

Election Equipment used in ND

According to the email from Lee Ann Oliver, Election Specialist, to Representative Ertelt, the entire state of North Dakota uses the same election equipment purchased from the same vendor. ND uses the Election Systems & Software (ES&S) DS200, DS450, and the Express Vote.

I reviewed the ES&S website at: <https://www.essvote.com/products/> and noted the following:

- DS200 is a precinct scanner and tabulator that uses digital-imaging technology to support paper-based voting.
- DS450 is a high-throughput scanner and tabulator
- Express Vote is a touch-screen system that produces a paper record for tabulation.

In addition, ND uses hand-marked ballots compared to certain states that utilize paperless election equipment. Thus, in the event of a contested election, ND would have auditable records to support to election results.

A limited internet search related to election voting machine issues identified vulnerabilities and irregularities with ES&S iVotronic DRE, which is a direct reporting electronic voting machine with no paper backup.

- DEFCON 25 Voting Machine Hacking Village *Report on Cyber Vulnerabilities in U.S. Election Equipment, Databases, and Infrastructure*:
 - Among the most vulnerable voting systems are Direct Recording Electronic (DRE) voting machines.
 - Lesson #1: Even with limited resources, time, and information, voting systems can be hacked.
 - Lesson #2: Foreign-made parts introduce serious supply chain concerns.

<https://www.defcon.org/images/defcon-25/DEF%20CON%2025%20voting%20village%20report.pdf>

- Is Technology the Answer? Software Quality Issues in Electronic Voting Systems
 - Issues with South Carolina's paperless ES&S iVotronic DRE.

https://cse.sc.edu/~buell/Public_Data/2019_VotingMachines.pdf

- Scientists said to buy cheaper, safer voter machines. SC spent \$51M on these instead
 - Top scholars prefer hand-marked paper ballot systems vs. paperless voting systems.

<https://www.thestate.com/news/politics-government/election/article246806162.html>

- Vulnerability & Security Assessment Report Election Systems & Software's Unity 3.1.1.0 identified vulnerability and security issues with the DS200.

<https://verifiedvoting.org/wp-content/uploads/2020/08/ESS-red-team-CA-2016.pdf>

- Wisconsin Elections Committee June 20, 2017 approved the use of ES&S software platform, including DS200 and DS450 for use in Wisconsin.

https://verifiedvoting.org/wp-content/uploads/2020/08/es_s_evs_5220_5320_commission_memo_pdf_11654.pdf

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North Dakota Century Code

- 16.1-01-01(2)(I). The secretary of state shall develop and conduct a test election for the state's voting system prior to each statewide election utilizing the votes cast within each county according to the logic and accuracy testing required in section 16.1-06-15.
- 16.1-06-15. Mandatory testing of electronic voting systems before each election and after tabulation of ballots.
 - 16.1-06-15(1). County auditors perform tests prior to the election.
 - 16.1-06.15(5). After each election, the Secretary of State shall order a random testing of the voting system programming for one precinct in each county...