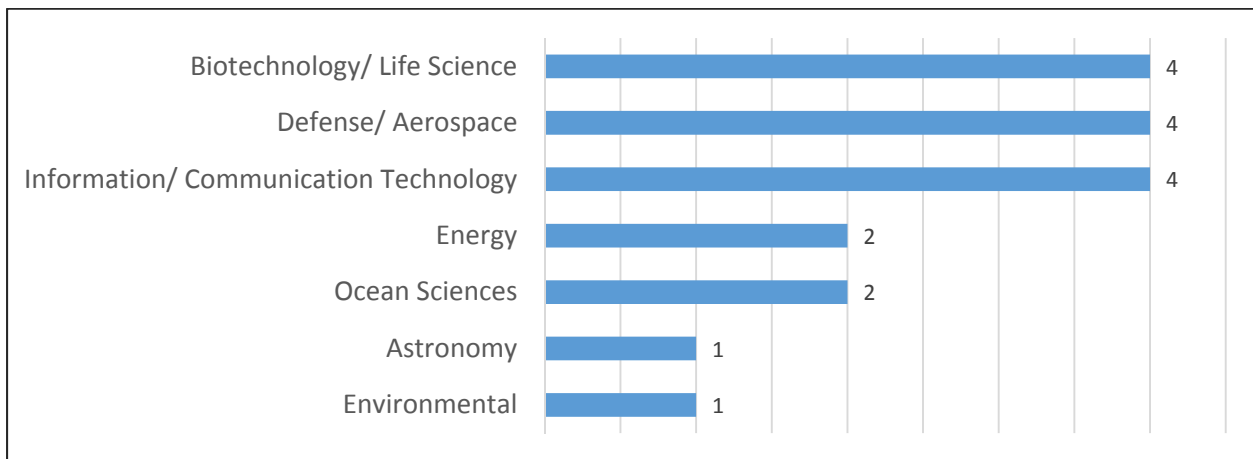
Figure 2 shows total number of QHTBs that conducted business in each industry sector in 2013, counting the multi-sector companies multiple times for all industry sectors they did business in.



“Biotechnology/Life Science”, “Defense/Aerospace”, and “Information/Communication Technology” were the three most popular industry sectors with four QHTBs doing business in them. There were two QHTBs doing businesses in each of “Ocean Sciences” and “Energy” sectors.

Table A-2 in the appendix at the end of this report shows business activities of QHTBs by detailed business activity. “Specialty Software Development” under the “Information/Communication Technology” sector was the most prevalent business activity amongst the QHTBs in 2013.

Figure 2. Number of QHTBs that conducted business in each sector (with multiple counting) <sup>1</sup>



<sup>1</sup> Multi-sector companies are counted for all sectors where they did business.

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### 3. Revenue and Spending Structure

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#### Revenue structure of QHTBs

In 2013, the ten QHTBs made a total of \$54.5 million revenue from all goods and services produced in Hawaii, of which 66.2% (\$36.1 million) was derived from out-of state sales or activities.

About 30% of this total revenue was earned from intellectual properties that QHTBs produced in Hawaii. The combined revenue of the ten QHTBs from their intellectual properties, by selling patented products or licensing royalty, etc., was \$16.4 million in 2013. 59.5% (\$9.8 million) of the revenue from intellectual properties was earned from out-of- state sales.

Table 4. Revenues of QHTBs, by revenue source

Source of revenue	Revenue in 2013	
Total revenue	\$54,535,604	100%
- From out of state sales	\$36,088,287	66.2%
Revenue from intellectual property	\$16,400,244	100%
- From out of state sales	\$9,757,855	59.5%

#### Hawaii expenses of QHTBs

The ten QHTBs spent \$45.8 million in 2013 as operating expenses or capital expenditures for sales and activities performed in Hawaii.

Table 5. Operating and Capital expenditure spent by QHTBs in 2013

Operating Expenses spent by QHTBs	Capital Expenditures spent by QHTBs
\$43,324,971	\$ 2,470,192

Table 6 presents where QHTBs made the spending in 2013, by industry sector. 49.6% (\$22.7 million) of QHTBs' Hawaii expenses was incurred in "Information/Communication Technology, while another 20.7% (\$9.5 million) of the spending was incurred in the "Biotechnology/Life Sciences" sector.

A subsector where the largest QHTBs' spending was incurred was "Test and Evaluation" under the "Information/Communication Technology" sector, with \$13.9 million spending in 2013 made by the ten QHTBs. The second largest amount of QHTBs' Hawaii expenses was incurred in "Specialty Software Development" under the same sector, with \$8.1 million spending made by the QHTBs in 2013.

Table 6. Where QHTBs spent their operating and capital expenditures in 2013

All industries	\$45,795,163	100.0%
<b>Biotechnology/ Life Sciences</b>	<b>\$9,496,753</b>	<b>20.7%</b>
- Diagnostics/Therapeutics	\$688,509	1.5%
- Healthcare IT	\$1,669,363	3.6%
- Medical Devices	\$7,138,881	15.6%
<b>Energy</b>	<b>\$843,957</b>	<b>1.8%</b>
- Energy Efficiency	\$815,262	1.8%
- Wind	\$14,347	0.0%
- Other Energy	\$14,347	0.0%
<b>Defense/Aerospace</b>	<b>\$4,556,457</b>	<b>9.9%</b>
- Communications & Computer Systems	\$1,645,384	3.6%
- Modeling/Simulation/Training	\$50,888	0.1%
- Photonics - Defense/Aerospace	\$2,141,816	4.7%
- Testing & Evaluation - Defense/Aerospace	\$718,369	1.6%
<b>Information/Communication Technology</b>	<b>\$22,731,322</b>	<b>49.6%</b>
- Modeling/Simulation/Training	\$704,178	1.5%
- Specialty Software Development	\$8,085,809	17.7%
- Testing/Evaluation	\$13,941,334	30.4%
<b>Ocean Sciences</b>	<b>\$4,388,204</b>	<b>9.6%</b>
- Ocean Engineering	\$4,388,204	9.6%
Unidentified	\$3,778,471	8.3%

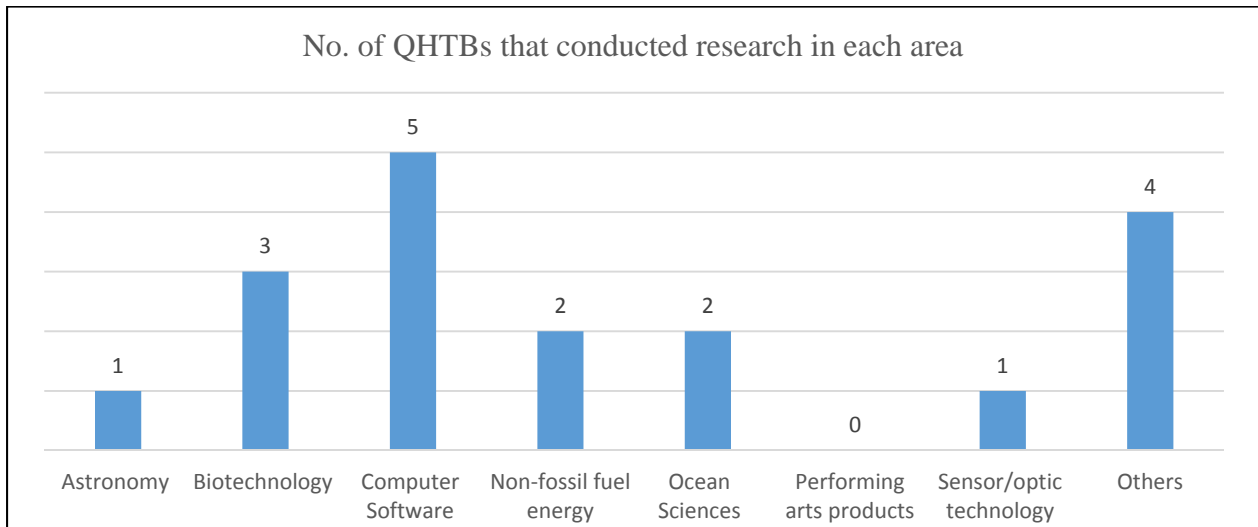
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## 4. Research Activities and Tax Credit

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Among the ten QHTBs, seven companies reported that they conducted research activities in one area while other three companies reported research activities in more than one area.

Figure 3. Areas where QHTBs conducted research activities in 2013



For “Qualified Research Activities”, Act 270 adopts §41 of the Internal Revenue Code, meaning that only incremental amounts are eligible for the credit, with the further requirement that qualified research activities do not include research expenses incurred outside of the state.

The ten QHTBs who completed the Hawaii research credit survey for tax year 2013 reported that they spent an aggregated amount of \$25.7 million in research activities in Hawaii in 2013.

Among those, \$17.3 million (67.2%) were eligible for the Hawaii tax credit for research activities (TCRA), and a total of \$1.1 million was reported as tax credit in Form N346.

The amount that individual QHTB reported for the Hawaii research credit ranged from \$8,381 to 178,250. Four out of the ten QHTBs reported more than \$150,000 each as research tax credit.

The dollar amount of combined corporate income tax paid by the ten QHTBs for tax year 2013 was \$80,648.

Table 7. Reported research expenses and tax credit for tax year 2013

Number of firms completed the survey	Total Research Expenses occurred in Hawaii	Total Research Expenses eligible for Hawaii TCRA	Total Tax Credit reported for Hawaii TCRA
10	\$25,743,372 100%	\$17,290,478 67.2%	\$1,093,073

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## 5. Job Characteristics and Creation

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### Employment overview

As of December 12, 2013, the ten QHTBs had a total of 315 regular employees (280 full-time and 35 part-time employees) working for the companies. The majority of these employees, 78.4%, were employed in research activities that the QHTBs were undertaking. The share of research activity jobs was higher among full-time jobs than among part-time and temporary/seasonal jobs.

A total of 23 workers were hired by the QHTBs on temporary or seasonal basis during the calendar year 2013. 60.9% of them were hired to work on research activities.

Table 8. Number of employments employed by QHTBs, by employment status

	Total	Full-time	Part-time	Temporary / Seasonal in 2013
		As of 12/12/2013		
All areas	338	280	35	23
In Research Activities	261	222	25	14
Research Activity Jobs as % of Total Jobs	77.2%	79.3%	71.4%	60.9%

### Employment size

QHTBs that submitted the research credit survey for tax year 2013 varied substantially in employment size. The number of regular employees that each of QHTBs hired as of December 2013 ranged from 2 to 95. There were three QHTBs that had less than 10 regular employees while a QHTB had more than 90 employees working for the company.

Table 9. QHTBs by employment size

<b>Number of regular employees<sup>1</sup> (as of December 2013)</b>	<b>No. of QHTBs</b>
Less than 10	3
10-19	2
20-29	2
30-59	0
60-69	2
70-89	0
90-99	1
100 and more	0

<sup>1</sup> Excludes temporary and seasonal employees

### Compensation levels of jobs in QHTBs

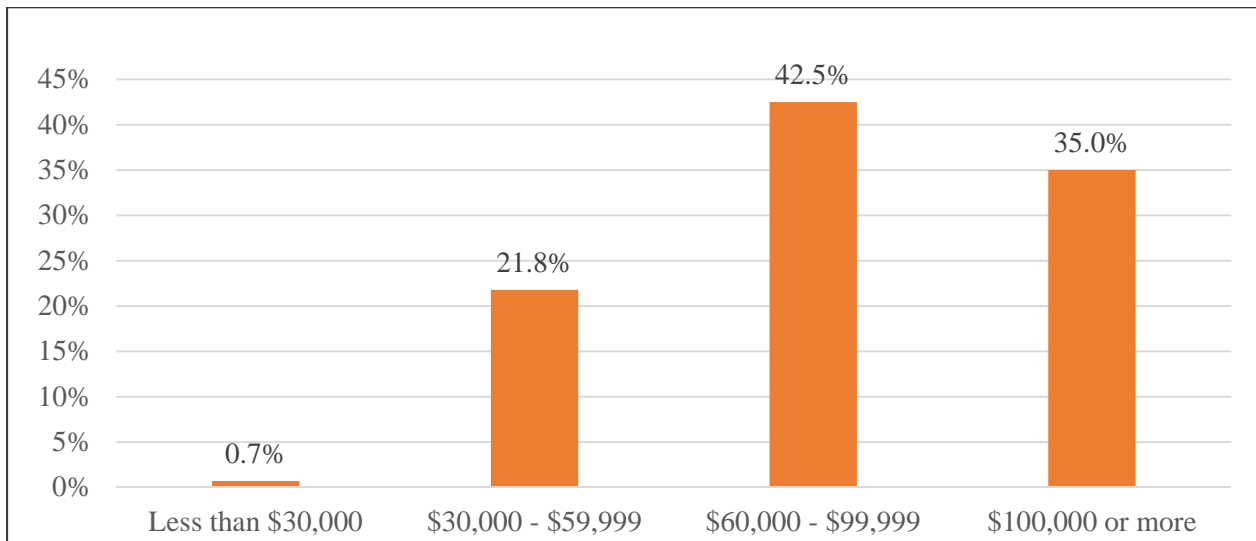
Table 10 shows the number of employees and their shares of total employees by four wage groups. Almost three quarters of regular employees in the QHTBs got paid more than \$60,000 annually, and 32% paid more than \$100,000 annually as wage.

Although most of the employees whose annual wage exceeded \$60,000 were full-time workers, many of the part-time employees in the QHTBs were also paid high. 25.7% of part-time workers in the QHTBs had annual wage over \$60,000 in 2013.

Table 10. Full-time and Part-time employees by wage level

Annual wage	Both Full & Part-time		Full-time		Part-time	
	Jobs	Percentages	Jobs	Percentages	Jobs	Percentages
Less than \$30,000	20	6.3%	2	0.7%	18	51.4%
\$30,000 - \$59,999	69	21.9%	61	21.8%	8	22.9%
\$60,000-\$99,000	126	40.0%	119	42.5%	7	20.0%
\$100,000 or more	100	31.7%	98	35.0%	2	5.7%
Total	315	100%	280	100%	35	100%

Figure 4. Full- time employees of QHTBs by wage level in 2013



Job changes in QHTBs from the previous year

Job creation due to the enactment of new research tax credit was not observed in 2013.

Although job loss/gain varied by individual QHTB, the aggregated number of regular jobs in the ten QHTBs in 2013 was about 6% lower than they had a year ago. Jobs in research activities also decreased. The number of employees working for research activities in the ten QHTBs in 2013 was 7 persons fewer than the QHTBs hired in 2012.

Table 11. Employment changes in QHTBs from 2012 to 2013

		2013	2012	Changes from 2012
Full-time employees	In all areas	280	293	-13
	In Research Activities	222	224	-2
Part-time employees	In all areas	35	42	-7
	In Research Activities	25	30	-5

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## 6. Impacts of QHTBs' Activities on External Companies

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Table 12 summarizes impacts of the QHTBs' business activities in 2013 on external companies in Hawaii. Eight QHTBs reported a positive independent contractor expense in 2013. The eight QHTBs spent a total of \$1.74 million in 2013 as independent contractor expenses for services performed in Hawaii. Among those, 50% (\$0.87 million) was spent in the area of "Scientific and Technical Contract Services".

In 2013, one company was established to commercialize the intellectual property owned by the QHTBs.

Table 12. Impacts of QHTBs' activities on external companies in Hawaii in 2013

Independent contractor expenses incurred by the QHTBs	\$1,741,939
Total number of independent contractors hired/external services procured by the QHTBs	39
Number of new companies established in Hawaii to commercialize the QHTBs' intellectual property	1



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## **7. Tax Credit Claimed with the State Department of Taxation**

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According to the State Department of Taxation (DoTax), thirteen claims were processed as of August 20, 2014, for the state research tax credit for tax year 2013. The total amount of the thirteen claims is \$386,221.

The difference between the amount reported on the DBEDT surveys (\$1.1 million) and DoTax tax credit claims (\$386,221) may be due to timing differences. The surveys were completed by QHTBs and were due before June 30, 2014. If a taxpayer is an individual or corporation with a tax year same as the calendar year, the tax return for tax year 2013 was due April 20, 2014, but the due date may be extended to October 20, 2014 if the taxpayer requests an automatic extension. Also, it takes time to process the tax returns.

For these reasons, the claims for the research tax credit processed by DoTax as of August 20, 2014 probably represent only a part of the total claims that will be filed for tax year 2013. Also, the number of claims for the tax credit may be greater than the number of surveys completed with DBEDT by the QHTBs, because if the QHTB is a partnership or other pass-through entity, the tax credits earned by the QHTB are passed through to its individual members, who claim the tax credits on their tax returns.

# **Appendix**

Table A- 1. List of QHTBs that filed Hawaii research tax credit surveys for tax year 2013

Company Name	Company Location
Advanced Integrated Photonics INC.	Culver City, California
Alternative Energy Technologies, LLC	Honolulu
DataHouse Consulting, INC.	Honolulu
Kamakura Corporation	Honolulu
Makai Ocean Engineering, INC.	Kailua
Oceanit Laboratories, INC.	Honolulu
Spirent Communications Hawaii LLC	Honolulu
Terasys Technologies INC.	Honolulu
Tissue Genesis Institute, LLC	Honolulu
Tissue Genesis, INC.	Honolulu

Table A- 2. Business activities of QHTBs

(A QHTB is counted multiple times for all business activities that it conducted.)

Industry sector	Subsector	No. of QHTBs conducted business in the subsector
Astronomy	Adaptive Optics	1
	Other Astronomy	1
	Remote Sensing	1
Biotechnology/Life Sciences	Diagnostics/Therapeutics	1
	Healthcare IT	1
	Medical Devices	3
Defense/Aerospace	Antenna Systems & Management	1
	Communications & Computer Systems	2
	Modeling/Simulation/Training	2
	Optics	2
	Other	1
	Photonics	1
	Remote Sensing	1
	Specialty Software Development	2
	Testing & Evaluation	2
Energy	Energy Efficiency	2
	Fuel Cells	1
	Ocean	1
	Other Energy	1
	Solar	1
	Wind	1
Environmental	Air Technologies	1
	Disaster Mitigation Management	1
	Other Environmental	1
	Soil Technologies	1
	Water Technologies	1
Information/Communication Technology	Antenna Systems & Management	1
	Information Services	1
	Laser	1
	Optics	1
	Other	2
	Specialty Software Development	4
	Telecommunications/Networks	2
	Testing & Evaluation	2
Ocean Sciences	Marine Biotechnology	1
	Ocean Engineering	2
	Other Ocean Sciences	1