

**Senate State Government Committee  
Public Hearing on SB 1249  
September 25, 2018, 9:30 AM  
Dauphin County Administration Building  
Written Testimony of Jonathan Marks, Commissioner  
Pennsylvania Department of State  
Bureau of Commissions, Elections and Legislation**

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. We are pleased to provide the following overview of the national environment, state process and timelines for voting system replacement, information about the certification of new voting systems and the standards for certification, the status of county endeavors, and support for Election administration reforms.

**I. Overview of National Context and Commonwealth Process**

Secure, resilient and accessible elections are of great importance to all of us who administer them. As public servants charged with protecting our most fundamental right, we are always attentive to our responsibility to ensure that right can be exercised freely, securely and with full confidence in the integrity of both the processes and the machinery of elections. By virtually everyone's standards, our current voting systems are approaching the end of their usable life, and they are built on operating systems that are no longer supported or soon will not be supported by the manufacturers. Over the last year, experts and elected officials from across the country and world, including the President of the United States, U.S. Senate Intelligence Committee, and the U.S. Department of Homeland Security, have issued strong warnings about the risks and vulnerabilities we face from both cyber threats and aging voting systems.<sup>1</sup>

These experts, including professionals in national security, intelligence, computer science, elections, and more, have urged states to act as quickly as possible, to replace older voting machines with voting systems that produce a paper record that voters can verify, and which enable robust post-election audits. For example, in the last several months, U.S. Homeland Security Secretary Kirstjen Nielsen has been escalating her calls for states and counties to quickly implement these types of systems. Over the last month, she has called on "every state in the Union to ensure that by the 2020 election, they have redundant, auditable election systems. The best way to do that is with a physical paper trail and effective audits so that Americans can be confident that — no matter what — their vote is counted and counted correctly."<sup>2</sup>

---

<sup>1</sup> See, e.g., President Trump's Executive Order on *Imposing Certain Sanctions in the Event of Foreign Interference in a United States Election*, <https://www.whitehouse.gov/presidential-actions/executive-order-imposing-certain-sanctions-event-foreign-interference-united-states-election/> (declaring a national emergency to deal with this threat)(September 12, 2018); U.S. Senate Intelligence Committee Report, Summary of Initial Findings and Recommendations (May 2018), <https://www.burr.senate.gov/imo/media/doc/RussRptInstlmt1-%20ElecSec%20Findings,Recs2.pdf>.

<sup>2</sup>Secretary Kirstjen M. Nielsen Remarks: Rethinking Homeland Security in an Age of Disruption, <https://www.dhs.gov/news/2018/09/05/secretary-nielsen-remarks-rethinking-homeland-security-age-disruption>; <https://www.washingtonpost.com/world/national-security/hacking-cyberattacks-now-the-biggest-threat-to-us->

The STEM sector and other professional fields also strongly urge these actions. This month, the National Academies of Sciences, Engineering, and Medicine issued a report, "Securing the Vote: Protecting American Democracy." The report assesses current technology and standards for voting, and recommends steps that federal, state, and local governments, election administrators, and vendors of voting technology should take to improve the security of election infrastructure, including that all elections should be conducted with paper ballots by 2020, and states should mandate risk-limiting audits within a decade.<sup>3</sup> Additionally, multiple courts have issued decisions in recent weeks indicating that states and counties that fail to heed these changed standards for security and continue to employ paperless Direct Recording Electronic voting machines (DREs) may violate voters' federal constitutional rights.<sup>4</sup> Pennsylvania is one of only a handful of states remaining that use all or primarily paperless voting systems.

In light of these circumstances, and pursuant to our statutory responsibility, the Department has the obligation to determine whether a voting system has adequate security measures and demonstrable accuracy, such that the Commonwealth's voters can have confidence that their vote is secure and will be accurately counted. Due to the age of our voting systems, the changing nature of the threats we face, and the virtually unanimous sentiment that voting systems must be fully auditable and capable of recovering quickly from error or attack, we have determined that our current voting systems need to be responsibly upgraded. Toward this end, the Department has been effectuating a conscientious and feasible plan to ensure that Pennsylvania voters are using the most secure, auditable, accessible, and resilient voting machines available, meeting current security standards. To do this responsibly, the Department spoke with many states and counties about timelines under which this transition could occur, and determined that while we could not expect counties to achieve this goal in 2018, that 2019 or early 2020 would provide at least as much time as many other jurisdictions which have transitioned.

---

[trumps-homeland-security-chief-warns/2018/09/05/d0045800-b119-11e8-a20b-5f4f84429666\\_story.html?utm\\_term=.9da708d971c8](https://www.washingtonpost.com/news/technology/wp/2018/09/05/d0045800-b119-11e8-a20b-5f4f84429666_story.html?utm_term=.9da708d971c8); See also <https://thehill.com/policy/cybersecurity/403148-dhs-chief-calls-on-election-officials-in-all-50-states-to-have> ("Nielsen told a group of reporters touring the Department of Homeland Security's National Cybersecurity and Communications Integration Center (NCCIC) in Arlington, Va., that she wants "all state and local election officials to make certain that by the 2020 presidential election, every American votes on a verifiable and auditable ballot.")

<sup>3</sup> <http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=25120>; See also National Election Defense Coalition Letter to Elections Officials, <https://www.electiondefense.org/letter-to-elections-officials> (including support from FreedomWorks and Americans for Tax Reform, among many other bi-partisan and non-partisan organizations and officials).

<sup>4</sup> See, e.g., *Stein v. Cortés*, U.S. District Court, E.D. Pa., 2:16-cv-6287 (Decision 09/07/18 at 40-1) (Denying the Department's Motion to Dismiss some of the plaintiffs' constitutional claims, allowing claims to go forward alleging that the use of the paperless DREs may violate plaintiffs' First Amendment, Due process, and Equal protection claims based on the risk of casting an ineffective vote and based on the unequal use of DREs in some counties but not others, and indicating that defendants will have to "justify" continuing to use paperless DREs); *Curling v. Kemp*, U.S. District Court, N.D. Georgia, 1:17-cv-02989, (Decision 09/17/18) (Giving substantial weight to the fact that "National security experts and cybersecurity experts at the highest levels of our nation's government and institutions have weighed in on the specific issue of DRE systems in upcoming elections and found them to be highly vulnerable to interference, particularly in the absence of any paper ballot audit trail;" and finding that Plaintiffs are substantially likely to succeed on the merits of one or more of their constitutional claims, that the DRE voting system deprives them or puts them at imminent risk of deprivation of their fundamental right to cast an effective vote (i.e., a vote that is accurately counted), and when they vote by DRE, their vote is in jeopardy of being counted less accurately and thus given less weight than a paper ballot.)

To initiate our plan, in December 2017, the Department held a voting systems vendor forum that was open to the public, county election officials, and other stakeholders, to begin exploring new voting machines options for Pennsylvania. In February 2018, the Department issued a directive requiring that all new voting systems procured by Pennsylvania counties have a voter-verifiable paper record. In April 2018, we released an Invitation for Bid (IFB) for vendors to submit proposals for these systems from which counties may choose. We also issued further direction that Pennsylvania counties must select new voting systems that meet these standards by December 31, 2019, urging the counties to implement these new voting systems as soon as feasible and no later than the 2020 Primary Election. On April 26, the Department held a voting systems vendor demonstration, allowing the public, legislators, county officials, press and all stakeholders to view and try the new voting systems under consideration. (Thank you to Senator Folmer for attending this demo.)

Over the last 10 months, the Department has visited dozens of counties, spoken at several county government conferences, provided counties feedback on proposals, suggested timelines for implementation, recommendations for negotiation of terms, and much more. More details on the status of county endeavors will be provided later in this testimony.

## **II. Certification and Standards for New Systems**

To ensure the highest level of security, resiliency, and accessibility for Pennsylvania voters, the Department released new voting system security and accessibility standards in Spring 2018, in order to meet current expert recommendations on security and accessibility. New voting equipment must not only include voter-verifiable paper records and achieve U.S. Election Assistance Commission (EAC) certification, but must also be assessed under these comprehensive state standards.

The PA Security Standard<sup>5</sup> 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 its 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.

---

<sup>5</sup> 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>

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 reasonable length PA ballot, and providing feedback. The examiners facilitate, observe and identify best practices for use.
- Election officials/poll workers test the accessibility features, especially how they are activated during an election, and comment on the usability of 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.

One voting system has already completed state and federal certification. A second voting system is wrapping up its testing after addressing issues identified during Kansas's primary election in August; we expect this testing to be complete in September and the system to be ready for certification. A third voting system has completed federal certification, was examined by the state at the end of August, and is on schedule to finish certification in Fall 2018. A fourth system has completed its federal testing and will be tested by the state in October. A fifth system has begun testing for both federal and state certification, and is expected to be ready for certification by Fall/Winter 2018. A sixth system is expected to initiate its process for federal and state certification in late Fall 2018.

With the transition to voting systems with paper records, the Commonwealth will also be bolstering our post-election audit requirements. We are currently gathering information about different models of risk-limiting audits to identify options that are not only effective but also as straightforward as possible to implement.

### **III. Status of County Endeavors**

The Department has been traveling around the state meeting with county commissioners, election directors, and other interested personnel to answer questions, offer assistance on every step of the process, serve as a central hub to help leverage negotiating power, and provide suggested task lists and timelines. Most counties have for months or even longer been exploring voting systems options, examining machines, seeking public input and quotes from vendors, and assessing preferred timeframes for implementation. One county, Susquehanna County, procured new systems and is implementing those new systems in the upcoming November election. Several other counties are planning to follow soon and implement new systems in the 2019 primary. Most counties appear most likely to implement new systems in the 2019 general election, though some counties may choose to implement in the 2020 primary.

The Department is working closely to provide support and assistance to all the counties, including the largest county, Philadelphia, which is working hard to take the steps necessary to procure and implement new systems. Philadelphia issued a Request for Information (RFI) on June 4, 2018, which stated their seeking of "statements of interest, capabilities, and Rough Order of Magnitude (ROM) cost estimates from all Respondents interested in, and capable of,

providing a State of Pennsylvania certified solution for Election Systems to include voting machines, electronic poll books and associated components in time for the 2019 General Election.”<sup>6</sup> The Department will also be holding six regional voting system demonstrations around the state in November and December, both to assist counties and to provide public education. In addition, three legislative briefings will be held in the next month.

Not surprisingly, the biggest concern expressed by most counties is funding. The Department is investigating every option for funding and financing, including grant opportunities, creative financing options, appropriations, partnerships, bonds, leases and more. We have designated 100% of the funds Pennsylvania will receive in federal funding under the Omnibus Appropriations Act of 2018 to be distributed proportionately to the counties for replacement of the voting systems, which will total \$14.15 million including the state’s 5-percent match. Though a welcome down payment, this is obviously not nearly enough. The administration is advocating strongly for additional federal funding, and is committed to working with the Pennsylvania legislature for an appropriation of state funding next year. We expect this system replacement initiative to be a cost-share of federal, state, and local dollars. We are also exploring options for long-term planning and saving for future system upgrade needs.

#### **IV. PA Election Law Advisory Board and other Election Administration Reforms**

The Department is keenly aware that replacing aging voting equipment is only one piece of restoring and maintaining voters’ confidence in elections. When we meet with county election officials, they express their objectives to make the voting experience better for their voters, but feel constrained by outdated election laws that limit their ability to be responsive to the needs of today’s voters. These election officials have some valuable ideas about how to both serve their voters better, and increase efficiency and cost-savings, as evidenced by their thoughtful testimony here today. We share many of these goals, including enacting No-excuse Absentee Voting with timeframes and procedures that meet today’s needs, reducing wasteful and outdated printing requirements, and addressing poll worker shortages, among other issues. We are reviewing the Pennsylvania Election Law Advisory Board bill proposed by Senator Vogel and look forward to continuing our collaboration with county election officials, other elections stakeholders, and the legislature to modernize Commonwealth elections.

#### **V. Conclusion**

The Commonwealth’s voting processes work well and voters can be confident in casting their votes, thanks to the robust security measures that are in place to protect the integrity of our elections and the equally robust commitment of local, state, and federal officials. County elections personnel and the tens of thousands of poll workers who will be on duty at polling locations across the Commonwealth on November 6<sup>th</sup> are extremely dedicated and work diligently to provide the most secure and efficient elections they can to their voters. The Department works closely with all 67 county boards of elections, as well as experts from the

---

<sup>6</sup> For the complete RFI, see <http://www.phila.gov/rfp/Documents/Election%20Systems%20RFI%20for%20Review%20and%20Posting%20FINAL.pdf>.

state and federal Departments of Homeland Security, Center for Internet Security (CIS), the National Guard, the PA Emergency Management Agency (PEMA), state and county IT staff, PA State Police, and many other key partners, and these partnerships and resources have grown tremendously over the last year.

Nonetheless, we must move forward responsibly based on the nearly unanimous recommendations of security experts. The Administration is strongly committed to working with the legislature to help fund these necessary upgrades on behalf of Pennsylvania voters, and to pass legislation to improve efficiency, cost-savings, and increasing accessibility for the voters of this Commonwealth.

Thank you for your time and efforts to enhance election security and enact voting reforms.