

**2019 Senate State Government Hearing – SB 48
March 26, 2019**

**Testimony of Acting Secretary Kathy Boockvar
Pennsylvania Department of State**

Good morning. Thank you, Chairman Folmer, Minority Chair Williams, and members of the Senate State Government committee for allowing the Department of State (Department) to submit written comments and testify at today's hearing. Joining me today is Jonathan Marks, Deputy Secretary for Elections and Commissions.

We are pleased to have this opportunity to speak with you about Pennsylvania's election modernization and certification processes and SB 48.

Election Modernization

As you know, last April, the department directed counties to purchase new voting systems that meet current security and accessibility standards, including an auditable paper ballot that voters can review and verify before casting their ballot. We took this action to join the great majority of the country in meeting 21st-century standards of security, accessibility and auditability.

In fact, Pennsylvania is one of only 12 states still using Direct Recording Electronic (DRE) voting machines and is the only swing state still doing so. Most if not all of these states are in the process of or planning to upgrade to current paper ballot-based systems by 2020. Several of the states that most recently transitioned or are currently transitioning include Ohio, Louisiana, Georgia, Arkansas, and Delaware (which is replacing its Danaher Electec 1242 systems, the same system used in Dauphin,

Philadelphia, Delaware, and several other PA counties), and most if not all of these states appropriated state funds to be used for the procurements.

Indeed, President Trump's Department of Homeland Security, as well as the Senate and House Intelligence Committees, are urging these upgrades, and there is nearly universal agreement among national security, computer science, and election experts that all voters should be voting on systems with auditable voter-verifiable paper records by the 2020 election.

County commissioners and election directors have been extraordinarily dedicated in their research and review of the new systems available, and in taking the steps necessary to procure voting systems that provide the most secure, auditable, and accessible voting systems to all Pennsylvanians. In fact, in Pennsylvania, about 19 counties (28%) have already taken official action toward acquiring new voting systems through a vote to purchase or lease a system and/or a vote to approve funding. These counties are Beaver, Berks, Bradford, Butler, Centre, Clinton, Crawford, Greene, Lawrence, Lebanon, Lehigh, Mercer, Montgomery, Northampton, Philadelphia, Pike, Susquehanna, Venango and Westmoreland. Approximately 8 to 10 counties report they hope to deploy new voting systems for the May 2019 primary. Officials in more than 30 counties report they expect to deploy new systems for the November 2019 election, and officials in 11 counties expect to deploy machines by the April 2020 primary. Fifteen counties remain undecided about their deployment date.

Because these upgrades involve significant cost, Governor Wolf's proposed budget includes a plan to contribute at least \$75 million — a minimum of \$15 million a year for five years — to help counties pay for these new voting systems. We believe this

plan strikes a fair balance in sharing the cost of this major expenditure with local and federal entities, as all three levels of government benefit from more secure and verifiable elections and greater voter confidence. It is also consistent with the recommendations of the bi-partisan Advisory Committee on Voting Technology assembled by the Joint State Government Commission pursuant to Senate Resolution 394 of 2016. In its December 2017 report to the General Assembly, the Committee recommended that “the General Assembly provide funding to assist counties in the purchase or lease of new voting equipment that complies with the requirements for a voter-verifiable paper record and adequate security measures.”

The Governor has already committed nearly \$13.5 million in federal Help America Vote Act money to the counties that procure new systems by 2020. Included in this budget is \$674,000 for the state’s required 5-percent match, which brings the total funding available to \$14.15 million.

To further assist counties, the department has provided a statewide purchasing COSTARS contract that they can use to cut through procurement red tape and negotiate their best deal, while including specifics that will ensure they have the information required to make an informed decision that best meets their needs. All of the new voting systems’ bids have been approved and posted on COSTARS for the counties to access. We also continue to pursue more federal assistance and explore other funding and financing options to help counties with this critical expenditure.

We held six regional expos in the last year to enable county election officials and the public to try out the available new voting systems. The expos have been well-received and well-attended. In addition, in the last year, Jonathan and I and our

elections team have traveled across the commonwealth to meet personally and individually with dozens of counties' commissioners and election directors, to answer questions, offer assistance on every step of the process, serve as a central hub to help leverage negotiating power, review and give counties feedback on vendor proposals, provide suggested task lists and timelines for implementation, and recommendations for negotiation of terms. We are continuing these visits through the spring and beyond.

Voting System Certification Background

It is the duty of the Secretary of the Commonwealth, under the Pennsylvania Election Code, to examine and re-examine voting systems to ensure that they can be securely used by voters. The Election Code also mandates that the Secretary revoke the certification of any voting system that can no longer be safely used. (See 25 P.S. § 3031.5.) For a voting system to be considered for certification in the Commonwealth, it must first be examined by a federally recognized independent testing authority to standards established by the federal government and certified by the U.S. Election Assistance Commission. The voting system must then be examined by the Secretary of the Commonwealth to determine if it meets the requirements of the Pennsylvania Election Code.

Department of State Voting System Certification Program

The Department has invested significantly in the voting system certification program in the last several years. In mid-2015 through 2016, the Department and many of the counties began laying the ground work for voting system replacement. Around

this time, the Department began an effort to improve and strengthen the voting system certification program in the Commonwealth.

The first step was the hiring of a voting system analyst. After a competitive interview process, we selected a candidate with a unique combination of technical, programming, and project management experience, along with a degree in computer science to lead the Department's effort in certifying new voting systems. With her experience and background in computer science, the Department can diligently review all hardware and software components of the voting system and reliably certify systems that are secure and effective.

Additionally, the Department released a statement of work for voting system examiners in 2017. We sought candidates with a deep understanding of computer science and with experience and knowledge in evaluating voting systems. The examiners also needed to demonstrate knowledge in preventing, identifying and mitigating vulnerabilities and security risks in both computer system hardware and software.

With recent voting system certifications, the Department has worked with SLI Compliance as its voting system examiner. SLI Compliance is a qualified and knowledgeable examiner through their experience as an EAC Accredited Voting System Test Lab (VSTL), staff experience with multiple voting system manufacturers, and they maintain certifications from professional organizations such as the International Organization for Standardization (ISO) and the Institute of Electrical and Electronics Engineers (IEEE).

The Department also released a new Pennsylvania Voting System Standard in early 2018. This standard specifically focuses on enhancing our testing process regarding security, usability and accessibility. The PA Security Standard¹ was modeled on proposals received by the EAC for future directions for their voting system certification program, and incorporates tests to ensure confidentiality, vote anonymity, integrity, security, and auditability of the voting systems. The test specifications include but are not limited to:

- Penetration testing that evaluates the security of the voting system by trying to exploit potential vulnerabilities.
- Access control testing to confirm that the voting system can detect and prevent unauthorized access to the system and election data.
- Evaluation of voting system audit logging capabilities to confirm that the system logs will allow auditing, as well as investigation of any apparent fraudulent or malicious activity.
- Tests that ensure every physical access point is well secured and system software and firmware is protected from tampering.

The PA Accessibility Standard aims to provide better information about the usability of voting systems for voters with disabilities. This standard entails expert review by usability and accessibility examiners and feedback from the voters and poll workers who will use the voting systems, identifying areas of concern and level of severity as follows:

- Voters with disabilities use the system, voting a typical ballot, and provide feedback. The examiners facilitate, observe and identify best practices for use.

¹ The complete Security Standard may be found here:
<https://www.dos.pa.gov/VotingElections/Documents/Voting%20Systems/Directives/Conduct%20Directive%20Att%20E%20-%20PA%20Voting%20System%20Security%20Standard%20v06122018.pdf>

- Election officials/poll workers test the accessibility features, especially how they are activated during an election, and comment on the usability of the system.
- The expert examiners consolidate the findings into a report, identifying summary measures needed for voters to use the voting system effectively, and poll worker and voter education requirements or guidance, if any.

The Department is also working very closely with the U.S. Election Assistance Commission to identify efficiencies and overlaps in testing to cut down on redundant testing and excessive costs. The Department's testing process currently takes an average of 2 to 3 months, an improvement from the 6 to 12 months (or more) prior to 2018. The testing is aided with the assistance of a DOS employee formerly employed by the EAC who is very familiar with their process, program, standard and timeline, helping the Department identify overlaps and redundancies, as well as improving communication between the state and federal testing authorities.

U.S. Election Assistance Commission Testing & Certification Program

The U.S. Election Assistance Commission was born out of the Help America Vote Act of 2002. The same legislation that provided funding for voting system replacement in the mid-2000s also created the agency that conducts voting system testing and certification at the federal level, which is required for all systems certified in Pennsylvania. The EAC also develops Voluntary Voting System Guidelines – or a federal voting system standard – used for the testing and certification program they manage at the federal level. The EAC accredits test laboratories, conducts manufacturing facility audits, is responsible for certification and decertification of voting systems at the federal level, and holds vendors accountable through an investigative process, to meet testing and certification program requirements. The EAC spent over a

decade setting up and streamlining their certification process. In the early days of the program, it would take years to get systems through certification. Now, it takes 8 to 12 months to get a new system/full system test completed and anywhere from 1 to 3 months to get system modification tests completed.

Prior to the existence of the EAC, the National Association of State Election Directors had a committee that reviewed test reports from Independent Test Authorities, and “certified” systems at the federal level, to standards created in 1990 by the Federal Election Commission. The majority of systems currently in use in Pennsylvania were manufactured to meet these 1990 standards, which were adopted by the EAC in 2002. It took at least a year for systems to get through this process and committee members may or may not have had experience, training and skills needed for this work.

Four new voting systems have been certified under the state’s new security and accessibility standards as well as federal standards. A fifth voting system has successfully completed state and federal testing and official certification will be released shortly. A sixth system is nearing the conclusion of its certification testing.

Decertification

Anyone who has certified a voting system does not take the burden of decertification lightly. At the state and federal level, every effort is made to cure the problem with the system – software, hardware or even vendor support – prior to decertification. But if the Secretary of the Commonwealth, based on the evidence provided by testing, review, and expert analysis in voting system certification, can no

longer affirm the safety, security, or demonstrable accuracy of the system, they have little choice but decertification.

Sometimes decertification must happen very quickly, and it is very important to have a process in place that has the resiliency, knowledge base, and flexibility to study the issues quickly and assess whether changes must be made. For example, in late 2007, the Department was notified of an anomaly with the AVS Winvote system. The Department worked closely with the vendor to develop a plan and timeline to get the needed changes tested by the EAC and in to Pennsylvania for certification. Just as everyone agreed to the plan, the vendor backed out. The Department was left with no choice but to decertify the equipment. This decision was made in December 2007 and communicated immediately to the impacted counties (Northampton, Lackawanna and Wayne). Those counties, with the help of the Department and fellow county election directors, were able to quickly acquire new equipment and train themselves and their poll workers in time for the presidential primary in April 2008. This same equipment was later also decertified in Virginia, two months before an election, and other states have had to make these types of decisions quickly as well.

While the decision to decertify is never taken lightly, it must be done efficiently to safeguard the integrity of our elections. Because primaries and elections occur in the Commonwealth at least twice every year, adding a months-long review process could unnecessarily hamper the ability of the department and the counties to address known threats and deficiencies. Additionally, SB 48's proposal may give the appearance of political influence in the process, rather than relying on a scientific assessment of the security and accuracy of the systems. Last, if the EAC decertifies a system or systems

at the federal level, we are likely to have no choice but to decertify immediately, due to the Pennsylvania Election Code's federal certification prerequisite to state certification.

Additionally, several courts, including in PA, have issued decisions in recent months indicating that states and counties that continue to employ paperless voting systems may violate voters' federal constitutional rights. Had we continued to oppose the PA litigation, we faced the risk that the Court could have ordered a much shorter time frame for counties to transition to new machines than the plan currently allows. Without admitting liability and to avoid this outcome, the Department of State entered into a settlement agreement, to continue the path we had already started – replacing all voting systems with new systems meeting current standards by 2020. If we don't upgrade by 2020, we also face the likelihood of a petition for re-examination of the DRE voting machines used in PA. PA's statute allows any 10 registered voters to require the commonwealth to reexamine any voting machine currently in use. We do not believe any of the current machines in use would meet current standards, and DOS would have to immediately decertify the machines, which could cause a shorter time frame for transition to new machines than the plan currently allows.

Conclusion

The existing statutes relating to certification and decertification in Pennsylvania have been working well for decades and include sufficient detail to ensure that these decisions are made only as necessary, based on standards requiring security, safety, and demonstrable accuracy. The statutes ensure that the voters of Pennsylvania will be able to have confidence in the security and verifiability of their vote and the results of our elections, even as technology changes.

Despite the cost, we believe the Commonwealth must continue to move forward with the upgrade to more secure, accessible, and auditable systems without delay, based on the nearly unanimous recommendations of security experts, and consistent with the rest of the country. The Administration is strongly committed to working with the legislature to help fund these necessary upgrades on behalf of Pennsylvania voters, as recommended in December 2017 by the bi-partisan Advisory Committee on Voting Technology assembled by the Joint State Government Commission. Pennsylvania counties are demonstrating great leadership in moving these transitions forward, and we hope to work with the legislature to support them and make this investment in our democracy in a fair and fiscally responsible manner.

Thank you for your time and attention and for this opportunity to appear before you.