

Department of Legislative Services  
Maryland General Assembly  
2006 Session

FISCAL AND POLICY NOTE  
Revised

House Bill 244  
Ways and Means

(Delegate Hixson, *et al.*)

Education, Health, and Environmental Affairs

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**Election Law - Voting Systems - Voter-Verified Paper Records**

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This emergency bill requires that optical scan voting systems be leased for one year to be used in each polling place for the 2006 elections and that at least one voting system at each polling place accommodate the needs of disabled voters and protect the voter's right to cast a private ballot. With regard to each election occurring on or after March 1, 2008, the bill requires that a voting system selected and certified by the State Board of Elections (SBE) produce a voter-verified paper record and provide access to disabled individuals equivalent to that provided to individuals who are not disabled. The bill also mandates other election procedures applicable to each election occurring on or after March 1, 2008 including certification of the software and hardware used in the voting system tabulation process prior to each election, posting of results at each polling place and on the Internet, a random audit of results, and a public demonstration of the voting system in each county prior to each election.

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**Fiscal Summary**

**State Effect:** General fund expenditures would increase by \$15 million to \$24 million over FY 2006 and 2007, assuming the State would bear half of the costs of implementing a new voting system and assuming a lease-purchase of optical scan and Automark machines was negotiated. The FY 2007 budget bill includes \$25.4 million in general funds (\$14.5 million of which is a fiscal 2006 deficiency appropriation), contingent on enactment of legislation, to implement a new voting system or modify the existing system. Future year expenditures would increase due to costs associated with ballot printing, handling, and storage in election years of roughly \$1.6 million and costs associated with pre-election voting system certifications as well as Internet postings that cannot be reliably estimated at this time.

**Local Effect:** County expenditures would increase over FY 2006 and 2007 by each county's share of between \$15 million and \$24 million, assuming counties would bear half the cost of implementing the new voting system. The FY 2007 budget bill reflects a local contribution of \$25 million (\$14.1 million of which is available as a fiscal 2006 deficiency appropriation) toward implementation of a new voting system or modification of the existing system, contingent on enactment of legislation. Expenditures would also increase due to election judge overtime pay and possibly additional local board training and voter education costs in FY 2006 and 2007. Future year county expenditures would increase due to ballot printing, handling, and storage; pre-election certification; post-election audit; and Internet posting costs.

**Small Business Effect:** None.

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## Analysis

### Bill Summary:

#### 2006 Elections

##### *Voting Systems*

For the 2006 primary and general elections only, SBE may not use the Diebold Accuvote TS System in any polling place in the State. Instead, SBE must select and certify an optical scan voting system to be used in each polling place for the 2006 elections and must enter into a lease agreement for the voting systems for not more than one year. SBE must ensure that each polling place has at least one voting system to accommodate the needs of disabled voters and protect the voter's right to cast a private ballot.

##### *Funding*

The Governor must allocate funding to carry out the above requirements.

#### Elections Occurring on or After March 1, 2008

##### *Voter-verified Paper Record*

A voter-verified paper record may include a paper printout from a touch-screen or other electronic voting machine, an optical scan ballot, a paper ballot mailed (whether from a domestic or overseas location) to a local board, or a ballot created through the use of a ballot marking device. The paper record must: (1) be an individual document physically separated from any other similar document and not a continuous roll; (2) be sufficiently

durable to withstand handling during audits and recounts; and (3) use ink that will not fade, smear, or otherwise degrade and obscure the paper record over time.

The voter-verified paper record must be available for inspection and verification by the voter before his/her vote is cast and the voter must be able to correct any error made by the voting system.

In the event of any irregularity or inconsistency between an electronic record and a voter-verified paper record, the paper record is considered the official true and correct record of votes cast. The voter-verified paper record shall also be preserved and maintained in a manner that makes it impossible to associate a voter with the record of their vote and must be securely stored by a local board for at least one year after an election.

#### *Access for Individuals with Disabilities*

A voting system approved by SBE must have the ability for a voter to cast and verify their votes by both visual and nonvisual means. At least one voting system in each polling place must provide access to disabled individuals and afford the voter the opportunity for private and independent review, acceptance, or rejection of the ballot as they intend to cast it. SBE must adopt regulations to ensure that these voting systems provide equivalent access to disabled individuals as is provided to individuals without disabilities.

#### *Voting System/Posting of Results/Random Audit*

The voting system's aggregation and tabulation equipment must only receive data by disk, tape, or other physical means and the software and hardware used in the voting system aggregation and tabulation process must be certified at least 30 days prior to its deployment in each election. Accuracy of results must take priority over the speed with which results are posted in aggregating and tabulating the results.

After the polls close, election judges must post, in an area accessible to the public, a paper record of the total of all the votes cast at that polling place. In addition, prior to the required random audit, each local board and SBE must make the initial election results available on a publicly accessible Internet web site. The paper records posted at each polling place must be retained in a secure location for one year after the date of the election and be made available for public review.

A hand-counted, random audit must be conducted after each election within three days of the initial total of all votes cast having been posted on a publicly accessible Internet web site. The audit must compare the electronic records with the corresponding voter-verified paper records for ballots cast in no less than 5% of the polling places in each county. The

polling places to be audited must be determined by a random drawing open to the public and press. If a discrepancy is found between the electronic and hand-counted vote tallies, an expanded audit must be conducted at additional randomly selected polling places in the county. Once the extent of any inconsistencies or irregularities is determined, SBE must conduct a thorough investigation of the voting system before the election results are certified in accordance with State law. SBE shall order a recount if the audit results call into question the outcome of the election for any federal, State, or local candidate or question.

### *Recordkeeping*

SBE must at all times maintain information regarding voting system failures occurring during pre-election testing and certification procedures, an election, post-election audits, recounts, or other results certification procedures, or at any other time. SBE must keep a permanent record of this information and make it available to the public on its web site within 48 hours of each failure, whether it is discovered by SBE or another person charged with certifying or decertifying election results or a voting system.

### *Public Demonstration of Voting System*

Between 30 and 10 days before the date of an election each local board must conduct a public demonstration of the voting system including the vote aggregation and tabulation equipment to be used in the election. The demonstration must be publicly announced and notice must be posted on the SBE web site no later than seven days before the demonstration.

### *Funding*

The Governor must allocate the resources required to implement the requirements of the bill, including any gift received by the State for the purposes of the bill and any federal or other special funds or grant received by the State for the purposes of the bill, except for federal funds received by the State to implement the requirements of the Help America Vote Act of 2002 (HAVA).

## **Current Law:**

### *Voting System Requirements*

HAVA requires, in part, that all voting systems beginning January 1, 2006 must (1) permit voters to verify their selections on a ballot, notify voters of overvotes and the effect of casting multiple votes, and permit voters to change their votes and correct any errors before casting a ballot; and (2) be capable of producing a permanent paper record

for the voting system that can be manually audited and is available as an official record for recounts. HAVA does not specifically require that a paper record be produced at the polling place for each voter to verify.

Similar to HAVA, State law also requires that a voting system be capable of producing a paper record of all votes cast for use in a recount, but does not require that the paper records be verified by the voters. State law also requires that a voting system protect the secrecy of the ballot, protect the security of the voting process, count and record all votes accurately, accommodate any ballot used under the Election Law Article, and protect all other rights of voters and candidates. A voting system must be shown to meet federal standards through independent testing, prior to undergoing the State certification process.

SBE is required to take a number of considerations into account when certifying a voting system including the commercial availability of the system, the cost of implementing the system, the efficiency of the system, the system's ease of understanding for the voter, and accessibility for all voters with disabilities recognized by the Americans with Disabilities Act. SBE has set further minimum requirements for voting systems along with certification procedures by regulation.

#### *Access for Disabled Individuals and Alternative Language Access*

Under HAVA, one voting system at each polling place must be accessible for individuals with disabilities including offering nonvisual access for the blind and visually impaired. Alternative language accessibility is also required under HAVA in accordance with § 203 of the federal Voting Rights Act of 1965. Pursuant to § 203, States and political subdivisions that have over a certain amount of limited English proficient citizens in a single language minority group (defined as persons who are American Indian, Asian American, Alaska Native, or of Spanish heritage) may not provide voting materials only in the English language. A state or political subdivision is subject to the requirement where the number of voting age U. S. citizens of limited English proficiency in a single language minority group within the jurisdiction:

- is more than 10,000;
- is more than 5% of all voting age citizens;
- on an Indian reservation, exceeds 5% of American Indian or Alaska Native residents of voting age on the reservation; and
- the illiteracy rate of the group is higher than the national illiteracy rate.

### *Pre- and Post-election Activities*

Pre- and post-election procedures followed by local boards and election judges are set forth by statute and SBE regulations. Pursuant to SBE regulations, each voting unit goes through a pre-election test to ensure its accuracy in tabulating votes and each local board is required to conduct a public demonstration of the test and make the test results available for inspection. A post-election system verification is also performed either manually or with election management software by retabulating voting results in the greater of two precincts or 10% of all precincts in each county. In addition, a post-election audit is conducted by the election director of each county according to procedures developed by the local board and approved by SBE.

### *Funding*

Chapter 564 of 2001, which required SBE to select, certify, and acquire a uniform statewide voting system for both polling places and absentee voting, provides, in uncodified language, that each county must pay its share, based on its voting age population, of one-half of the State's cost of acquiring and operating the uniform statewide voting systems. Operating costs include the cost of maintenance, storage, printing of ballots, technical support and programming, related supplies and materials, and software licensing fees.

Under codified State law, in existence prior to the enactment of Chapter 564 of 2001, counties are required to appropriate funds for the local boards' overall operational expenses and expenses for supplies and equipment necessary for voter registration and elections.

**Background:** In accordance with Chapter 564 of 2001, which required SBE to select, certify, and acquire a uniform statewide voting system both for polling places and absentee voting, SBE contracted with Diebold Election Systems in January 2002 to purchase the direct-recording electronic (DRE) touchscreen voting system for use in polling places. Up to and including fiscal 2006, SBE will have paid approximately \$25 million for the State's current voting machines, which are financed through the State Treasurer's Office. Approximately \$42.5 million remains to be paid for the machines in accordance with a payment schedule running through fiscal 2014. Approximately \$16.5 million will have been paid to Diebold for support services through fiscal 2006. If the machines continue to be used, SBE would require additional support services from Diebold through fiscal 2009 (through the 2008 presidential election), at an approximate cost of \$23 million. Under State law, counties are obligated to pay their share of one-half of the above costs, based on each county's voting age population, and are invoiced for their share of the costs by SBE.

All local jurisdictions with the exception of Baltimore City implemented the Diebold touchscreen voting system for the March 2004 presidential primary election, and all jurisdictions including Baltimore City will use the voting system for the 2006 election.

The Diebold touchscreen voting system is not capable of producing voter-verified paper records. The voting system stores election results on removable memory cards that are transported to local boards of election for vote tabulation and can later produce a permanent paper record of all ballots cast, but the system cannot produce a paper record at the time the ballot is cast.

#### *Current Access for the Disabled and Alternative Language Access*

The State's uniform statewide voting system currently accommodates voters with disabilities by offering an audio ballot, a magnified ballot for voters with low vision, and an adjustable screen to accommodate voters who prefer or need to vote while sitting.

Alternative language access is available in two counties. Montgomery County offers all election materials, including audio ballots, in Spanish, in accordance with the requirements of the federal Voting Rights Act, and also voluntarily provides printed election material in Korean, Vietnamese, and Mandarin Chinese. Prince George's County voluntarily provides election material, including audio ballots, in Spanish. State law allows voters to have someone assist them in voting (though not the voter's employer or agent of the employer or an officer or agent of the voter's union), including an election judge, provided it is done in the presence of another election judge of a different political party.

**State Expenditures:** SBE advises that the requirements of the bill for the 2006 elections would require the lease of Automark voting machines (for use by disabled voters) along with the optical scan system. The Automark operates in a similar manner to a DRE touchscreen machine and offers access to disabled voters through audio capability, ballot magnification, and a sip/puff tube for voters that cannot use the touchscreen or touchpad. Rather than record a person's vote electronically, the Automark machine prints out a completed optical scan ballot which is then fed into an optical scan machine to be counted.

An optical scan system along with Automark machines appears to also be the most feasible option to meet the requirements of the bill for elections occurring on or after March 1, 2008. The bill prohibits the Diebold Accuvote-TS system from being used for the 2006 elections and the system would likely also not be an option to meet the bill's requirements applicable to elections occurring on or after March 1, 2008. Diebold has developed a printer prototype for the system to produce voter-verified paper records, which Diebold would be able to manufacture if given certain specifications by the State,

but the printer uses a continuous roll, which the bill does not allow. Legislative Services is not aware of a touchscreen machine available that is capable of producing individual voter-verified paper records not on a continuous roll.

SBE advises that two Automark machines would be needed at each precinct in order to not interfere with a disabled person's ability to vote if one of the machines malfunctioned and needed to be repaired or replaced. Other jurisdictions contacted by Legislative Services that use Automark machines will conduct the 2006 elections using one Automark machine at each polling place with a certain amount of backups (one per county for an average of 5% of the total number of machines in Idaho, a minimum of 10% of the total number of machines in South Dakota, and 10% of the total in Sacramento County, California).

Automark machines are only federally certified (a prerequisite to State certification) to work in conjunction with two models of optical scan systems, both of which are offered by one company, Election Systems & Software (ES&S). ES&S has partnered with Automark Technical Systems, LLC to offer the Automark machines along with their optical scan systems.

ES&S advises the lowest cost option for a one-year lease of optical scan and Automark machines would be to lease used, earlier model optical scan machines (which would reduce the cost of leasing the optical scan machines by roughly \$8 million) instead of the more recent M100 optical scan machines ES&S offers. However, a stand-alone lease of used optical scan machines along with Automark machines for the 2006 elections would leave the State in the position of needing to lease or purchase a voting system to be used for elections occurring on or after March 1, 2008. Because an optical scan system in conjunction with Automark machines appears to be the most feasible option to meet the bill's requirements applicable to elections occurring on or after March 1, 2008, a lease with an option to buy an M100 optical scan system along with Automark machines from ES&S appears to be the most cost effective way to meet the bill's requirements.

ES&S advises a lease with an option to buy M100 optical scan machines and Automark machines would not result in a greater cost than an estimate of \$39 million ES&S provided to SBE for a one-year lease of the new machines, which included the lease cost of the machines (\$5,000 per optical scan machine and \$4,950 per Automark machine) and turn-key support services to deploy the machines for the 2006 elections. The estimate assumed the need for two Automark machines per precinct as specified by SBE. If one Automark machine per precinct and a certain number of backups were used, the cost would be closer to \$29 million.

SBE advises that the costs of a contract for optical scan and Automark machines from ES&S could be closer to \$47 million as opposed to ES&S' estimate of \$39 million,

primarily due to a need for a higher level of support services than has been proposed by ES&S. Factoring in SBE's advisement, the eventual cost of a lease with an option to buy contract for the optical scan and Automark machines, that would include turn-key support services could be between \$39 million and \$47 million (if and when the machines were purchased), based on two Automark machines being placed at each precinct. If one machine per precinct and a certain number of backups were used, the cost could be closer to between \$29 million and \$37 million. If the machines were not purchased after the one-year lease, the cost of the one-year lease should be less than the above-mentioned figures, though a fee may also need to be paid for not exercising the option to buy the machines.

In addition to the above costs, there would be costs associated with State certification, security review, software installation, personnel, documentation updates, training, and voter education costs that could total roughly \$9.8 million, based on estimates provided by SBE. Factoring in these costs and the \$8.6 million that will be saved on Diebold services in fiscal 2007, the eventual cost of the lease and purchase of the machines (assuming the machines are purchased) would be between \$30 and \$38 million if one Automark machine was placed at each precinct with a certain number of backups, and between \$40 and \$48 million if two Automark machines are placed at each precinct (presumably paid for over fiscal 2006 and 2007).

Assuming the State would bear half of the costs of implementing the new voting system, State general fund expenditures would increase by between \$15 million and \$24 million (reflecting the range of total costs above, between \$30 million and \$48 million) over fiscal 2006 and 2007.

#### *Future Year Costs*

Future year expenditures would increase by roughly \$3.1 million in election years due to costs associated with ballot printing, handling, and storage for a statewide primary and general election. It is assumed these costs would be shared between the State and counties. Expenditures would also increase due to costs associated with pre-election voting system certifications as well as Internet postings required by the bill, yet these costs cannot be reliably estimated at this time.

SBE is currently projected to pay roughly \$16.8 million over fiscal 2008 and 2009 for support services associated with the Diebold touchscreen voting systems through the 2008 elections. ES&S' estimate consists of roughly \$3 million for support services costs. However, SBE's estimate of the cost of switching to the ES&S optical scan and Automark machines contains support services costs closer to \$8.5 million. It appears, based on these numbers, that there may be cost savings with respect to support services, however it is difficult to compare the support services costs between the two systems

given the current uncertainty of the actual services costs for the ES&S optical scan system and Automark machines. SBE advises there are still a number of unknowns with respect to the ES&S system and its associated costs and does not expect the overall cost of services to decrease if the ES&S system is used.

### *Fiscal 2007 Budget Bill*

The fiscal 2007 budget bill includes \$50.4 million to implement an accessible voter-verified paper audit trail or modify the existing touchscreen voting system, the majority of which is contingent on the enactment of legislation requiring the replacement of the existing voting system to allow for accessible voter-verified paper audit trails or modification of the existing system. This amount is almost split in half between general funds and locally-contributed special funds (\$25.4 million and \$25 million, respectively).

Of the \$50.4 million, \$28.6 million (\$14.5 million – general funds; \$14.1 million – special funds) is immediately available as a fiscal 2006 deficiency appropriation.

**Local Expenditures:** Assuming counties would bear half the cost of implementing the new voting system, each county would be responsible for its share of between \$15 million and \$24 million over fiscal 2006 and 2007, based on its voting age population.

In fiscal 2006 and 2007, counties would also experience additional costs associated with election judge overtime pay resulting from implementing the new voting system, and likely election judge training and voter education costs in addition to those estimated by SBE. *For illustrative purposes*, the Montgomery County Board of Elections estimates its cost for overtime pay associated with preparing for the 2006 elections with the new voting system could be roughly \$125,000.

In future years, counties would experience additional costs associated with ballot printing, handling, and storage (each county's share of roughly \$1.6 million); pre-election certifications; performing post-election audits (election judge compensation); and any costs associated with posting results on the Internet.

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## **Additional Information**

**Prior Introductions:** None.

**Cross File:** SB 713 (Senator Hollinger, *et al.*) – Education, Health, and Environmental Affairs.

**Information Source(s):** Montgomery County; Prince George's County; Caroline County; Calvert County; Howard County; State Board of Elections; Election Systems & Software; Diebold Election Systems; Automark Technical Systems; North Dakota Secretary of State; Idaho Secretary of State; Sacramento County, California; Baltimore City; Department of Legislative Services

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