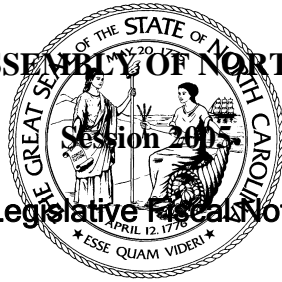


GENERAL ASSEMBLY OF NORTH CAROLINA



Legislative Fiscal Note

**BILL NUMBER:** Senate Bill 1692 (Second Edition)

**SHORT TITLE:** Sales Tax on R&D Equipment.

**SPONSOR(S):** Senator Hoyle

<b>FISCAL IMPACT (millions)</b>					
	Yes (x)	No ( )	No Estimate Available ( )		
	<u>FY 2006-07</u>	<u>FY 2007-08</u>	<u>FY 2008-09</u>	<u>FY 2009-10</u>	<u>FY 2010-11</u>
<b>REVENUES:</b>					
State	(4.1)	(7.9)	(8.4)	(9.0)	(9.7)
Local	(2.3)	(4.9)	(5.3)	(5.6)	(6.0)
<b>POSITIONS</b>					
(cumulative):					
<b>PRINCIPAL DEPARTMENT(S) &amp; PROGRAM(S) AFFECTED:</b> North Carolina Department of Revenue.					
<b>EFFECTIVE DATE:</b> January 1, 2007.					

**BILL SUMMARY:** Under current law the purchase of mill machinery, including some research and development equipment, is taxed at a rate of 1%, with an \$80.00 cap per item. These items are taxed under the new 5F privilege tax. Research and development equipment purchases made by private sector organizations that are not involved in manufacturing are taxed at the full, general rate of 7.0% (6.5% after June 30, 2007). Nonprofit organizations involved in research and development, such as research hospitals and universities, are taxed at the full 7.0% rate of tax, but can apply for an annual or semi-annual sales tax refund. The legislation changes these statutes by exempting all equipment purchased by qualifying research and development companies from the sales tax, but applies the 5F privilege tax of 1% tax, with an \$80.00 cap per item, to those purchases. Supplies used in research and development would continue to be taxable at the full rate. In order to qualify for the special tax treatment the company and the equipment purchased must met the following four part test:

1. The item is purchased by a research and development company in the physical, engineering, and life sciences, and is included in Industry Sector 541710 of NAICS.
2. The item is equipment, a part, or accessory attached to the equipment.
3. The item would be mill machinery under G.S. 105-187.51 if it were purchased by a manufacturing industry, or plant that conducts research and also manufactures.

4. The item is depreciable under the Code.

**ASSUMPTIONS AND METHODOLOGY:** Because of limited specific data on R&D purchases by qualifying organizations, two methods are used to develop a fiscal estimate.

Employment Based Estimate: In 2005 the North Carolina Biosciences Organization (NCBio), in conjunction with Fiscal Research, surveyed selected members of their organization concerning their level of employment and their expenditures on research and development equipment. The results of the survey indicate that these businesses spent an average of \$15,065 per employee on potentially qualifying equipment in 2004. Data from the Employment Securities Commission indicates that in 2005 the number of individuals employed by firms whose primary NAICS code is 541710 was 12,885. Multiplying the estimated number of employees in qualifying businesses by the average expenditure per employee (as reported in the survey), suggest total potential qualifying purchases in North Carolina of \$194.1 million in 2005.

Data from the National Science Foundation indicates that, on a national basis, total industry related research and development expenditures have grown an average of 7.08% per year. Using this number as a proxy for future North Carolina growth suggests the following expenditures on qualifying purchases:

<b>Year</b>	<b>R &amp; D Equipment Expenditures</b>
<b>2005</b>	194,112,525
<b>2006</b>	207,855,692
<b>2007</b>	222,571,875
<b>2008</b>	238,329,963
<b>2009</b>	255,203,725
<b>2010</b>	273,272,149
<b>2011</b>	292,619,817

Adjusting for fiscal years, and applying the appropriate rate of tax, suggests the following potential annual fiscal impact:

<b>Fiscal Year</b>	<b>Equipment Expenditures</b>	<b>State</b>	<b>Local</b>
<b>2005-06</b>	200,984,108	9,044,285	5,024,603
<b>2006-07</b>	215,213,783	9,684,620	5,380,345
<b>2007-08</b>	230,450,919	9,218,037	5,761,273
<b>2008-09</b>	246,766,844	9,870,674	6,169,171
<b>2009-10</b>	264,237,937	10,569,517	6,605,948
<b>2010-11</b>	282,945,983	11,317,839	7,073,650

National R&D Expenditure Based Estimate: The National Science Foundation reports the following research and development expenses for all research and development in North Carolina:

<b>Year</b>	<b>R &amp; D Total Expenses by Industry</b>
<b>1997</b>	3,478,000,000
<b>1998</b>	3,350,000,000
<b>1999</b>	3,934,000,000
<b>2000</b>	3,641,000,000
<b>Average</b>	3,600,750,000

Using the average National Science Foundation reported growth in research and development expenditures (7.08% per year over six years) as a proxy for North Carolina increases in research and development expenditures suggests the following total R & D expenditures in the state:

<b>Year</b>	<b>R &amp; D total expenses by Industry</b>
<b>2005</b>	5,125,809,852
<b>2006</b>	5,488,717,190
<b>2007</b>	5,877,318,367
<b>2008</b>	6,293,432,507
<b>2009</b>	6,739,007,529
<b>2010</b>	7,216,129,262
<b>2011</b>	7,727,031,214

There is very little data on how much of total research and development expenses are related to equipment. PAREXEL's Pharmaceutical R&D Statistical Sourcebook 2004-05 indicates that Canadian pharmaceutical manufacturers expend 3.4% of their research and development dollars on capital equipment. Using this number as a proxy for North Carolina equipment expenditures, and applying the appropriate tax rates, suggests the following revenue losses for the State and local governments:

<b>Fiscal Year</b>	<b>Equipment Expenditures</b>	<b>State Tax</b>	<b>Local Tax</b>
<b>2005-06</b>	180,446,960	8,120,113	4,511,174
<b>2006-07</b>	193,222,604	8,695,017	4,830,565
<b>2007-08</b>	206,902,765	8,276,111	5,172,569
<b>2008-09</b>	221,551,481	8,862,059	5,538,787
<b>2009-10</b>	237,237,325	9,489,493	5,930,933
<b>2010-11</b>	254,033,728	10,161,349	6,350,843

These numbers assume the items are exempted from tax. However, the legislation exempts them from sales tax, but applies a 1% tax, with an \$80 per item tax. No data is available to determine what proportion of the above numbers will actually be returned to the General Fund under the new tax. For purposes of this fiscal note it is assumed that 10% of the total is returned to the general fund under the new tax.

An average of the estimates developed under both simulations, once adjusted for the new tax revenue, is used as the fiscal impact.

**SOURCES OF DATA:** Internal Revenue Service, National Science Foundation, PAREXEL's Pharmaceutical R&D Statistical Sourcebook 2004/05, "Patentees Research and Development Expenditure in Canada", Journal of Pharmacy and Pharmaceutical Science, 2002.

**TECHNICAL CONSIDERATIONS:** None

**FISCAL RESEARCH DIVISION:** (919) 733-4910

**PREPARED BY:** Linda Struyk Millsaps

**APPROVED BY:** Lynn Muchmore, Director  
Fiscal Research Division



**DATE:** May 31, 2006

**Signed Copy Located in the NCGA Principal Clerk's Offices**