



## Voting System Standards

[FEC HOME](#) > [AGENDAS](#) > [12/13/2001 AGENDA](#) > [AGENDA DOCUMENTS 01-62 and 01-62a](#)

This document is part of Agenda Document Number 01-62a on the agenda for consideration at the December 13, 2001, meeting of the Federal Election Commission.

1 **FEDERAL ELECTION COMMISSION**

2 [NOTICE 2001 - ]

3 **VOLUNTARY STANDARDS FOR COMPUTERIZED VOTING SYSTEMS**

4  
5 **AGENCY:** Federal Election Commission.

6 **ACTION:** Notice with request for comments.

7 **SUMMARY:** The Federal Election Commission (the “FEC”) requests comments on the  
8 second draft of the revisions to the 1990 national voluntary performance  
9 standards for computerized voting systems and the first draft of the revisions  
10 to the 1990 national test standards. Please note that these drafts do not  
11 represent a final decision by the Commission. The FEC will publish a Federal  
12 Register notice when both volumes of the final revised standards are issued.  
13 Note also that the text of the final documents will not become part of the Code  
14 of Federal Regulations because they are intended only as guidelines for states  
15 and voting system vendors. States may mandate the specifications and  
16 procedures through their own statutes, regulations, or administrative rules.  
17 Voting system vendors may voluntarily adhere to the standards to ensure the  
18 reliability, accuracy, and integrity of their products. Further information is  
19 provided in the supplementary information that follows.

20 **DATE:** Comments must be received on or before February 1, 2002.

21 **ADDRESSES:** Copies of the draft revised performance and test standards may be found on  
22 the Federal Election Commission’s web site at [www.fec.gov/elections.html](http://www.fec.gov/elections.html),  
23 or may be requested by contacting the Office of Election Administration,

1 Federal Election Commission, 999 E. Street, N.W., Washington, D.C. 20463.  
2 They may also be requested in person at the Office of Election  
3 Administration, 800 N. Capital St., N.W., Washington, D.C., Suite 600.  
4 All comments should be addressed to Ms. Penelope Bonsall, Director, Office  
5 of Election Administration, and must be submitted in either written or  
6 electronic form. Because no anonymous submissions will be considered, all  
7 submissions must include the commenter's full name, postal mail address, and  
8 electronic mail address if submitted by e-mail. Written comments should be  
9 sent to the Office of Election Administration, Federal Election Commission,  
10 999 E. Street, N.W., Washington, D.C., 20463. Faxed comments should be  
11 sent to (202) 219-8500, although it is advisable to send a printed copy to  
12 ensure legibility. Comments can be submitted electronically to [vss@fec.gov](mailto:vss@fec.gov).  
13 It is suggested that electronic comments that are submitted as attachments use  
14 Microsoft Word and that all comments avoid the use of special characters or  
15 encryption. Comments can be submitted through the close of business on  
16 February 1, 2002

17 **FOR FURTHER**  
18 **INFORMATION**

19 **CONTACT:** Ms. Penelope Bonsall, Director, Office of Election Administration, 999 E.  
20 Street, N.W., Washington, DC 20463; Telephone: (202) 694-1095; Toll free  
21 (800) 424-9530, extension 1095.

22 **SUPPLEMENTARY**

23 **INFORMATION:** In 1990, the FEC and its Office of Election Administration promulgated  
24 standards for computerized election equipment pursuant to its responsibilities under 2 U.S.C  
25 438(a)(10), which requires the FEC to "serve as a national clearinghouse for the compilation and

1 review of procedures with respect to the administration of Federal elections.” The resulting  
2 product is the Voting System Standards (the “Standards”). Although voluntary, the Standards  
3 have been adopted in 38 states in whole or in part and are used to design systems and procure  
4 equipment to meet the needs of diverse jurisdictions serving a wide variety of voting populations  
5 and election formats.

6         The Standards are designed to provide technical specifications and documentation  
7 requirements to vendors that intend to sell systems in the states that require compliance with the  
8 Standards. In order to show compliance, a vendor must submit its system for qualification  
9 testing. The qualification testing is done through an Independent Testing Authority (“ITA”) that  
10 has been certified by the National Association of State Election Directors (“NASED”). Once a  
11 system has completed the ITA process, it receives a NASED Qualified identification number. In  
12 order to maintain its status as a NASED qualified system, the hardware and software must be  
13 identical to the hardware and software tested by the ITA.

14         The Standards are designed to guide development of computerized voting systems. To  
15 this extent, the only voting systems that are addressed in the Standards are electronic DRE  
16 systems and paper-based systems that utilize electronic technology to count ballots. The  
17 Standards do not address lever machines systems, as there are currently no manufacturers that  
18 design systems using such machines.

19         Periodic revisions to the Standards are necessary to reflect the development of emerging  
20 technology in voting systems and design innovations. Increasingly, voting system vendors are  
21 designing systems that use electronic and telecommunications components not addressed in the  
22 original standards. As a result, proposed revisions have been developed by the FEC that reflect  
23 the technologies contemplated by the voting system industry. Also, the Standards acknowledge

1 the impact of the Americans with Disabilities Act and provide specifications so that voting  
2 system vendors can design systems that allow a voter with a disability to exercise his or her  
3 democratically protected right to vote.

4         Additionally, the revised Standards incorporate a broadened understanding of what  
5 constitutes a voting system by including not just the machine used by voters to cast ballots, but  
6 also certain components of the Election Management System (EMS), the telecommunications  
7 system (where applicable), and the ballot counting system. The revised Standards augment the  
8 requirements for the EMS, addressing preparation of the ballot, election-specific coding of  
9 software, and vote consolidation and reporting processes. The Standards do not provide  
10 guidance to computerized election database systems that are not part of the voting system itself.  
11 Such systems include voter registration databases and other consolidated databases used by  
12 election officials. The FEC's Office of Election Administration has produced other documents,  
13 available upon request, that can assist election officials and other interested parties in developing  
14 and maintaining such systems.

15         The FEC recognizes that human interface considerations are an integral part of  
16 developing an accurate, reliable voting system. The FEC has allocated funds to investigate  
17 human factors issues and is developing specifications that can be used in conjunction with both  
18 the Standards and other FEC operational and management guidelines to ensure that human  
19 factors considerations are given an important place in the development and procurement of  
20 voting systems.

21         The 1990 Standards were released as a single volume. However, the new Standards are  
22 divided into two volumes, both included in this release. Volume I provides functional and

1 technical requirements for a number of system types and configurations. Volume II provides  
2 testing specifications for the requirements of Volume I.

3 On July 10, 2001, the Commission published a Federal Register notice requesting  
4 comments on the first draft of Volume I of the revised Standards. 66 FR 35978. Public  
5 comment was significant in both volume and content. Over 350 comments from over 40  
6 commentators provided ideas and approaches to the Standards that greatly enhance their use by  
7 vendors, election officials, and voters. Because of this feedback, substantive changes were made  
8 to Volume I and a second draft of this document is being released for additional public comment.  
9 Although many of the comments on Volume I were helpful in devising the content of Volume II,  
10 this will be the first opportunity for the public to comment on its specific content.

11 The documents released with this notice include an Overview document, Volume I of the  
12 Standards (containing nine sections and three appendices), and Volume II of the Standards  
13 (containing seven sections and four appendices). The overview document explains in detail the  
14 history of the Standards project, provides a description of how the Standards fit into the election  
15 vending process, and gives an explanation of the reasoning behind the inclusions and exclusions  
16 of various systems, requirements, and test methods. Volume I of the Standards contains  
17 functional requirements (Section 2) that outline system benchmarks. The Standards also  
18 anticipate an increased demand for equipment that meets the needs of people with disabilities. In  
19 order to address these needs, the FEC consulted with the Access Board, the federal agency that  
20 developed access guidelines for federal information technology, to produce specific  
21 requirements to help guide vendors in the development of systems that increase accessibility to  
22 voters with disabilities (Section 2.6).

1           The Standards provide specific requirements for system software (Section 3) and  
2 hardware (Section 4). Additionally, the Standards anticipate that voting systems will move  
3 increasingly towards the use of telecommunications to cast ballots, consolidate vote data, and  
4 report results. As such, two sections of Volume I of the Standards outline requirements to guide  
5 selection of proper telecommunications equipment (Section 5) and ensure that the introduction of  
6 telecommunications equipment does not compromise the security and secrecy demanded by the  
7 election process (Section 6). Section 6 also addresses security and secrecy requirements for a  
8 voting system’s software, hardware, and administrative procedures (as specified by the vendor).

9           Volume I of the Standards also provides information on quality assurance (Section 7) and  
10 configuration management issues (Section 8). These sections are tailored towards the unique  
11 needs of the election system industry, and are designed to provide guidance in sound  
12 management practices without posing an undue burden on small companies that have  
13 traditionally formed the backbone of the election system industry.

14           Section 9 of Volume I of the Standards provides an introduction and overview to the  
15 testing process necessary for a system to be qualified. The testing processes and specifications  
16 themselves are found in the body of Volume II.

17           Ultimately, the Standards are only a component of the necessary steps to ensure reliable,  
18 accurate, and secure elections. A qualified system has passed certain benchmarks for accuracy  
19 and reliability, but this is not sufficient to ensure overall system reliability unless jurisdictions  
20 who purchase the system use sound procurement and management practices to ensure that the  
21 system’s security, accuracy, and reliability are protected during the election cycle itself.  
22 Because such practices are related to the actions of voting officials rather than vendors, they are  
23 clearly outside the scope of the Standards. However, the Standards mandate a significant

1 amount of disclosure from vendors in order to provide a clear understanding to election officials  
2 of how the system can be optimally operated.

3 The FEC invites all interested parties to submit comments. It is requested that each  
4 commenter indicate if he or she is willing to appear before the Commission. The FEC asks that,  
5 where appropriate, submitted comments reference the specific sections of the Standards that are  
6 germane to the submitted comment. Additionally, the FEC requests that comments regarding  
7 specific content be accompanied by specific suggestions for alterations to language or technical  
8 specifications, so that the Commission may consider changes that best reflect the intent of the  
9 commenter. Comments suggesting the use of alternate industry standards should provide the  
10 standard industry reference.

11  
12  
13  
14  
15  
16  
17  
18  
19  
20

\_\_\_\_\_  
Danny L. McDonald  
Chairman  
Federal Election Commission

DATED: \_\_\_\_\_  
BILLING CODE: 6715-01-P