

NORTH CAROLINA CIGARETTE EXCISE TAX INCREASES
ESTIMATED NEW REVENUES, COST SAVINGS, AND OTHER BENEFITS & EFFECTS

Current State Cigarette Tax Rate: \$0.35 per pack

Nationwide State Average: \$0.918 per pack (RI at \$2.46 is highest)

Smoking-Caused Costs in State Per Pack Sold: \$6.74

North Carolina Rank Among All States: 44th (1 is highest)

Tax Increase Per Pack	Additional New State Cig Tax Revenue (Millions/Yr)	Fewer State Packs Sold/Yr (Millions)	Youth Smoker Decline	Fewer Future Youth Smokers	Related Lifetime Health Savings (Millions)	Adult Smoker Decline	Fewer Adult Smokers	Related Lifetime Health Savings (Millions)	Youth Future Smoking Deaths Avoided	Adult Smoking Caused Deaths Avoided	5-Year Smoking Harmed Births Avoided	5-Year Heart & Stroke Savings (Millions)	5-Year Smoking-Births Savings (Millions)	Overall Long-Term Health Savings (Millions)
0.10	\$48.0	-22.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
0.15	\$72.5	-28.8	-2.5%	16,200	\$259.2	-0.6%	8,600	\$72.9	5,100	2,200	2,100	\$4.0	\$3.0	\$332.1
0.20	\$96.3	-35.6	-3.3%	21,700	\$347.2	-0.8%	11,500	\$97.5	6,900	3,000	2,810	\$5.3	\$4.0	\$444.7
0.25	\$119.5	-42.3	-4.2%	27,100	\$433.6	-1.0%	14,300	\$121.3	8,600	3,700	3,510	\$6.6	\$5.0	\$554.9
0.30	\$142.0	-49.0	-5.0%	32,500	\$520.0	-1.2%	17,200	\$145.9	10,400	4,500	4,210	\$7.9	\$6.0	\$665.9
0.35	\$163.9	-55.7	-5.9%	37,900	\$606.4	-1.4%	20,100	\$170.4	12,100	5,300	4,920	\$9.2	\$7.0	\$776.8
0.40	\$185.0	-62.4	-6.7%	43,400	\$694.4	-1.5%	23,000	\$195.0	13,800	6,000	5,620	\$10.5	\$8.0	\$889.4
0.45	\$205.5	-69.2	-7.5%	48,800	\$780.8	-1.7%	25,800	\$218.8	15,600	6,800	6,320	\$11.9	\$9.0	\$999.6
0.50	\$225.4	-75.9	-8.4%	54,200	\$867.2	-1.9%	28,700	\$243.4	17,300	7,600	7,020	\$13.2	\$10.0	\$1,110.6
0.55	\$244.5	-82.6	-9.2%	59,600	\$953.6	-2.1%	31,600	\$268.0	19,000	8,300	7,730	\$14.5	\$11.0	\$1,221.6
0.60	\$263.0	-89.3	-10.0%	65,100	\$1,041.6	-2.3%	34,500	\$292.6	20,800	9,100	8,430	\$15.8	\$12.0	\$1,334.2
0.65	\$280.8	-96.0	-10.9%	70,500	\$1,128.0	-2.5%	37,400	\$317.2	22,500	9,900	9,130	\$17.1	\$13.0	\$1,445.2
0.70	\$297.9	-102.7	-11.7%	75,900	\$1,214.4	-2.7%	40,200	\$340.9	24,200	10,600	9,840	\$18.4	\$14.0	\$1,555.3
0.75	\$314.4	-109.5	-12.6%	81,400	\$1,302.4	-2.9%	43,100	\$365.5	26,000	11,400	10,540	\$19.8	\$15.0	\$1,667.9
0.80	\$330.2	-116.2	-13.4%	86,800	\$1,388.8	-3.1%	46,000	\$390.1	27,700	12,100	11,240	\$21.1	\$16.0	\$1,778.9
0.85	\$345.3	-122.9	-14.2%	92,200	\$1,475.2	-3.3%	48,900	\$414.7	29,500	12,900	11,940	\$22.4	\$17.1	\$1,889.9
0.90	\$359.8	-129.6	-15.1%	97,600	\$1,561.6	-3.5%	51,700	\$438.4	31,200	13,700	12,650	\$23.7	\$18.1	\$2,000.0
0.95	\$373.5	-136.3	-15.9%	103,100	\$1,649.6	-3.7%	54,600	\$463.0	32,900	14,400	13,350	\$25.0	\$19.1	\$2,112.6
1.00	\$386.6	-143.0	-16.7%	108,500	\$1,736.0	-3.9%	57,500	\$487.6	34,700	15,200	14,050	\$26.3	\$20.1	\$2,223.6

NS = Not Significant. Cigarette tax increases boost state cigarette tax revenues, despite reducing smoking, because the increased tax per pack brings in more new revenue than is lost from the prompted declines in pack sales caused by consumption declines (and by any increased smoker tax avoidance). Parallel increases to state taxes on other tobacco products would provide more new state revenue -- while also further reducing tobacco use and its related harms and costs in the State. These projections are fiscally conservative because they include a generous adjustment for lost state pack sales (and tax revenues) from new tax avoidance efforts after the tax increase by continuing in-state smokers. [See, e.g., Farelly, M. et al., *State Cigarette Excise Taxes: Implications for Revenue and Tax Evasion*, http://www.rti.org/pubs/8742_Excise_Taxes_FR_5-03.pdf, RTI International, 2003.] The projections are based on research findings that a 10% cigarette price increase reduces youth smoking rates by 6.5% or more, adult rates by 2%, and total consumption by 4%. [See, e.g., Chaloupka, F. J., "Macro-Social Influences: The Effects of Prices and Tobacco Control Policies on the Demand for Tobacco Products," *Nicotine & Tobacco Research*, 2000, and other price studies at <http://tigger.uic.edu/~fjc> and www.uic.edu/orgs/impactteen.] But these elasticity findings are adjusted downward to be conservative and to account for some smokers avoiding the price increases through various tax evasion strategies. All projected savings are in 2002 dollars, following the same methodology the U.S. Centers for Disease Control and Prevention (CDC) has used to update its data on state smoking-caused costs. [See CDC, *Sustaining State Programs for Tobacco Control: Data Highlights 2004*, <http://www.cdc.gov/tobacco/datahighlights/index.htm>.] 19 states have cigarette tax rates of \$1.00 per pack or more (RI at \$2.46 and NJ at \$2.40 are the highest). Chicago (\$3.66), New York City (\$3.00), and Anchorage (\$2.90) have the highest combined state plus local cigarette tax rates. For more information, see <http://tobaccofreekids.org/reports/prices>.

Campaign for Tobacco-Free Kids, www.tobaccofreekids.org, 7.1.05/ Eric Lindblom, February 24, 2006

To account for possible additional declines in state cigarette sales and tax revenues from other, unrelated factors -- such as state tobacco prevention investments, other public and private tobacco prevention efforts, federal tobacco tax increases, cigarette company or retailer increases to cigarette prices, etc. -- these projections assume an ongoing background decline in consumption of 1.5 percent per year.^{*} To be even more conservative, the projected amounts have also been rounded down. Despite all of these revenue-reducing adjustments, the projections still show that non-trivial state cigarette tax increases will both significantly reduce smoking levels and substantially increase state revenues. [See, e.g., TFK factsheet, *Raising State Cigarette Taxes Always Increases State Revenues (and Always Reduces Smoking)*, <http://tobaccofreekids.org/research/factsheets/pdf/0098.pdf>.][†] These projections assume that the tax increase is fully passed on in higher prices and is adjusted for inflation over time. The estimate of the pre-tax-increase starting price per pack in these projections includes all federal and statewide excise and sales taxes but not any purely local taxes (except NY City's \$1.50 per pack cigarette tax is factored into the overall NY State price per pack), and is based on data from Orzechowski & Walker, *Tax Burden on Tobacco*, 2003 [an industry-funded annual report] and USDA Economic Research Service, Tobacco Briefing Room, www.ers.usda.gov/Briefing/tobacco.

The projected adult and youth smoking and smoking-harmed birth declines, and related mortality reductions, are calculated by applying the research findings on the effects of tax and price increases on smoking levels to the number of current adult smokers in each state, the number of smoking-affected births in each state, and the U.S. Centers for Disease Control and Prevention (CDC) estimates of the number of kids alive today in each state who will become adult smokers and die from smoking. [CDC, *Behavioral Risk Factor Surveillance System (BRFSS)*. CDC, "Smoking During Pregnancy -- United States, 1990-2002, Morbidity and Mortality Weekly Report (MMWR) 53(39): 911-15 (October 8, 2004) <http://www.cdc.gov/mmwr/PDF/wk/mm5339.pdf>. CDC, *State Highlights 2004: Sustaining State Programs for Tobacco Control, 2004*, <http://www.cdc.gov/tobacco/datahighlights/index.htm>, and CDC, "Projected Smoking-Related Deaths Among Youth -- United States," *MMWR* 45(44): 971-974, November 11, 1996, www.cdc.gov/mmwr/mmwr_wk.html. See, also, "Annual Smoking-Attributable Mortality, Years of Potential Life Lost, and Economic Costs -- United States 1995-1999," *MMWR*, www.cdc.gov/mmwr/preview/mmwrhtml/mm5114a2.htm, April 11, 2002.]

The projected youth and adult healthcare savings accrue over the lifetimes of kids alive in the state today who quit or don't start because of tax increase and over the lifetimes of those current adult smokers who quit because of the increase. Despite shorter life spans, smokers' total lifetime healthcare costs average \$16,000 higher than nonsmokers (in 2002 dollars); but the savings per each adult quitter are less than \$16,000 because adult smokers have already been significantly harmed by their smoking and have already incurred or locked-in extra, smoking-caused health costs. [Hodgson, T.A., "Cigarette Smoking and Lifetime Medical Expenditures," *The Millbank Quarterly* 70(1), 1992. See, also, Nusselder, W., et al., "Smoking and the Compression of Morbidity," *Epidemiology & Community Health*, 2000; Warner, K., et al., "Medical Costs of Smoking in the United States: Estimates, Their Validity, and Their Implications," *Tobacco Control* 8(3): 290-300, Autumn 1999.] 5-Year Heart & Stroke Savings projections show the estimated reductions in smoking-caused health expenditures within first five years after the tax increase from reduced smoking-caused heart attacks and strokes, based on Lightwood & Glantz, "Short-Term Economic and Health Benefits of Smoking Cessation -- Myocardial Infarction and Stroke," *Circulation* 96(4), August 19, 1997. These savings will increase considerably in subsequent years. The projected 5-Year Smoking Births Savings accrue from the reductions in smoking-caused birth complications over five years from declines in smoking among pregnant women. [Miller, D. et al., "Birth and First-Year Costs for Mothers and Infants Attributable to Maternal Smoking," *Nicotine & Tobacco Research* 3:25-35, 2001] There are also a range of other short-term savings from the tax-prompted declines in other smoking-caused health problems and other smoking-caused costs. [See, e.g., U.S. Department of the Treasury, *The Economic Costs of Smoking in the U.S. and the Benefits of Comprehensive Tobacco Legislation*, 1998.] Because of research and data limitations, it is not yet possible to provide reasonable estimates of the smoking-caused cost reductions in each year following a cigarette tax increase. Some smoking-caused healthcare cost savings from a cigarette tax increase will be relatively small initially but will grow quickly. The listed 5-Year savings from fewer smoking-caused heart attacks and strokes and from fewer smoking-affected pregnancies show just some of the many substantial short-term savings from the smoking reductions prompted by a tax increase.

Projections may change based on the availability of new data or new research findings or on other refinements to the underlying models and formulas. For more information, see <http://tobaccofreekids.org/research/factsheets/index.php?CategoryID=18> and <http://tobaccofreekids.org/reports/prices>. Please direct questions to Eric Lindblom, Campaign for Tobacco-Free Kids, 202-296-5469 or elindblom@tobaccofreekids.org.

^{*} Cigarette company price cuts, state anti-tax-evasion measures (see <http://tobaccofreekids.org/research/factsheets/pdf/0274.pdf>), and other factors could also work to increase cigarette consumption and/or taxable sales in the state, which would increase state cigarette tax revenues beyond the projected amounts.

[†] Smokers who quit or cut back will also spend some of the money they previously spent on cigarettes to purchase other goods on which sales tax is collected, thereby increasing overall state sales tax revenues.