JOINT LEGISLATIVE INCOME TAX CREDIT REVIEW COMMITTEE

DECEMBER 10, 2013 MEETING

OPEN SESSION MATERIALS

Joint Legislative Budget Committee
Staff Memorandum

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DATE: December 2, 2013

TO: Members, Joint Legislative Income Tax Credit Review Committee

FROM: Hans Olofsson, Chief Economist

SUBJECT: 2013 INCOME TAX CREDIT REVIEW - OPEN SESSION

This memo transmits background materials for the December 10**,** 2013 meeting of the Joint Legislative Income Tax Credit Review Committee. This memo includes information specific to the only credit scheduled for a review in 2013 that does not include confidential taxpayer information: Credit for Increased Research Activities (A.R.S. § 43-1074.01 and § 43-1168). The credits with confidential taxpayer information are reviewed in a separate memo.

Background

Laws 2002, Chapter 238 established the Joint Legislative Income Tax Credit Review Committee, and specified a schedule for review of corporate and individual income tax credits. While the Research and Development Credit will be reviewed in open session, the following credits will be discussed in executive session due to confidential information.

- Credit for Pollution Control Equipment
  A.R.S. § 43-1081 (Individual)
  A.R.S. § 43-1170 (Corporate)
- Credit for Taxes Paid for Coal Consumed in Generating Electrical Power
  A.R.S. § 43-1178 (Corporate)

As a result of Laws 2010, Chapter 225, the Department of Revenue (DOR) may disclose confidential statistical information to this Committee and JLBC Staff. DOR views tax credit information to be confidential if: (1) 3 or less taxpayers claimed the credit, or (2) 90% or more of the total credit used to offset tax liability was attributable to a single taxpayer.

The Joint Legislative Income Tax Credit Review Committee is charged with determining the original purpose of each of the existing income tax credits and establishing a standard for evaluating the success or failure of the credit. Pursuant to statute (A.R.S. § 43-221), the standard for evaluation of the credits may include: (1) the history, rationale and revenue impact, (2) the benefit to the state in various economic terms, and (3) the complexity in the use and administration of the credit.

All the credits on the 2013 review schedule have been reviewed by the committee in prior years.

Limitations

There are several limitations that affect the evaluation of income tax credits. For example, the timeliness of data is one such limitation. Individual and corporate credit data is not currently available for tax year 2012. Instead, the latest available credit data released by DOR is for tax year 2011. This information is preliminary, however, which suggests that it will likely be revised in future years.

(Continued)

A second limitation is the lack of performance measures for tax credits. Some credits have stated performance measures or goals, but most of the credits do not have objectives included in statute. Chapter 238, however, requires any new credit to include a clause that explains the rationale and objective of the credit (A.R.S. § 43-223).

Finally, the evaluation of tax credits in terms of their economic benefits to the state is often difficult to conduct since the data required to do so is rarely available. For example, while DOR reports on the amount of research and development ("R&D") spending that qualifies for the R&D credit, there is no data on the number of new jobs associated with such activity.

2013 Review

The following information is provided (where applicable) for each of the credit categories:

Description - The definition of the tax credit, and how the credit is calculated.

Refundable - Whether the credit is refundable or nonrefundable. A nonrefundable credit can never exceed the taxpayer's tax liability. Instead, any amounts not used to offset the taxpayer's liability in a taxable year can either be carried forward to future tax years or must be forfeited in the same tax year. By contrast, a refundable credit is allowed to exceed the taxpayer's tax liability and any excess amounts are refunded to the taxpayer.

Transferable - Whether or not any unused portion of the credit can be sold or otherwise transferred to other taxpayers. None of the credits included in the current review is transferable.

Carry Forward - Whether or not any unused nonrefundable credit may be carried forward into subsequent tax years, and if so, for how many years.

History and Rationale - The year the tax credit was implemented, revisions to the credit since its enactment, and relevant information regarding the intended purpose of the credit.

Revenue Impact - Based on data reported by DOR, information for each tax year on the number of claimants, the amount of total available credit, credit used, and credit carried forward to a subsequent tax year.

Economic Benefits - A summary of information available related to any economic benefits associated with each tax credit, including economic development, new investments, job creation or retention of existing jobs, and any other economic benefits that may be specific to each credit.

Complexity - Information related to the complexity of administration and application of each tax credit, including the perspective of the state agencies administering the credit, as well as the trade associations and representatives of the corporations and/or individuals claiming the credit.

Potential Performance Measures - A listing of potential measures that might be used to evaluate each of the income tax credits.

The reported information was obtained from a variety of sources. The JLBC Staff reviewed the statutes establishing each of the credits, as well as the tax forms and instructions used by businesses and individuals to claim the credits.

The JLBC Staff also reviewed summaries and minutes of committee and subcommittee hearings that were held prior to adoption of the credits. Various agencies were contacted, including DOR and the Arizona Commerce Authority.

HO:kp
Attachment
xc: Reed Spangler, Senior Policy Advisor, Senate
John Fetherston, Policy Advisor, Senate
Bill Ritz, Senate Finance Committee Analyst
Lorenzo Romero, Director of Fiscal Policy, House
Mark Bogart, Senior Economist/Policy Advisor, House
Jeanine Jones, House Ways and Means Committee Analyst

RESEARCH AND DEVELOPMENT TAX CREDIT

Research and Development Tax Credit

Summary

- The cost of the *nonrefundable* corporate credit was $80.2 million in tax year (TY) 2011, the last year for which data is available. The cost of this credit has grown significantly since TY 2009, when it was $32.5 million.
- The cost of the *nonrefundable* individual credit was $6.8 million in TY 2011.
- Since the inception of the *refundable* credit program in 2010, the annual credit authorization cap of $5 million has been reached each year.
- The corporate credit had a limited carry forward of $453 million and an unlimited carry forward of $543 million in TY 2011. Corporations may have insufficient tax liability, however, to ever claim most of the carry forward credits.
- The individual credit had a limited carry forward of $0.2 million and an unlimited carry forward of $12.0 million in TY 2011.
- A total of 711 corporations and 938 individuals claimed the credit between 1993 and 2011.

Statute

A.R.S. § 43-1168 (Corporate)
A.R.S. § 43-1074.01 (Individual)

Description

The Research and Development (R&D) credit is a corporate and individual income tax credit for increased research activities conducted in this state, including research conducted at a state university and funded by the taxpayer. The current R&D program provides both nonrefundable and refundable tax credits. The nonrefundable credit program is administered by the Department of Revenue (DOR) whereas the refundable program is administered by the Arizona Commerce Authority (ACA).

All of the state's R&D credits are calculated based on definitions under the federal R&D credit program, except that the qualified research must be conducted in Arizona. Qualified research under the federal credit program refers to research undertaken for the purpose of discovering information that is technological in nature and the application of which must be intended for use in developing a new or improved business component (such as an invention or production process). In addition, the research activities must be elements of a process of experimentation relating to a new or improved function, performance, reliability, or quality.

There are 2 categories of research and development expenditures that are eligible for the R&D credit: basic research payments and qualified research expenses. Under the federal definition, *basic research payments* refer to the amounts a taxpayer paid in cash, under a written contract, to a qualified university, scientific research organization, or grant organization. *Qualified research expenses* refer to employee wages, cost of supplies, rental or lease costs of computers, and contract expenses paid to nonemployees (contractors). The R&D credit can only be claimed for research payments and expenses above a stipulated *base amount*, which is determined based on the ratio of a company's qualified research expenses to its gross receipts during a certain base period. For this reason, the R&D credit is calculated based on the amount of payments and expenses in excess of the base amount (hereafter referred to as "excess research expenditures").

The state R&D credit is calculated as a percentage of a company's excess research expenditures. If the excess amount is $2.5 million or less, the credit is 24% of this amount, up to a maximum of $600,000. For excess expenditures greater than $2.5 million, the credit is equal to $600,000 plus 15% of the amount exceeding $2.5 million.

Nonrefundable R&D Program
The nonrefundable credit program, which is administered by DOR, consists of a regular R&D credit and an additional R&D credit for university research. Each of the 2 nonrefundable credits is described in more detail below.

Regular R&D Credit
The original ("regular") nonrefundable R&D program was enacted in 1992 for corporations and in 1999 for individuals. As discussed in more detail in the *History and Rationale* section below, the Legislature has modified the credit program several times since the original enactment.

The regular R&D credit can be carried forward for up to 15 years. However, credit carryovers from years prior to 2003 are limited. The amount carried forward from these years is the lesser of the taxpayer's liability or $500,000 minus the new credit created in the current year. Credit carryovers from 2003 and subsequent years are not limited by statute. However, in practice, carry forwards from these years are still limited in the sense that these amounts can never exceed the taxpayer's liability. For a more detailed discussion on credit carry forwards, see *Revenue Impact* section below.

Additional R&D Credit for University Research
The university R&D credit, which was enacted in 2011, is a nonrefundable individual and corporate income tax credit available to taxpayers that make basic research payments to a university under the jurisdiction of the Arizona Board of Regents (Arizona State University, University of Arizona, and Northern Arizona University). The university R&D credit is 10% of the amount of basic research payments above the base amount paid to one or more of the aforementioned state universities. Since the university R&D credit is in addition to the regular R&D credit, some taxpayers can receive credits of up to 34% of their qualified basic research payments.

Taxpayers cannot claim the university R&D credit unless they first request and receive approval from DOR. The credit, which became effective January 1, 2012, is subject to an aggregate cap of $10 million per calendar year. DOR approves the credit applications on a first come, first served basis. Unused university R&D credits can be carried forward for up to 5 years.

Refundable R&D Program
The refundable R&D credit, which is administered by ACA, was enacted during the 2010 regular session. This credit is only available to taxpayers that employ fewer than 150 full-time employees. Other requirements to qualify for the refundable credit are the same as under the nonrefundable R&D program. The refundable credit is limited to 75% of the amount by which the tax filer's credit exceeds his tax liability in the taxable year. The remaining 25% of the excess credit must be forfeited by the taxpayer.

To claim the refundable R&D credit, the taxpayer must first be approved by ACA. The taxpayer submits an application to ACA and upon approval receives a Certificate of Qualification. ACA is authorized to approve refunds of up to $5 million per calendar year. The certificate is issued on a first come, first served basis. The refundable credit has been in effect since TY 2010.

History and Rationale

The corporate R&D credit was first passed and signed into law in July 1992 (Laws 1992, Chapter 296) and became effective in TY 1993. The credit has been amended several times. The initial statute had a sunset provision; the credit is now permanent. The credit was capped as described above through TY 2002. Effective January 1, 2003, the credit is not limited. Laws 1999, 1st Special Session, Chapter 5 extended the credit to individual income tax filers (shareholders of S corporations, partners of partnerships, and sole proprietors), beginning in TY 2001.

Laws 2008, Chapter 290 increased the amounts of the excess research expenditures that can be claimed under the R&D program. For excess amounts of up to $2.5 million in TY 2010, the credit percentage was increased from 20% to 22%. For excess amounts greater than $2.5 million in TY 2010, the credit percentage was raised from 11% to 13%. As shown in the table below, the credit percentages are further increased to 24% and 15%, respectively, in the period from TY 2011 through TY 2017. Beginning in TY 2018, the credit calculation reverts to the credit percentages used prior to TY 2010.

Tax Year	If Expenses ≤ $2.5 million, Credit is:	If Expenses > $2.5 million, Credit is:
2010	22% of amount up to $550,000	$550,000 plus 13% of amount exceeding $2.5 million.
2011 - 2017	24% of amount up to $600,000	$600,000 plus 15% of amount exceeding $2.5 million.
2018 -	20% of amount up to $500,000	$500,000 plus 11% of amount exceeding $2.5 million.

Laws 2010, Chapter 289 prohibits a taxpayer from claiming both the R&D credit and the solar liquid fuel tax credit (A.R.S. § 43-1085.01 and § 43-1164.02) for the same expenses. Laws 2010, Chapter 312 created the refundable R&D program administered by ACA. Laws 2011, 2nd Special Session, Chapter 1 established the additional R&D credit for university research.

According to historical information, the purpose and rationale for the initial R&D credit program was to create a business climate in Arizona that would be competitive with other states seeking to attract companies emphasizing research and technology. During the 1992 session, the Ways and Means Committee was told that 16 states had similar legislation. According to a 2013 report prepared by the Texas Legislative Budget Board, Arizona is one of 43 states in the nation that currently offer some type of R&D tax incentive.

Revenue Impact

Corporate

Based on preliminary data provided by the Department of Revenue (DOR), 279 corporations claimed the credit in 2011, the last year for which data is available. These corporations claimed a total of $1.0 billion in qualified research and development expenses and payments on their tax credit forms. The regular nonrefundable R&D program reduced the corporate income tax by $(80.2) million in TY 2011. The first-year impact (TY 2012) of the nonrefundable university R&D credit will not become available until the fall of 2014.

The table below provides a history of the corporate R&D credit in terms of claimants, eligible research and development expenses, credit usage, and carry-forward amounts.

Tax Year	# of Claimants	Total Expenses & Payments	New Credit Available	Total Credit Available	Credit Used	Limited Carry Forward	Unlimited Carry Forward
1993	23	$5,558,699	$617,710	$617,710	$403,663	$494,032	N/A
1994	89	$156,284,525	$5,206,158	$5,445,055	$3,062,056	$26,466,029	N/A
1995	85	$161,933,770	$8,595,822	$9,559,521	$6,149,046	$49,679,229	N/A
1996	111	$332,189,906	$13,461,458	$15,758,856	$9,881,387	$100,481,239	N/A
1997	133	$275,026,626	$17,352,202	$19,483,124	$11,089,063	$82,117,051	N/A
1998	129	$482,316,974	$17,873,965	$19,369,112	$8,963,229	$191,337,518	N/A
1999	140	$649,466,689	$18,989,822	$20,552,034	$10,457,350	$295,172,070	N/A
2000	129	$954,184,305	$22,933,366	$24,867,021	$9,513,397	$426,481,296	N/A
2001	154	$599,004,606	$39,087,332	$43,870,994	$11,172,212	$483,872,649	N/A
2002	170	$510,112,435	$40,018,461	$54,206,980	$12,499,682	$530,624,724	N/A
2003	191	$588,511,869	$76,480,879	$95,227,649	$32,608,554	$542,080,994	$46,014,944
2004	218	$731,936,580	$94,439,795	$133,837,851	$37,403,178	$539,162,954	$104,227,142
2005	223	$825,465,642	$105,691,046	$218,391,034	$49,146,730	$529,640,287	$165,416,171
2006	245	$905,649,642	$115,576,916	$276,497,559	$57,097,482	$513,835,703	$224,264,399
2007	248	$858,169,602	$110,229,628	$288,104,929	$58,222,680	$502,627,623	$275,034,280
2008	251	$796,050,711	$101,738,141	$377,203,471	$49,697,682	$495,434,024	$323,894,271
2009	253	$867,775,396	$110,167,461	$425,114,684	$32,544,386	$489,099,366	$389,660,226
2010	287	$940,495,241	$139,534,152	$528,025,491	$58,964,328	$450,699,610	$459,892,229
2011	279	$1,007,974,852	$167,120,610	$631,263,275	$80,239,506	$453,423,860	$543,307,643

# of Claimants – the number of taxpayers that claimed the credit in each taxable year.
Total Expenses and Payments – eligible research and development expenses reported by taxpayers on their tax credit form.
New Credit Available – the amount of new tax credits identified in each taxable year.
Total Credit Available– the total tax credits identified in each taxable year, including any new credits and any credits carried over from a previous taxable year and identified in that year.
Credit Used – the amount of credits used to offset tax liability in each taxable year.
Limited Carry Forward – any carry forward established prior to 2003 is limited in that the new credit established plus the carry forward cannot exceed $500,000 per tax year. For example, if the new credit identified in 2002 is $300,000, the carry forward that year is limited to $200,000 since this would bring the total credit to the maximum amount of $500,000.
Unlimited Carry Forward – beginning with tax year 2003, the carry forward amount is not limited in future years.

As noted above, the refundable R&D credit is available to companies with fewer than 150 full-time employees. The refund is up to 75% of the excess credit (amount by which the credit exceeds the tax liability). The remaining 25% of the excess credit must be forfeited by the taxpayer. The table below, which was provided by DOR, shows the amount of refunds approved by ACA since the inception of the program in 2010. ACA is authorized to approve up to $5.0 million in refundable credits each calendar year.

Year	# of Refunds Approved	Total Credit	Excess Credit	Forfeited Credit	Refund
2010	52	$7,591,084	$7,051,305	$1,762,826	$5,000,002
2011	75	$7,039,799	$6,668,494	$1,667,124	$4,999,994
2012	48	$7,185,058	$6,992,721	$1,748,180	$4,999,995

As indicated in the table above, ACA has essentially approved the maximum amount of $5.0 million in refundable credits each year. By April 1, 2013, ACA had already authorized the maximum allowable amount of $5.0 million for calendar year 2013.

R&D Expenses and Payments

According to DOR, 711 corporations used the R&D credit from TY 1993 through TY 2011. During this 19-year period, these companies claimed a total of $11.6 billion in R&D expenses and payments for an average of $16.4 million per company. At the height of the high-tech bubble in 2000, corporations claimed a total of $954 million in qualified R&D spending, a level that was not exceeded until 2011.

Credit Available and Credit Used

Whenever a company files for the R&D credit, it is required to calculate the amount of the *new credit available* for the current year. This is a simple calculation based on the amount of excess research expenditures. For example, if this amount is $2,000,000 in TY 2013, the new credit available for TY 2013 is 24% of $2,000,000, or $480,000.

Total credit available is the sum of new credit available and any unused credits carried over from prior years. As noted previously, the amount of carry forward depends on when the credit was created (before 2003, or after) and the amount of tax liability and new credit in the current year. For example, for a company with a new credit of $400,000 and a tax liability of $750,000, the pre-2003 carry forward amount would be limited to $100,000 (the lesser of $750,000 or $500,000 minus $400,000) whereas the post-2002 carryover could be no greater than $350,000 ($750,000 minus $400,000). In this example, total credit available is $850,000, or the new credit plus the sum of the pre-2003 and post-2002 carryovers ($400,000 plus $100,000 plus $350,000).

Credit used is the amount of a business' total available credit that is actually used to offset its tax liability in the current tax year. This amount is not only constrained by the taxpayer's liability but also by the extent to which the company is claiming other nonrefundable credits. For example, if the total available credit for all the company's nonrefundable credits is $1,400,000 ($850,000 of the nonrefundable R&D credit plus $550,000 in other nonrefundable credits), it may choose to use $350,000 of this amount for the R&D credit and $400,000 for the other nonrefundable credits. Regardless of how this company chooses to allocate its available credits, the total amount cannot exceed the company's tax liability of $750,000. In this example, the amount of the R&D credit used is $350,000.

The total amount of R&D credits used to reduce corporate tax liability in TY 2003 was $32.6 million, which was a 160% increase from TY 2002. The TY 2003 surge in credit use coincided with the removal of the credit cap that year. By way of comparison, qualified R&D spending increased 15% in TY 2003. The next large increase in credit use occurred in TY 2011 when the credit percentages were increased to their current levels. Based on preliminary data, R&D credits reduced corporate tax liability by $(80.2) million in TY 2011, a 36% increase over the prior tax year. Qualified R&D spending increased by 7% from TY 2010 to TY 2011.

Carry Forward

As noted previously, any corporation that files for nonrefundable R&D credits is required to make a separate calculation of credit carryovers before and after December 31, 2002. This is the reason the table above distinguishes between limited and unlimited carry forward. (Pre-2003 and post-2002 carryovers are referred to as, respectively, limited and unlimited carry forward.) Limited and unlimited credit carryovers were $453 million and $543 million, respectively, in TY 2011.

There are a number of reasons for the large build-up of R&D credit carry forwards. First, unused R&D credits can be carried forward up to 15 years compared to 5 years for most other income tax credits. Second, pre-2003 (or limited) carryovers cannot by statute exceed $500,000 per year. This amount is further reduced if new credit is created in the current year. (Under the example used previously, the new credit of $400,000 reduced the pre-2003 carryover to $100,000.) Third, although post-2002 credit carryovers are not capped by statute, the actual amounts claimed remain limited by businesses' tax liability.

While pre-2003 (or limited) credit carryovers remain high ($453 million in TY 2011), amounts have slowly decreased over time. By contrast, post-2002 (or unlimited) carry forwards have been growing by more than 20% annually. Unlimited credit carryovers were $543 million in TY 2011. Although combined corporate carry forwards totaled almost $1 billion in TY 2011, it is unlikely that the whole amount can be used to reduce tax payments in future years. As noted previously, a corporation's ability to use nonrefundable R&D credits is limited by its tax liability. According to DOR, most companies that use the R&D credit are able to fully offset their tax liability. For example, data provided by DOR shows that only 52 of the 279 corporations that claimed the R&D credit in 2011 had any liability left after using the credit. Additionally, to offset their tax liability, the claimants used less than 50% of the new credit created in 2011. This serves to further increase credit carryover in future years.

Over the life of the R&D program, the amount of new credits created has been on average more than twice the amount of credits used in the same year. This is the main reason for the large build-up of credit carry forwards over the years. This suggests that the higher credit percentages that became effective in 2011 may not only result in larger amounts of new credits in future years but also larger amounts of credit carryovers.

Claimants

The number of corporations claiming the R&D credit increased from 23 in 1993 to 279 in 2011. The largest number of claims was made in 2010 when 287 corporations used the credit to offset tax liability. The table below, which was provided by DOR, shows the number of companies claiming the credit between 1993 and 2011 by the size of the credit used.

Number of Corporations Claiming the Credit Each Year by the Amount of Credit Used

Tax Year	$0 to $50,000	$50,000 to $100,000	$100,000 to $250,000	$250,000 to $500,000	$500,000 to $750,000	$750,000 to $1 million	Over $1 million	# of Claimants
1993	6	15	2	0	0	0	0	23
1994	20	53	15	1	0	0	0	89
1995	16	52	5	11	1	0	0	85
1996	24	57	14	12	4	0	0	111
1997	33	68	14	9	9	0	0	133
1998	45	61	8	10	5	0	0	129
1999	56	56	11	4	13	0	0	140
2000	63	42	7	11	6	0	0	129
2001	78	56	11	2	3	0	4	154
2002	93	57	10	2	5	0	3	170
2003	111	55	10	5	6	1	3	191
2004	117	72	15	5	5	1	3	218
2005	99	87	15	9	8	1	4	223
2006	95	99	14	12	12	5	8	245
2007	100	97	19	10	10	4	8	248
2008	122	87	16	15	4	3	4	251
2009	122	87	24	8	2	5	5	253
2010	144	93	21	13	6	4	6	287
2011	136	89	22	13	5	2	12	279

Most companies tend to claim relatively modest amounts. Slightly less than half of the claimants use $50,000 or less of the credit. Ninety percent of the corporations that claimed the credit between 1993 and 2011 used $250,000 or less. Preliminary data indicates that the number of companies using more than $1 million in credits increased from 6 to 12 in 2011.

As noted previously, 711 corporations have claimed the credit since it was established in 1993. About half of the companies (361 out of 711) filed for the credit in 3 taxable years or less. As shown in the table below, only one corporation used the R&D credit in each year between 1993 and 2011.

Number of Corporations Claiming the Credit by the Total Number of Tax Years Claimed

# of years claimed	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
# of corporations	173	111	77	65	48	51	37	30	31	18	16	14	5	6	8	10	4	6	1

Individual

As noted previously, the nonrefundable R&D credit became available to individual taxpayers for the first time in TY 2001. Since this time, the cost of the individual credit has risen from $0.5 million in 2001 to $6.8 million in 2011. According to DOR, a total of 938 individual taxpayers have claimed the credit since 2001. The impact of the individual income tax credit by year is summarized in the table below.

Tax Year	# of Claims	New Credit Available	Total Credit Available	Credit Used	Limited Carry Forward	Unlimited Carry Forward
2001	60	$943,502	$943,503	$508,516	$434,986	N/A
2002	107	$1,582,874	$1,988,911	$817,296	$1,171,615	N/A
2003	136	$2,851,821	$4,020,038	$1,191,528	$1,143,176	$1,685,334
2004	166	$3,144,479	$5,883,630	$1,654,410	$1,096,963	$3,132,257
2005	200	$4,246,231	$8,450,439	$3,353,682	$854,668	$4,242,089
2006	274	$5,011,315	$9,890,210	$4,192,874	$757,727	$4,939,609
2007	272	$4,316,725	$9,277,258	$3,493,380	$530,475	$5,253,403
2008	333	$6,186,939	$11,706,623	$4,831,871	$427,187	$6,447,565
2009	336	$5,755,270	$12,314,616	$4,592,244	$382,810	$7,339,562
2010	466	$9,045,469	$16,692,997	$6,521,146	$280,793	$9,607,303
2011	503	$9,672,962	$19,450,219	$6,833,284	$180,890	$11,971,537

# of Claimants – the number of taxpayers that claimed the credit in each taxable year.
New Credit Available – the amount of new tax credits identified in each taxable year.
Total Credit Available– the total tax credits identified in each taxable year, including any new credits and any credits carried over from a previous taxable year and identified in that year.
Credit Used – the amount of credits used to offset tax liability in each taxable year.
Limited Carry Forward – any carry forward established prior to 2003 is limited in that the new credit established plus the carry forward cannot exceed $500,000 per tax year. For example, if the new credit identified in 2002 is $300,000, the carry forward that year is limited to $200,000 since this would bring the total credit to the maximum amount of $500,000.
Unlimited Carry Forward – beginning with tax year 2003, the carry forward amount is not limited in future years.

Economic Benefits

Measurable Economic Development
New Investments
Creation of New Jobs or Retention of Existing Jobs

According to economic theory, research produces "positive externalities." This means that the benefits of research accrue not only to the companies that bear the cost of discovering or producing new technology but also to those that are "external" to such R&D spending. Due to this "spillover effect" of benefits,

companies may be reluctant to engage in R&D. To correct this type of "market failure," economists may prescribe an R&D tax credit to lower the effective cost of research.

State policymakers also enact R&D credits as an economic development tool intended to entice businesses to locate or expand facilities and employment within their borders. States' success in achieving this objective is not clear. To date, most empirical evaluations of R&D incentives have been for the federal research credit. These empirical studies suggest that the federal R&D credit has induced companies to engage in more research and development than they would have otherwise.

A relatively small number of academic studies of state R&D credits have been conducted to date and the results of these studies are mixed. For example, a 2005 study from the University of Illinois showed that state R&D incentives generate an additional $75 to $118 of additional R&D spending per capita. Another University of Illinois study conducted in 2008 concluded that the presence of a state R&D program increases the number of high technology establishments in a state by 17 per 1 million of population and increases the proportion of high technology businesses in a state by 0.07%.

While the studies from the University of Illinois suggest that state R&D credits can result in increased R&D spending, other studies have reached different conclusions. For example, a 2007 study by the San Francisco Federal Reserve Bank concluded that state R&D credits do not increase the total level of research spending but merely serve to shift the location of research spending from one state to another. In other words, a company is likely to shift the research spending it was already performing in one state to another state with a more generous tax incentive. For this reason, the study referred to state R&D credits as a "zero-sum game." The result of another study conducted at the University of Southern Mississippi in 2010 suggests that the state R&D credit has been effective in terms of expanding research among already existing companies in the state but not for encouraging startups of new high technology firms.

The impact of the R&D credit on economic development, new investment, and the creation or retention of jobs in Arizona has not been formally evaluated. Such a study would require access to individual company-level data on R&D tax credit claims over many years. The state's confidentiality statute precludes the release of such detailed information. Even if such data were available, however, it would be difficult to measure the extent to which the growth in employment and income in the state would be directly attributable to in-state R&D spending as opposed to "technological spillover" from other states.

According to the National Science Foundation (NSF), R&D expenditures in Arizona totaled $5.5 billion in 2010, the last year for which such data has been released. The data was compiled from NSF's surveys of the organizations that perform the bulk of research and development (businesses, government, universities, and nonprofit organizations). Arizona's share of R&D spending among all states was 1.46%. NSF's 2010 report showed that Arizona ranked 21st in the nation in terms of total R&D spending and 24th in terms of R&D intensity (R&D spending as a percent of the state gross domestic product). Annual NSF reports from 2003 to 2010 suggest that Arizona's share of total R&D spending in the nation has marginally improved over this time (from 1.29% in 2003 to 1.46% in 2010). It is not known, however, to what extent, if any, this improvement was attributable to the state's R&D program.

A recent report released by DOR indicates that the primary beneficiaries of the increased R&D credit percentages under Laws 2008, Chapter 290 are a small number of corporations. Most corporations that claimed the credit under existing law (Laws 2008, Chapter 290) would have received the same amount of credit under the lower credit percentages provided by prior law. This suggests that the current state R&D program (with its higher credit percentages) may primarily serve to keep a relative small number of large (and often multi-state) corporations from moving their current R&D operations from Arizona to other states.

Complexity

The R&D credit is unusually complex in its description, calculation and application. Qualified expenses are defined by federal regulations and not by Arizona law. Even if the R&D expenses have already been calculated for the taxpayers' federal returns, the record-keeping requirements to track expense carry

forwards over 15 years may impose a burden. The carry forward provisions also make this credit difficult to administer and verify.

Potential Performance Measures

Performance measures could include:

1. Total research dollars spent in Arizona each year.

2. Number of persons employed in research activities.

3. Total research payrolls.

4. The introduction of new products.

Prior Review

The Research and Development tax credit was last reviewed by the JLITCRC in 2008. The Committee recommended that the credit be placed back on the review schedule and that performance measures be enhanced.