An Analysis of the Proposed Lease of the Ohio Turnpike
by

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J. Kenneth Blackwell, candidate for governor of Ohio, has proposed leasing the 241-mile Ohio Turnpike over 99 years with the expectation of generating between $4 to $6 billion at the time the lease is signed. The proceeds would be in turn be invested in a set of programs collectively referred to as "Jobs for Ohio Business" or the JOB Fund. [1] The goal of identifying innovative strategies to generate investment capital for Ohio's economically challenged communities is commendable. However, it is also important such proposals be evaluated.

Will the market bear a $4 to $6 Billion Lease?
Will the market bear the $4 to $6 billion asking price? Despite recent comparable turnpike leases in Indiana and Illinois, we believe the answer to be: "No, not without substantial annual toll increases." And even then there is reason to doubt the wisdom of the transaction from the viewpoint of Ohio's highway users and taxpayers. [2] This conclusion is based on an assessment of a variety of estimates of the value of the revenue stream to a prospective lessee.

Based on the Ohio Turnpike Commission's 2004 Financial Statements, we estimate the annual cash flow for the Ohio Turnpike to be $109.4 million per year (Appendix 1).[3] This estimate reflects a net revenue flow after a number of adjustments to the original financial statements. We assume the lessee would not be eligible to receive gas tax payments, depreciate the highway (since the turnpike will not be an asset owned by the lessee), or have debt service expenses. Our net revenue estimate is consistent with the estimate used by the co-author of Blackwell's proposal, Jerome Corsi, who justified the estimated $4 to $6 billion lease payment on an annual cash flow of $100 million.[4]

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[1] The plan is detailed on the Blackwell for Governor website http://www.kenblackwell.com/News/Read.aspx?ID=321 and the book *Rebuilding America*. The proposed uses for the lease proceeds include: Ohio energy development; Ohio Venture Capital Fund; revolving development loan fund; turnpike corridor development; transportation infrastructure; universal broadband access; higher education scholarship fund for engineering, technology, and science students; K-12 science and math program support, and technology-specific worker training.

[2] Privatization of toll roads is addressed in an article entitled "Toll-Road Sales: Paying Up," appearing in the May 8th, 2006 edition of *Barron*'s magazine.

[3] These assumptions are detailed in the notes to Appendix 1 and are comparable to those described in published descriptions of the proposal. http://www.ohioturnpike.org/pdf/2004_report_full.pdf

[4] Corsi was cited by Plain Dealer reporter Sandy Theis as assuming that "the lease-holder would get $100 million annually—before interest, taxes, depreciation, and amortization." Leasing Turnpike: A road to riches? *Plain Dealer*, June 4, 2006, page 1.

The Turnpike lease should be worth less than $1 billion

Figuring out how much the revenues from the Turnpike are worth to a lesser requires calculating how much the returns over the 99-year term of the lease are worth in a lump sum today. Potential leasers will discount revenues that stretch out for nearly a century to establish a current value for the turnpike. We used what economists call the "rate of time preference" as the discount rate. The higher the rate, the more impatient the investor is to earn their money back and the less they are willing to pay for the lease. Therefore, the value of a 99-year lease is higher to investors with lower rates of time preference (we use a 3 percent discount rate for patient investors) than it is to investors that have shorter time horizons (a 5 percent rate is used for more impatient investors).

We generated six estimates of the value of the lease using three models of annual revenue flows over the life of the 99-year lease and by using the two rates of time preference for each model (Appendix 2 and 3).

The first scenario assumes flat revenues of $109.4 million per year over the life of the lease. The model that is closest to the Blackwell proposal is the second. It assumes that the lessee is responsible for paying off the Turnpike Commission's outstanding debt and revenues from tolls and concessions are held constant.[5] The estimated value of the lease with a five percent rate of time preference is $1.469 billion and value with a three percent rate is $2.608 billion. The highest estimated lease values is generated by the third model, were it is assumed that tolls increase by three percent each and every year and the existing Turnpike bonds are repaid out of the general revenue fund and are not counted against the sales value of the lease. In essence this model assumes that the bonds are not paid off and disappear into the fiscal ether. The lease values then range from $4.656 billion to $10.517 billion.[6]

Even our estimated value of $1.5 to $2.6 billion under the second scenario is too high. Absent from both our models and the Blackwell proposal is the cost of rebuilding the turnpike two to three times over the life of the lease. If we use the current $771 million bond debt as a guess for the cost of rebuilding the original 1955-era roadbed, which we have been told is low, a rational lessee will reduce its offer by at least this amount. The prospect of having to rebuild the turnpike in the future should result in a lease offer of under $2 billion; it should be closer to $1 billion.

Can $1 billion be right?

The 2004 the Turnpike Commission's positive cash flow of $109 million is a 2.73 percent return on a $4 billion bond and an infinitesimal 1.82 percent return on a $6 billion bond. On June 1, 2006 risk-less inflation indexed 20-year US Treasury bills were earning 2.49 percent and 30-year US Treasury's were earning 5.20 percent. The return from taking the risk of leasing and managing the Ohio Turnpike has to be higher than these two rates. Obviously, a $4 billion lease is too high given existing Turnpike revenues.

Another way of valuing the present value of the Turnpike's $109 million per year operating surplus is to figure out the value of a corporate bond that returned $109 million annually.

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[5] The 2004 financial statement noted $771 million in outstanding debt principle. The debt service for the outstanding obligations through 2033 totaled $1.2 billion. We assume the proposal will be implemented in 2007 and eliminate payments scheduled for 2005 and 2006.

[6] The proposal allows tolls to increase by a maximum of either three and a half per cent per year or the annual rate of inflation for the previous year. We were conservative by capping the increases at 3 percent.

On June 1 Moody's Aaa corporate bonds were earning 5.94 percent and riskier Baa bonds were returning 6.74 percent. If the lessee's Turnpike debt were treated as the best corporate debt it would be worth $1.835 Billion. If it were treated as Baa debt it would be worth $1.610 billion. This analysis gives us a value for the Turnpike that is between $1.5 and $1.8 billion. These are numbers that are consistent with our present value analysis.

Another way of calculating the impact of the lease on Turnpike users is to estimating how large the annual net income generated by the Turnpike through tolls and concession payments would have to be to justify leases in the $4 billion to $6 billion range. Net income would have to double or triple its current amount: a $4 billion lease would need more than $240 million in annual net income and a $6 billion lease would need to more than $360 million. Remember that all of these estimates assume that the turnpike will not require substantial reconstruction.

How far will the money go in supporting economic development investments?
The lease of the Ohio Turnpike is proposed to generate capital investment moneys that would be deposited in a variety of funds to support economic development programs across Ohio. Based on descriptions of the funds, we assume that the principal from the lease of the turnpike would be preserved and only interest earnings would be spent each year.

Even if the proposed optimistic lease amount of $4 to $6 billion is achieved, the money available to be spent on economic development projects is likely be between $103.4 and $242.4 million per year (Appendix 5). If the market value of the lease is closer to our $2 to $3 billion dollar estimate (which we think is optimistic), then the annual amount of funds for economic development projects would be between $50.9 and $115.0 million, with the most likely revenue stream being at the low end of the estimate. If we are correct about the necessity of rebuilding the turnpike, the annual amounts will be at most half as large.

Ohio currently has a variety of economic development programs targeted at rejuvenating economically troubled communities. We compare the annual proceeds earned from the capital funds to projects supported by the Clean Ohio Revitalization Funds (CORF). In 2005, the typical CORF project received $3 million in support (Appendix 6). Under the various scenarios tested above, the proceeds from the capital funds would support as few as 15 projects or as many as 81 projects a year. The likely scenario is that there will be 15 projects a year until new bonded indebtedness is incurred to rebuild the turnpike, then the number will drop in half to seven or eight projects supported by $25 million in revenue.

Another way to think of these revenues is to compare them to annual tax growth in the state general revenue fund (GRF). Between 1990 and 2000, the state GRF grew an average of $604.8 million per year. The slowest annual growth, occurring from FY94 to FY95, was $14.9 million. The most robust GRF growth, occurring from FY99 to FY00 at the height of the dot com bubble, was $1.1 billion. If the principle is to be protected from current obligations, the potential for new investment resulting from leasing the turnpike will be modest.

Other considerations
Privatizating highways is not a new idea. This type of financing is desirable in four cases: when a private firm has a credit rating superior to that of the nation; when the nation has limited bonding capacity due a wide range of infrastructure demands (those needs that can be financed by user fees are privatized); when the nation is unable to manage its assets, such as collecting or retaining tolls; or finally when the asset is severely degraded and

needs an rebuilding program that exceeds the nation's management abilities. None of these conditions exist with Ohio's turnpike.

The 75-year lease on the 157-mile Indiana Toll Road went for $3.8 billion; $1.8 billion higher than was expected by the state. The once-bankrupt Chicago Skyway leased for $1.8 billion for 99 years. Both are troubled roads; which creates an opportunity for a private company to earn a good return by operating them more efficiently. Indiana's politics prevented a toll increase (it cost more to collect the toll than the toll was worth) and the roadbed is in poor condition. The Chicago Skyway was haunted by patronage and operating inefficiencies. Ohio's turnpike has neither of these problems.

If the turnpike is well run, a private vendor will have difficulty squeezing a profit out of the lease, unless, the company sees an opportunity to charge monopoly rents through ever-increasing tolls.

We fear that the competitive zeal of firms entering new markets where returns are unknown are resulting in company's paying more for the leases than they are worth when measured by the ability to pay. Stock analysts are starting to question the high prices the US Turnpike leases are getting. *Barron*'s reporter Andrew Day noted that Australian investors did not boost the stock price of the bank that acquired the Indiana lease, and Alison Booth, an analyst interviewed by Day, said that "increasing competition for new tollroad projects is resulting in monopolistic returns being competed away." In other words, lease payments look to be unsustainably high. Have private companies overpaid? There are recent examples of failed privately owned highways in California, Virginia, Texas, and South Carolina as traffic volumes fell short of expectations or toll increases led motorists and truckers to take alternative routes. [7] The same occurred recently when the Ohio turnpike boosted tolls for truckers and they flooded nearby state highways and town centers. Those toll increases were rolled back.

Will tolls increase? The trick for the private highway operator will be balancing increased toll revenue against decreased traffic. Today over half the tolls in Ohio are paid for by truckers. If a private firm operates the tollroads from Youngstown to nearly Milwaukee trucks will feel the burden of severely increased tolls. Why should car drivers care? After all, trucks cause most highway damage? Some of those trucks are making deliveries to Northern Ohio's businesses. Increased tolls will be an additional burden to the auto assembly plants in Lordstown, Avon Lake, and Toledo. Additionally, Ohio will see a shift in cross country truck traffic from I-80 in the north to I-70 in central Ohio, further disadvantaging the distribution and logistics industry in the northern portion of the state and providing competive advantage to the logistics triangle of Indianapolis, Columbus, and Louisville.

Why should we be concerned if potential highway operators pay too much for the leases? If the leaseholder pays too much money for the highway, maintenance will slip. The counter-argument is that there will be safeguards in the lease. The reality is that the safeguards can only be enforced through slow court and political proceedings. If the overpayment bankrupts the operator then the state will have to pick up the pieces along with the bills for repairing the Turnpike.

[7] Smith, Sylvia A., Privately owned roads not new, *Fort Wayne Journal Gazette*, January 23, 2006.

Why, then, should Ohio lease the turnpike? We do not think that it will improve the highway's condition; we do not think that there are major cost savings to be found in removing patronage; and we do not think the lease will remove a constraint on the state's debt ceiling. Even if the Ohio Turnpike is well run by a private company, there will be no easy profits earned through its management. The lease will be paid for by increased tolls. In effect, the proposed economic development funds that will be created from the proceeds of the lease will not be supported by operating the turnpike more efficiently. They will be indirectly supported by increased highway tolls.

While we have attempted to shed new light on the proposal to sell the turnpike, we are a fiscal analyst and an economist, not accountants or attorneys. Clearly, there may be quirks in the tax code that may result in a private investor being willing to pay more than the economically rational return for the turnpike lease. Our qualifications to comment on the value of the Turnpike have been questioned in whispers to reporters and editors. The purported experts are salesmen with calculators; smart investment bankers who benefit from a trade. They will be in the Hamptons, not be in Ohio, when it is time to pick up the pieces if a speculative bubble is pierced and that is what the asserted sales values being thrown around look like to us—a speculative bubble.

Please remember that there is no free lunch in the economy. While receiving a big bag of money for the Turnpike looks like a great deal; in the end, it is a financial transaction that has to be repaid. Think of the long term lease of the Turnpike as the state equivalent of a home equity loan. The cash you receive may be desirable, but the equity has to be replaced eventually. And the rationality of a home equity loan also depends on how you use that cash—do you put your kids through college or take the family to Disney World?

Decades ago Ohio's voters were told that proceeds from the Ohio Lottery would be the silver bullet that would fix the state's school finance woes; it was not. The lease of the Ohio Turnpike will be as effective in financing economic development as the Ohio Lottery has been in financing public education. This is not a comforting thought.

The only reason to lease the asset, given our analysis, is an ideological drive to shrink the size of government.

Appendix 1
Estimated Annual Cash Flow of the Ohio Turnpike
Operated by a Private Vendor

Operating Revenue		
Tolls	$	189,701,000
Special Toll Permits	$	2,750,000
Concessions	$	13,793,000
Other	$	1,184,000
Total Operating Revenues*	**$**	**207,428,000**
Non-operating Revenues		
State Fuel Tax Allocation**	$	-
Investment Earnings***	$	-
Total Non-operating Revenue	**$**	**-**
Total Revenue	**$**	**207,428,000**
Operating Expenses******		
Administration And Insurance	$	7,982,000
Maintenance Of Roadway And Structures	$	30,957,000
Services And Toll Operations	$	46,449,000
Traffic Control, Safety, Patrol & Communications	$	12,902,000
Major Repairs And Replacements	$	(277,000)
Depreciation Expense*****	$	-
Total Operating Expenses	**$**	**98,013,000**
Non-operating Expenses:		
Interest Expense******	$	-
Loss On Disposals / Write-Offs Of Capital Assets*******	$	-
Total Non-operating Expenses	**$**	**-**
Total Expenses	**$**	**98,013,000**
Total Profit/Loss	**$**	**109,415,000**

Notes:
* This analysis assumes the vendor would derive revenues from the same sources as the Turnpike Commission.
**It is not clear whether the vendor, a private firm, would be eligible to receive fuel tax proceeds.
***Assumes the vendor would not benefit from the Turnpike Commission's Investments.
This may increase in the future, but investment earning would be restricted by operating needs.
****Assumes many of the same expenses as the Turnpike Commission, with noted exceptions.
***** No depreciation since the state retains ownership, but may have leasehold improvements in the future.
****** It is unclear who would pay the $732,898,000 in outstanding debt.
This assumes the Turnpike Commission would pay debt services, perhaps from proceeds of lease?
*******Vendor doesn't own the capital assets, so no write off.
+This shows the expected return over the life of the lease would be a less than invested.
Typically, government intervention into the market is justified when the market won't bear an activity.
The present value is the total amount that a series of future payments is worth now.

Source: Ohio Turnpike Commission "2004 Annual Report"

Appendix 2
Annual Revenue Flows For Turnpike Vendor
With and Without Debt Service Repayment over Life of the 99 Year Lease

Year	Scenario 1 Annual Revenue	Bond Payment	Scenario 2 Net Annual Revenues	Year	Scenario 1 Annual Stream	Bond Payment	Scenario 2 Net Annual Revenues
2007	$ 109,415,000	$ 55,389,000	$ 54,026,000	2056	$ 109,415,000	$ -	$ 109,415,000
2008	$ 109,415,000	$ 55,378,000	$ 54,037,000	2057	$ 109,415,000	$ -	$ 109,415,000
2009	$ 109,415,000	$ 55,342,000	$ 54,073,000	2058	$ 109,415,000	$ -	$ 109,415,000
2010	$ 109,415,000	$ 55,313,000	$ 54,102,000	2059	$ 109,415,000	$ -	$ 109,415,000
2011	$ 109,415,000	$ 55,313,000	$ 54,102,000	2060	$ 109,415,000	$ -	$ 109,415,000
2012	$ 109,415,000	$ 55,313,000	$ 54,102,000	2061	$ 109,415,000	$ -	$ 109,415,000
2013	$ 109,415,000	$ 55,313,000	$ 54,102,000	2062	$ 109,415,000	$ -	$ 109,415,000
2014	$ 109,415,000	$ 55,313,000	$ 54,102,000	2063	$ 109,415,000	$ -	$ 109,415,000
2015	$ 109,415,000	$ 55,370,200	$ 54,044,800	2064	$ 109,415,000	$ -	$ 109,415,000
2016	$ 109,415,000	$ 55,370,200	$ 54,044,800	2065	$ 109,415,000	$ -	$ 109,415,000
2017	$ 109,415,000	$ 55,370,200	$ 54,044,800	2066	$ 109,415,000	$ -	$ 109,415,000
2018	$ 109,415,000	$ 55,370,200	$ 54,044,800	2067	$ 109,415,000	$ -	$ 109,415,000
2019	$ 109,415,000	$ 55,370,200	$ 54,044,800	2068	$ 109,415,000	$ -	$ 109,415,000
2020	$ 109,415,000	$ 55,124,800	$ 54,290,200	2069	$ 109,415,000	$ -	$ 109,415,000
2021	$ 109,415,000	$ 55,124,800	$ 54,290,200	2070	$ 109,415,000	$ -	$ 109,415,000
2022	$ 109,415,000	$ 55,124,800	$ 54,290,200	2071	$ 109,415,000	$ -	$ 109,415,000
2023	$ 109,415,000	$ 55,124,800	$ 54,290,200	2072	$ 109,415,000	$ -	$ 109,415,000
2024	$ 109,415,000	$ 55,124,800	$ 54,290,200	2073	$ 109,415,000	$ -	$ 109,415,000
2025	$ 109,415,000	$ 28,719,600	$ 80,695,400	2074	$ 109,415,000	$ -	$ 109,415,000
2026	$ 109,415,000	$ 28,719,600	$ 80,695,400	2075	$ 109,415,000	$ -	$ 109,415,000
2027	$ 109,415,000	$ 28,719,600	$ 80,695,400	2076	$ 109,415,000	$ -	$ 109,415,000
2028	$ 109,415,000	$ 28,719,600	$ 80,695,400	2077	$ 109,415,000	$ -	$ 109,415,000
2029	$ 109,415,000	$ 28,719,600	$ 80,695,400	2078	$ 109,415,000	$ -	$ 109,415,000
2030	$ 109,415,000	$ 6,429,500	$ 102,985,500	2079	$ 109,415,000	$ -	$ 109,415,000
2031	$ 109,415,000	$ 6,429,500	$ 102,985,500	2080	$ 109,415,000	$ -	$ 109,415,000
2032	$ 109,415,000	$ -	$ 109,415,000	2081	$ 109,415,000	$ -	$ 109,415,000
2033	$ 109,415,000	$ -	$ 109,415,000	2082	$ 109,415,000	$ -	$ 109,415,000
2034	$ 109,415,000	$ -	$ 109,415,000	2083	$ 109,415,000	$ -	$ 109,415,000
2035	$ 109,415,000	$ -	$ 109,415,000	2084	$ 109,415,000	$ -	$ 109,415,000
2036	$ 109,415,000	$ -	$ 109,415,000	2085	$ 109,415,000	$ -	$ 109,415,000
2037	$ 109,415,000	$ -	$ 109,415,000	2086	$ 109,415,000	$ -	$ 109,415,000
2038	$ 109,415,000	$ -	$ 109,415,000	2087	$ 109,415,000	$ -	$ 109,415,000
2039	$ 109,415,000	$ -	$ 109,415,000	2088	$ 109,415,000	$ -	$ 109,415,000
2040	$ 109,415,000	$ -	$ 109,415,000	2089	$ 109,415,000	$ -	$ 109,415,000
2041	$ 109,415,000	$ -	$ 109,415,000	2090	$ 109,415,000	$ -	$ 109,415,000
2042	$ 109,415,000	$ -	$ 109,415,000	2091	$ 109,415,000	$ -	$ 109,415,000
2043	$ 109,415,000	$ -	$ 109,415,000	2092	$ 109,415,000	$ -	$ 109,415,000
2044	$ 109,415,000	$ -	$ 109,415,000	2093	$ 109,415,000	$ -	$ 109,415,000
2045	$ 109,415,000	$ -	$ 109,415,000	2094	$ 109,415,000	$ -	$ 109,415,000
2046	$ 109,415,000	$ -	$ 109,415,000	2095	$ 109,415,000	$ -	$ 109,415,000
2047	$ 109,415,000	$ -	$ 109,415,000	2096	$ 109,415,000	$ -	$ 109,415,000
2048	$ 109,415,000	$ -	$ 109,415,000	2097	$ 109,415,000	$ -	$ 109,415,000
2049	$ 109,415,000	$ -	$ 109,415,000	2098	$ 109,415,000	$ -	$ 109,415,000
2050	$ 109,415,000	$ -	$ 109,415,000	2099	$ 109,415,000	$ -	$ 109,415,000
2051	$ 109,415,000	$ -	$ 109,415,000	2100	$ 109,415,000	$ -	$ 109,415,000
2052	$ 109,415,000	$ -	$ 109,415,000	2101	$ 109,415,000	$ -	$ 109,415,000
2053	$ 109,415,000	$ -	$ 109,415,000	2102	$ 109,415,000	$ -	$ 109,415,000
2054	$ 109,415,000	$ -	$ 109,415,000	2103	$ 109,415,000	$ -	$ 109,415,000
2055	$ 109,415,000	$ -	$ 109,415,000	2104	$ 109,415,000	$ -	$ 109,415,000
				2105	$ 109,415,000	$ -	$ 109,415,000
					$ 5,361,335,000	$1,151,606,000	$ 4,209,729,000

Appendix 3
Annual Revenue Flows for Turnpike Vendor over Life of the 99 Year Lease with Annual 3% Toll Increases

Year	Scenario 3 Annual Revenues	Year	Scenario 3 Annual Revenues
2007	$ 109,415,000	2056	$ 465,694,250
2008	$ 112,697,450	2057	$ 479,665,077
2009	$ 116,078,374	2058	$ 494,055,029
2010	$ 119,560,725	2059	$ 508,876,680
2011	$ 123,147,546	2060	$ 524,142,981
2012	$ 126,841,973	2061	$ 539,867,270
2013	$ 130,647,232	2062	$ 556,063,288
2014	$ 134,566,649	2063	$ 572,745,187
2015	$ 138,603,648	2064	$ 589,927,542
2016	$ 142,761,758	2065	$ 607,625,369
2017	$ 147,044,611	2066	$ 625,854,130
2018	$ 151,455,949	2067	$ 644,629,754
2019	$ 155,999,627	2068	$ 663,968,646
2020	$ 160,679,616	2069	$ 683,887,706
2021	$ 165,500,005	2070	$ 704,404,337
2022	$ 170,465,005	2071	$ 725,536,467
2023	$ 175,578,955	2072	$ 747,302,561
2024	$ 180,846,324	2073	$ 769,721,638
2025	$ 186,271,713	2074	$ 792,813,287
2026	$ 191,859,865	2075	$ 816,597,685
2027	$ 197,615,661	2076	$ 841,095,616
2028	$ 203,544,131	2077	$ 866,328,485
2029	$ 209,650,454	2078	$ 892,318,339
2030	$ 215,939,968	2079	$ 919,087,889
2031	$ 222,418,167	2080	$ 946,660,526
2032	$ 229,090,712	2081	$ 975,060,342
2033	$ 235,963,434	2082	$ 1,004,312,152
2034	$ 243,042,337	2083	$ 1,034,441,516
2035	$ 250,333,607	2084	$ 1,065,474,762
2036	$ 257,843,615	2085	$ 1,097,439,005
2037	$ 265,578,923	2086	$ 1,130,362,175
2038	$ 273,546,291	2087	$ 1,164,273,040
2039	$ 281,752,680	2088	$ 1,199,201,231
2040	$ 290,205,260	2089	$ 1,235,177,268
2041	$ 298,911,418	2090	$ 1,272,232,586
2042	$ 307,878,760	2091	$ 1,310,399,564
2043	$ 317,115,123	2092	$ 1,349,711,551
2044	$ 326,628,577	2093	$ 1,390,202,897
2045	$ 336,427,434	2094	$ 1,431,908,984
2046	$ 346,520,257	2095	$ 1,474,866,254
2047	$ 356,915,865	2096	$ 1,519,112,242
2048	$ 367,623,341	2097	$ 1,564,685,609
2049	$ 378,652,041	2098	$ 1,611,626,177
2050	$ 390,011,602	2099	$ 1,659,974,962
2051	$ 401,711,950	2100	$ 1,709,774,211
2052	$ 413,763,309	2101	$ 1,761,067,438
2053	$ 426,176,208	2102	$ 1,813,899,461
2054	$ 438,961,495	2103	$ 1,868,316,445
2055	$ 452,130,339	2104	$ 1,924,365,938
		2105	$ 1,982,096,916
			$ 64,404,827,449

Appendix 4
Net Present Value of 99 Year Lease

Scenario 1: **Bonds paid by Turnpike Commission from lease proceeds.** Net Present Value: A) Discount rate of 3.0% over 99 years returns $3,451,701,054 B) Discount rate of 5.0% over 99 years returns $2,170,827,049
Scenario 2: **Bonds paid by vendor and revenue stream are reduced by debt service.** Net Present Value A) Discount rate of 3.0% over 99 years returns $2,607,679,397. B) Discount rate of 5.0% over 99 years returns $1,468,790,616.
Scenario 3: **State pays off bonds and vendor increases tolls 3% each year.** Net Present Value A) Discount rate of 3.0% over 99 years returns $10,516,587,379. B) Discount rate of 5.0% over 99 years returns $$4,655,686,384.
Note: Returns do not include inflation premiums.

Appendix 5
Annual Revenue Income for Ohio from Lease Proceeds

Lease Proceeds	Debt Repayment	Net Return	3% Return	5% Return
Proposed Lease Value				
$ 4,600,000,000	$ 1,151,606,000	$3,448,394,000	$ 103,451,820	$ 172,419,700
$ 6,000,000,000	$ 1,151,606,000	$4,848,394,000	$ 145,451,820	$ 242,419,700
Estimated Lease Value less Debt Repayment				
$ 3,451,701,054	$ 1,151,606,000	$ 2,300,095,054	$ 69,002,852	$ 115,004,753
$ 2,170,827,049	$ 1,151,606,000	$ 1,019,221,049	$ 30,576,631	$ 50,961,052
Estimated Lease Value, Vendor Repays Outstanding Debt				
$ 2,607,679,397	NA	NA	$ 78,230,382	$ 130,383,970
$ 1,468,790,616	NA	NA	$ 44,063,718	$ 73,439,531

Appendix 6
Purchasing Power from Turnpike Lease:
Number of Possible Clean Ohio Revitalization Fund Projects per Year

Revenue (3%)	CORF Projects	Revenue (5%)	CORF Projects
$ 103,451,820	34	$ 172,419,700	57
$ 145,451,820	48	$ 242,419,700	81
$ 69,002,852	23	$ 115,004,753	38
$ 30,576,631	10	$ 50,961,052	17
$ 78,230,382	26	$ 130,383,970	43
$ 44,063,718	15	$ 73,439,531	24

Note: The typical payment from the CORF in 2005 was $3 million.