

**T50T01**  
**Maryland Technology Development Corporation**

*Operating Budget Data*

(\$ in Thousands)

	<b>FY 04</b>	<b>FY 05</b>	<b>FY 06</b>	<b>FY 05-06</b>	<b>% Change</b>
	<b><u>Actual</u></b>	<b><u>Working</u></b>	<b><u>Allowance</u></b>	<b><u>Change</u></b>	<b><u>Prior Year</u></b>
General Fund	\$4,000	\$5,467	\$4,811	-\$656	-12.0%
<b>Total Funds</b>	<b>\$4,000</b>	<b>\$5,467</b>	<b>\$4,811</b>	<b>-\$656</b>	<b>-12.0%</b>
Contingent & Back of Bill Reductions					
<b>Adjusted Total</b>	<b>\$4,000</b>	<b>\$5,467</b>	<b>\$4,811</b>	<b>-\$656</b>	<b>-12.0%</b>

- The fiscal 2006 budget allowance decreases 12%, or \$656,000 from \$5.5 million in fiscal 2005 to \$4.8 million in fiscal 2006.
- Significant decreases in the fiscal 2006 allowance include a reduction of 10.9%, or \$190,000 to support the Maryland Technology Transfer Fund (MTTF) and a reduction of 40%, or \$300,000 to support the University Technology Development Fund (UTDF).

Note: Numbers may not sum to total due to rounding.

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*Analysis of the FY 2006 Maryland Executive Budget, 2005*

## ***Analysis in Brief***

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### **Major Trends**

***Companies Supported by TEDCO MTTF Investments Have Been Successful in Leveraging Follow-on Funding:*** The MTTF is designed to encourage technology transfer from universities and federal laboratories. By the end of fiscal 2004 recipients of State seed funding from MTTF had leveraged an additional \$34.5 million in follow-on funding.

***Since Inception in Fiscal 2004, the Maryland University Intellectual Property Support (patent) Fund Has Generated 131 Patent Applications:*** The patent fund is designed to increase the number of patent applications by 300 over a three-year period with a total commitment of \$1.5 million (\$500,000/year). Fiscal 2006 is the last year of funding for this initiative, and TEDCO is estimating it will achieve its goal of 300 patent applications.

### **Recommended Actions**

1. Concur with Governor's allowance.

### **Updates**

***TEDCO Has Been Successful in Leveraging Outside Funding:*** Since August 2000, the Maryland Technology Development Corporation has generated \$8.0 million in outside funding for companies and organizations in the State. Of the \$8.0 million, \$2.6 million is for completed projects, \$4.6 million is for current projects, and \$800,000 is for an anticipated federal award.

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**Maryland Technology Development Corporation**

***Operating Budget Analysis***

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**Program Description**

**Statutory History**

The Maryland Technology Development Corporation (TEDCO) was established by Chapter 661, Acts of 1998 to stimulate the creation of and investment in new scientific research and technologies for economic development in the State. The enabling legislation allows the corporation to (1) accept loans, grants, or assistance from federal, State, or local governments, colleges or universities, or private sources; (2) acquire, construct, develop, manage, market, manufacture, license, sublicense, reconstruct, rehabilitate, improve, maintain, equip, lease, repair, and operate any project in the State; (3) acquire, purchase, hold, lease, and use any franchise, patent, license, or real, personal, mixed, or tangible or intangible property; (4) sell, lease, transfer, license, sublicense, assign, and dispose of any property; (5) acquire any lands, structures, property, rights-of-way, franchises, easements for the construction, improvement, rehabilitation, or operation of a project; (6) set rates, rentals, fees, and charges for services and resources; (7) do all things necessary to carry out the powers granted, and (8) exercise any power not in conflict with the Constitution and the law of the State.

TEDCO is also exempt from (1) State and local taxes; (2) oversight by the Board of Public Works and the laws governing procurement under the General Procurement Law; (3) laws governing the State personnel management system; (4) laws regarding attendance of the public at open sessions; and (5) laws related to executive departments. TEDCO, its board, and employees are subject to the public ethics law and the Public Information Act. The debts, claims, obligations, and liabilities of TEDCO or its subsidiaries, if any, may not be considered a debt of the State or a pledge of its credit.

Chapter 13, Acts of 2000 amended certain parts of the TEDCO statute, including changing the name from the Maryland Science, Engineering, and Technology Development Corporation to the Maryland Technology Development Corporation or TEDCO, expanding the board from 11 to 15 members, and authorizing the corporation to make grants and equity investments in technology-based businesses. Further, TEDCO's statutory authority was expanded by Chapters 597 and 598, Acts of 2001, to create the Maryland Technology Incubator Program, administered by TEDCO, to promote "entrepreneurship and the creation of jobs in technology-related industry by establishing and operating effective incubators throughout the State that provide adequate physical space and programs intended to increase or accelerate business success in the field of technology. Finally, TEDCO's statutory authority was further amended by Chapter 364, Acts of 2002 to allow the corporation to be a member of or create a nonprofit for-profit entity that meets the eligibility requirements for the receipt of certain federal grants.

## **Performance Analysis: Managing for Results**

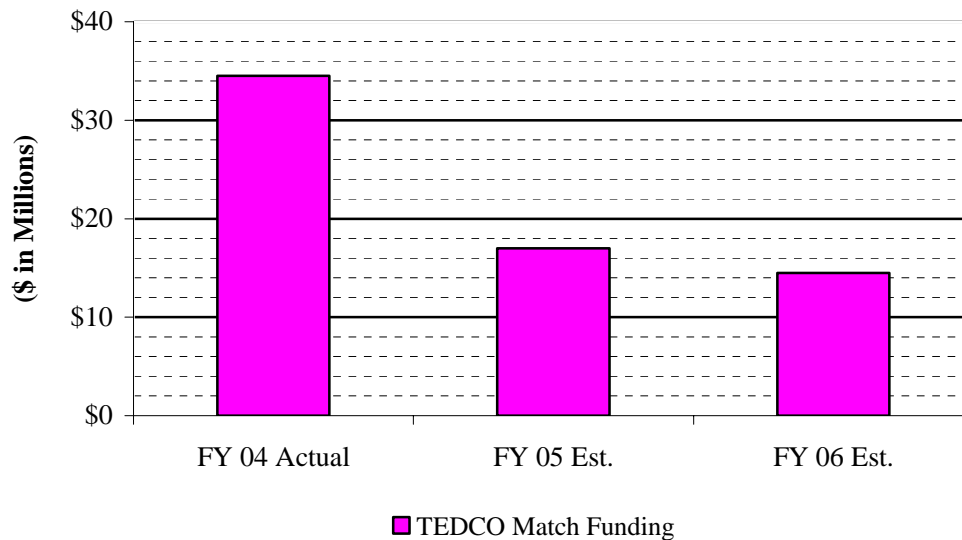
The mission of the Maryland Technology Development Corporation is to facilitate the creation of businesses and to foster their growth in all regions of the State through the commercialization of technology. TEDCO's role is to be Maryland's leading source of funding for seed capital and entrepreneurial business assistance. TEDCO accomplishes this mission and role by administering several investment programs, including the Maryland Technology Transfer Fund (MTTF), the University Technology Development Fund (UTDF), and the Maryland University Intellectual Property Support Fund.

The MTTF provides State seed investments to very early stage companies to encourage technology transfer from universities and federal laboratories. A measure of success for this program is the ability of funded start-ups to obtain follow-on funding for commercialization. The primary sources of follow-on funding include federal funds; venture capital funds and other equity investments; debt consolidation; and Department of Business and Economic Development (DBED) funds. TEDCO estimates that approximately 1.7%, or \$800,000 of the follow-on funding was provided by DBED.

Early results from completed projects show considerable leverage of State funds. As shown in **Exhibit 1**, from program inception through the end of fiscal 2004 companies that received MTTF seed funding investments leveraged an additional \$34.5 million in follow-on funding. In fiscal 2005 and 2006, follow-on funding is expected to decrease to \$17.0 million and \$14.5 million, respectively. Although this seems like a substantial decrease, fiscal 2004 included one company, Reactive NanoTech, which leveraged follow-on funding of \$14.4 million, considerably increasing the fiscal 2004 total. Excluding Reactive NanoTech, fiscal 2004 follow-on funding is approximately \$20.0 million. In fiscal 2006 the amount of follow-on funding is estimated to decrease to \$14.5 million due to a 10.9% decrease in the MTTF 2006 allowance.

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**Exhibit 1**  
**Follow-on Technology Development Funding**  
**Fiscal 2004 – 2006**



Note: Fiscal 2004 includes \$14.4 million of follow-on funding for one company, Reactive Nano Tech.

Source: Maryland Technology Development Corporation

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Beginning in fiscal 2004, TEDCO began a three-year \$1.5 million (\$500,000/year) program to encourage university faculty to propose inventions for commercialization. The goal of the program is to increase the number of patent applications by 300 over the three-year period. By increasing the amount of funds devoted to obtaining patents, faculty members are encouraged to patent inventions with commercial applications. The impetus behind the University Patent program stemmed from the results of a study conducted by TEDCO on the State's technology transfer programs in accordance with committee narrative included in the 2001 *Joint Chairmen's Report*. The study concluded that while ranking very high in terms of access to federal research and development funds, Maryland ranks near the middle of states in terms of commercializing research. As shown in **Exhibit 2**, the program supported 88 patent applications in fiscal 2004 and is estimating to support an additional 200 patent applications in fiscal 2005 and 2006.

**Exhibit 2**  
**Maryland University Intellectual Property Support Fund**  
**Number of New Patent Applications**  
**Fiscal 2004 – 2006**

	<u>FY 04 Actual</u>	<u>FY 05 Est.</u>	<u>FY 06 Est.</u>
Number of Patents Applications	88	100	100

Source: Maryland Technology Development Corporation

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**Governor's Proposed Budget**

The fiscal 2006 allowance for TEDCO is budgeted as a State grant in the amount of \$4.8 million, which is \$656,000, or 12% less than the fiscal 2005 working appropriation. **Exhibit 3** summarizes the major changes.

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**Exhibit 3**  
**Governor's Proposed Budget**  
**TEDCO – Maryland Technology Development Corporation**  
**(\$ in Thousands)**

<b>How Much It Grows:</b>	<b>General Fund</b>	<b>Total</b>
2005 Working Appropriation	\$5,467	\$5,467
2006 Governor's Allowance	4,811	4,811
Contingent & Back of Bill Reductions	<u>0</u>	<u>0</u>
<b>Adjusted Allowance</b>	<b>4,811</b>	<b>4,811</b>
Amount Change	-\$656	-\$656
Percent Change	-12.0%	-12.0%

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**Where It Goes:**

**Personnel Expenses**

Salaries and Wages..... \$152

**Program Activity**

Decrease in contractual services based on 2004 actual..... -8

Decrease funding for equipment based on 2004 actual..... -2

Decrease funding for Incubator Support Program..... -200

Decrease funding for technology commercialization..... -100

Decrease funding for legal services..... -10

Increase in operational costs..... 2

**Investment Programs**

Decrease funding for Maryland Technology Transfer Fund..... -190

Decrease funding for University Technology Development Fund..... -300

**Total** **-\$656**

Note: Numbers may not sum to total due to rounding.

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**Personal Expenses**

The fiscal 2006 allowance provides \$1,234,522 for personnel expense, which is an increase of \$152,162 over the fiscal 2005 working appropriation. In fiscal 2004, 6 of TEDCO's 10 positions were funded with State funds and 4 positions were funded with federal funds. In fiscal 2005, the General Assembly agreed to fund all 10 positions with State funds, but reduced the funding by \$103,000. The fiscal 2006 allowance provides full funding for all 10 positions. The allowance does not include a cost-of-living adjustment.

**Program Activity**

Changes in program activity include a \$200,000 decrease for the incubator support program. The incubator support program provides value-added services to incubator companies. These services include business assistance, a monthly newsletter, and incubator services. The program was reduced to meet DBM's 12% reduction goal. The allowance also includes a \$100,000 decrease for technology commercialization. The \$100,000 was used as a match for a one-year Small Business Innovation Research federal grant that will not be renewed in fiscal 2006. Due to reduced funding in fiscal 2006, TEDCO will not make as many grant awards, resulting in decreased legal services of approximately \$10,000.

**Investment Programs**

Funding for TEDCO's three investment programs are decreasing 16.4% from \$3.0 million in fiscal 2005 to \$2.5 million in fiscal 2006. Changes to the individual programs are discussed below.

### **Maryland Technology Transfer Fund**

The MTTF provides State seed investments of up to \$75,000 in very early stage companies to encourage technology transfer from universities and federal laboratories. MTTF awards have a repayment obligation in the event of commercialization and may require in-kind matching funds depending upon the size of the company. The fiscal 2006 allowance for the MTTF is \$1,560,000 which represents a decrease of 10.9%, or \$190,000. Since its inception in fiscal 2002 and through January 31, 2005, TEDCO has received 97 proposals for investment financing. Of the 97 proposals, 65 awards were approved totaling \$3.2 million and another five awards totaling \$238,853 were approved for continuation funding. TEDCO estimates it will assist approximately 35 emerging technology companies in fiscal 2005 and approximately 30, or five less in fiscal 2006, due the reduced funding level.

### **University Technology Development Fund**

The UTDF provides investments of up to \$50,000 to Maryland universities to support pre-commercial research on university-owned intellectual property. This funding bridges the gap between basic research funding from the federal government and commercialization funding from the private sector. The fiscal 2006 allowance for the UTDF is \$450,000 which represents a decrease of 40%, or \$300,000. Since inception in fiscal 2001 and through January 31, 2005, TEDCO has received 83 proposals for investment financing. Of the 83 proposals, 54 awards were approved totaling \$2.7 million, of which 3 projects totaling \$135,000 represented continuation funding. Twenty-two UTDF projects have resulted in 15 new patent applications and 12 licenses. TEDCO estimates it will assist approximately 15 university research and development projects in fiscal 2005 and approximately 9, or 6 less in fiscal 2006, due the reduced funding level.

**The Department of Legislative Services recommends that TEDCO brief the committees on the impact of the reduced funding in the investment programs on the State's effort to increase the commercialization of research and development from Maryland universities and federal laboratories.**

### **Maryland University Intellectual Property Support Fund**

The Maryland University Intellectual Property Support Fund is intended to promote technology transfer from Maryland universities to the private sector by increasing the number of patent applications and invention disclosures resulting from university research and development. The program provides 50% of the cost of initial patent applications up to a match of \$5,000. The fiscal 2006 allowance is \$500,000 which is the same appropriation as fiscal 2005. The goal of the program is to increase the number of patent applications by 300 over the three-year period, beginning in fiscal 2004, with a total commitment of \$1.5 million (\$500,000/year).

To carry out the program, TEDCO has agreements with six of the State's major academic research institutions including, the University of Maryland, Baltimore County; University of Maryland, Baltimore; University of Maryland, College Park; University of Maryland Biotechnology Institute; Johns Hopkins University; and Johns Hopkins University Applied Physics Laboratory. The

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program has a self-renewing feature where each campus sets aside a share of revenue earned by patents supported under the fund for future patent applications. As of January 2005, the program has generated approximately 131 patent applications; however, it will take several years before the patents are issued and realize income.

## ***Recommended Actions***

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1. Concur with Governor's allowance.

## Updates

### 1. TEDCO Has Been Successful in Leveraging Outside Funding

One of TEDCO’s primary missions is to capitalize on the substantial federal research funding available in Maryland and to promote the commercialization of the technology research being conducted in the universities and federal laboratories. As shown in **Exhibit 4**, all indications are that TEDCO has been successful in securing outside funding including federal funding for organizations and companies in Maryland. Over the past four years, TEDCO has successfully secured \$8.0 million in outside funding sources. Of the \$8.0 million, \$2.6 million is for completed projects, \$4.6 million is for current projects, and \$800,000 is for an anticipated federal award.

**Exhibit 4**  
**TEDCO Outside Funding Sources**

<u>Current/Active Grants</u>	<u>Amount</u>	<u>Source</u>	<u>TEDCO Match</u>	<u>Year Funded</u>	<u>Term of Grant</u>
NAVAir Technology Commercialization Initiative*	\$1,256,617	U.S. Navy	\$0	2005	18 months
Aberdeen Technology Transfer Initiative**	965,000	U.S. Army	0	2005	1 year
ACTIVATE (with UMBC)	600,000	NSF	60,000	2005	3 years
Maryland Technology Partnership for Innovation	600,000	NSF	60,000	2004	3 years
New Markets Growth Fund (Dingman Center – UMCP)***	500,000	SBA/FHLBAtl	0	2002	3 years
Mountain Maryland SBIR Initiative*	78,950	SBA	42,720	2005	1 year
Mid-Atlantic Regional Technology Transfer Center*	59,500	NASA	0	2005	1 year
Council of State Governments*	50,000	CSG	0	2004	1 year
Rural Business Incubation Initiative*	494,739	SBA	0	2005	18 months
<b>Total</b>	<b>\$4,604,806</b>				
<b><u>Prior Grants</u></b>					
NAVAir Technology Commercialization Initiative	\$1,000,000	U.S. Navy	0	2002	2 years
Mid-Atlantic Regional Technology Transfer Center*	\$204,000	NASA	0	2001	3 years

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<u>Current/Active Grants</u>	<u>Amount</u>	<u>Source</u>	<u>TEDCO Match</u>	<u>Year Funded</u>	<u>Term of Grant</u>
Maryland Technology Partnership for Innovation	600,000	NSF	60,000	2001	2 years
Maryland Minority SBIR Initiative*	225,000	SBA	150,000	2002	2 years
eReadiness Maryland*	210,000	private/EDA	100,000	2001	2 years
eReadiness Study of Western Maryland	50,000	EDA/ARC	25,000	2003	1 year
eReadiness Study of the Eastern Shore	25,000	USDA	15,000	2003	1 year
Best Practices in Business Incubation*	200,000	EDA	160,000	2002	2 years
American Society of Mechanical Engineers – Fellow*	40,000	ASME	0	2002	2 years
<b>Total Approved August 2000 thru November 2004</b>	<b>\$2,554,000</b>		<b>\$60,000</b>		
<b><u>Pending Awards</u></b>					
Fort Detrick Technology Transfer Initiative (TBD)	800,000	U.S. Army	0	2005	1 year
<b>Total</b>	<b>\$800,000</b>				
	<b>\$7,958,806</b>		672,720		
<b>Leverage of TEDCO Funds</b>				12 to 1	

\*Funds flow through TEDCO

\*\*\$157,504 flows through TEDCO

\*\*\*\$166,666 flows through TEDCO

NSF = National Science Foundation

SBA/FHLBAtl = U.S. Small Business Administration/Federal Home Loan Bank of Atlanta

EDA = U.S. Department of Commerce – Economic Development Administration

NASA = National Aeronautics and Space Administration

SBIR = Small Business Innovation Research

USDA = U.S. Department of Agriculture

CSG = Council of State Governments

ASME = American Society of Mechanical Engineers

Source: Maryland Technology Development Corporation

## ***Current and Prior Year Budgets***

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### **Current and Prior Year Budgets Maryland Technology Development Corporation (\$ in Thousands)**

	<b><u>General Fund</u></b>	<b><u>Special Fund</u></b>	<b><u>Federal Fund</u></b>	<b><u>Reimb. Fund</u></b>	<b><u>Total</u></b>
<b>Fiscal 2004</b>					
Legislative Appropriation	\$4,000	\$0	\$0	\$0	\$4,000
Deficiency Appropriation	0	0	0	0	0
Budget Amendments	0	0	0	0	0
Cost Containment	0	0	0	0	0
Reversions and Cancellations	0	0	0	0	0
<b>Actual Expenditures</b>	<b>\$4,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,000</b>
<b>Fiscal 2005</b>					
Legislative Appropriation	\$5,467	\$0	\$0	\$0	\$5,467
Budget Amendments	0	0	0	0	0
<b>Working Appropriation</b>	<b>\$5,467</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,467</b>

Note: Numbers may not sum to total due to rounding.

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Note: TEDCO received capital appropriations of \$1.0 million in fiscal 2004 and \$2.5 million in fiscal 2005 for incubator facilities (funded through general obligation bonds). No capital appropriations were requested in fiscal 2006.

## ***Audit Findings***

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TEDCO does not have a fiscal compliance audit. Fiscal 2005 was the first year TEDCO directly received a general fund grant under its own budget code. Prior to fiscal 2004, TEDCO's general fund grant was budgeted through the Board of Public Works.

**Object/Fund Difference Report  
TEDCO - Maryland Technology Development Corp**

<u>Object/Fund</u>	<u>FY04 Actual</u>	<u>FY05 Working Appropriation</u>	<u>FY06 Allowance</u>	<u>FY05 - FY06 Amount Change</u>	<u>Percent Change</u>
<b>Objects</b>					
12 Grants, Subsidies, and Contributions	\$ 4,000,000	\$ 5,467,000	\$ 4,811,000	-\$ 656,000	-12.0%
<b>Total Objects</b>	<b>\$ 4,000,000</b>	<b>\$ 5,467,000</b>	<b>\$ 4,811,000</b>	<b>-\$ 656,000</b>	<b>-12.0%</b>
<b>Funds</b>					
01 General Fund	\$ 4,000,000	\$ 5,467,000	\$ 4,811,000	-\$ 656,000	-12.0%
<b>Total Funds</b>	<b>\$ 4,000,000</b>	<b>\$ 5,467,000</b>	<b>\$ 4,811,000</b>	<b>-\$ 656,000</b>	<b>-12.0%</b>

Notes:

The fiscal 2005 appropriation does not include deficiencies, and the fiscal 2006 allowance does not reflect contingent reductions.

TEDCO received capital appropriations of \$1.0 million in fiscal 2004 and \$2.5 million in fiscal 2005 for incubator facilities (funded through general obligation bonds). No capital appropriations were requested in fiscal 2006.