

Voting Machine Purchase Deadline Looming - counties must meet January 20 deadline to contract for new equipment.

Due to federal and state requirements for voting machines, counties must choose new voting equipment right away. Counties must have new equipment delivered and precinct workers trained before early primary voting begins in April.

You have a choice of

- optical scan systems with ballot marking devices,
- Direct Record Electronic systems (DREs) which are also known as touchscreen or pushbutton electronic or,
- hand counted paper ballots

In this letter we address the funding source, purchase costs, operating costs, information about upcoming demos, and additional background information on voting systems.

DETAILS ON FUNDING - CONSIDER THE PURCHASE COST AND THE OPERATING COSTS

Purchase Cost

Each county is eligible for up to \$12,000 per precinct for machines, plus \$1.00 per registered voter up to \$100,000 for software.

This is enough money to pay for new optical scan/ballot marking systems for each county.

Counties that want the more expensive touchscreen or direct record machines will have to pay the difference of at least 2 to 3 times more - from their own budget.

Text of the law: <http://www.ncleg.net/Sessions/2005/Bills/Senate/HTML/S223v7.html>

Financial analysis from the state government -- using data supplied by the State Board of Elections <http://www.ncleg.net/Sessions/2005/FiscalNotes/Senate/PDF/SFN0223v4n1.pdf>

Operating Cost

Once you purchase the equipment, your county budget will pay the costs of that operating equipment.

Counties that use electronic voting equipment (touchscreen or pushbutton) spend about 30-40% more than optical scan counties, on an annual basis. This can be a real budget buster for some.

ANALYSIS OF NET ANNUAL EXPENDITURES BASED ON VOTING SYSTEM TYPE

Precinct-Based Optical Scanners							
Wake County				Durham County			
Year	Expend	Reg Voters	Cost/Voter	Year	Expend	Reg Voters	Cost/Voter
'04	\$1,455,458	460,821	\$3.16	04	\$556,923	175,322	\$3.18
'03	\$1,951,178	415,649	\$4.69	'03	\$703,031	158,916	\$4.42
'02	\$1,232,426	403,050	\$3.06	'02	\$506,287	154,950	\$3.27
'01	\$1,539,268	426,375	\$3.61	'01	\$668,777	152,324	\$4.39
'00	\$1,250,349	411,121	\$3.04	'00	\$547,576	156,131	\$3.51
'99	\$1,434,369	377,435	\$3.80	'99	\$437,795	150,984	\$2.90
6 Year Total:	\$8,863,048			6 Year Total:	\$3,420,389		
Average:	\$1,477,175		\$3.56	Average:	\$570,065		\$3.61
Direct Record Electronic Voting Machines							
Guilford County				Mecklenburg County			
Year	Expend	Reg Voters	Cost/Voter	Year	Expend	Reg Voters	Cost/Voter
'04	\$1,569,894	290,129	\$5.41	'04	\$2,400,533	470,849	\$5.10
'03	\$1,776,383	268,368	\$6.62	'03	\$2,549,260	426,212	\$5.98
'02	\$1,298,271	276,492	\$4.70	'02	\$2,266,099	442,055	\$5.13
'01	\$1,285,192	274,357	\$4.68	'01	\$2,195,750	434,335	\$5.06
'00	\$1,181,877	279,221	\$4.23	'00	\$2,457,602	467,875	\$5.25
'99	\$1,101,522	267,650	\$4.12	'99	\$1,670,825	433,121	\$3.86
6 Year Total:	\$8,213,139			6 Year Total:	\$13,540,069		
Average:	\$1,368,857		\$4.96	Average:	\$2,256,678		\$5.06

BACKGROUND INFORMATION ON VOTING SYSTEMS Touchscreens verses Optical Scanners

Optical Scan + ballot marking device for each County cost \$10,000 - \$12,000 per precinct

- State grant will pay completely for Optical Scan and Ballot Marking Devices
- Meets state, federal law
- Meets disabled requirements
- Disabled find this most user friendly
- Cost 30-40% less to operate annually
- One optical scanner serves at least 3,000 voters in a day

Touch-screens or pushbutton DREs - would cost \$20,000-\$40,000 per precinct at least

- County will pay \$thousands or \$millions above the HAVA funding
- Not required by state or federal law
- Does not meet most disabled requirements, may require replacement in 2007
- Uses ballot on a reel, thermal paper, violates secrecy of vote
- 20% failure rate in live test of ballot on reel this July in California
- This type DRE had blank paper ballots at end of day in Ohio 2005 elections
- Proven to have a higher undervote rate based on North Carolina 2004 election data
- DREs cost more to own and operate, based on real study of NC counties, over 6 year period
- One DRE serves no more than 170 people in a day with less than 5 minutes each to vote

In 2004, Guilford County NC's Board of Elections(touchscreen county) spent \$114,436 in operating expenses than Wake County's BOE, (an optical scan county) yet has 170,692 less registered voters!

See cost comparison of 2 large optical scan counties and 2 large DRE counties

<http://www.ncvoter.net/affordable.html>

It isn't wise for the State/County to waste \$Millions of hard earned tax dollars.
Nor should the State/Counties cut services to voters by consolidating precincts.

Financial analysis of meeting NC VVPB law and HAVA -- using data supplied by the State Board of Elections

<http://www.ncleg.net/Sessions/2005/FiscalNotes/Senate/PDF/SFN0223v4n1.pdf>

DREs cost 30-40% more to operate, NC study

<http://www.ncvoter.net/affordable.html>

DREs cost 40% more to operate, Florida study

<http://www.votersunite.org/info/costcomparisonextended.asp>

DREs require about 20% more poll workers, 10% more precincts

<http://www.cs.duke.edu/~justin/voting/VotingForumUU.ppt>

Ballot on reel touch-screens (Diebold) 20% failure rate, systems crash, printer jams

http://www.votetrustusa.org/index.php?option=com_content&task=view&id=96&Itemid=30

Lucas Co., Ohio -paper record was blank on the two busiest voting machines at one polling site. The

<http://toledoblade.com/apps/pbcs.dll/article?AID=/20051120/NEWS09/511200359>

Blind voters **prefer** ballot marking devices to **touch screen** machines.

<http://www.yesweekly.com/main.asp?SectionID=1&SubSectionID=1&ArticleID=603&TM=48903.21>

Verified Voting Foundation recommends optical scan and ballot marking for disabled

<http://www.verifiedvotingfoundation.org/article.php?id=6254>

DREs have higher undervote rate in NC

<http://www.cs.duke.edu/~justin/voting/totals.html>

DREs have high undervote rate and phantom votes in NM

<http://www.votersunite.org/info/newmexicophantomvotes.asp>

Dr. Rebecca Mercuri recommends optical scan at this time

<http://www.ncleg.net/committees/jointselectcomm /january72005mee /mercurinlegisl/mercurinlegisl.pdf>

North Carolina State Board of Elections website

<http://www.app2.sboe.state.nc.us/>

Regional Demonstrations scheduled Dec 12, 13, 14, and 15

The regional demonstrations as set out in the attached memo are designed for the county boards to meet their requirements under GS 163-165.9.

The demonstrations will be held at the following locations:

Fayetteville Technical Community College - December 12th, 2005

Willis Building Auditorium in Greenville - December 13th, 2005

Marriott in downtown Greensboro - December 14th, 2005

Asheville-Buncombe Technical Community College - December 15th, 2005

All demonstrations will begin at 2:00 pm and end at 7:00 pm

QUESTIONS FOR VENDORS

A. WHAT DID THEY BRING

1.a. ES&S – Did you bring the Automark which is federally certified with your optical scanner? (Several states recently switched to your optical scan systems, including Arizona, Minnesota, and Nebraska -- 1 page per state is attached).

1.b. ES&S – Did you bring the privacy sleeve to demonstrate with the Automark and your optical scanner?

2. What is the purchase price of the system you are showing us?

3. Where would this machine be repaired? Does it have to be sent to another state?

4. Do you supply the ballot-programming software with this system, or is there an extra cost to acquire it? If that software is priced separately, how much is it? If ballots are not programmed by the elections office, what location does the vendor provide for this?

5. How much do you charge for technical support? If the cost varies, what are the lower and upper amounts? What if extra support is needed?

B. ACCESSIBILITY

(Principle: If these machines are supposed to be accessible, vendors should have done extensive design and testing in conjunction with groups of voters with disabilities)

7. Does this system have to be rebooted when a voter wishes to use the audio mode? If so, how long does that take? Does it have to be rebooted to turn off the audio mode and how long does that take?

8. When voters use the audio, does the screen always shut off so that voters who want to both see and hear at the same time cannot do so?

9. When voters use the hand-held device, does the screen always shut off so that voters who use the handheld device are forced to use the audio and cannot see the screen at the same time?

10. How would an Iraqi veteran who has lost both arms and all vision use this system?

11. Have you met with local groups in North Carolina to test this machine who are

- elderly
- have limited manual reach, strength, and dexterity
- blind

If so, which groups? Assuming a ballot with 8 or 9 races and an average of 5 candidates per race, how long would it take for a voter with limited manual reach, strength, and dexterity to vote? How long would it take for a blind voter? What suggestions for improvement did these different testers with disabilities make?

If not, why not, since important provisions of HAVA are for voters with disabilities and that is a prime reason for changing our voting technology?

12. Did you have groups of blind voters involved in the design of what your audio text says? If so, which groups?

C. PAST PERFORMANCE

13. Can a voter select straight party vote? If so, after the voter selects a straight party vote and then changes the selection for one race, are all the straight party votes cancelled?

14. Have you ever been sued for errors in ballot programming that your technicians did for a jurisdiction?

15. For how many elections have you had to replace the ballot programming provided by your technicians due to flaws in it?

16. Have any of your voting systems been de-certified for malfunctions in any state?

D. TIMING

17. Given a ballot with 8 or 9 races, and an average of 5 candidates per race -

- Approximately how long would it take to vote on this system?
- How many voters would be able to use this system in an hour?
- In a **13 -hour** election day? (Two sample ballots are attached, Nov 2004, and Nov 2005.)

E. PRINTERS AND BALLOTS

18. How many ballot printouts will one “reel to reel” ballot hold during a general election?

19. What is the length of the paper on the reel?

20. Do you guarantee the print on the ballot to be readable for up to 2 years?

21. Under what conditions does the ballot become unreadable?

22. Does this machine’s paper ballot require climate controlled storage?

23. Can you show us how to manually recount by hand the ballot on the reel?

24. How do the blind verify the paper ballot on a reel?

25. What happens if the power goes out?

F. Training

26. How many hours has it taken to train a Poll worker team of 10 precinct workers to effectively run your machines?

What ages were the test ‘workers’?”

Do you supply trainers and how many are available for North Carolina this spring?

F. AUDITS

27. Would you allow your equipment to be demonstrated in a full public test involving:

(a) A mock election with at least 10 DREs and their central tabulator if they provide one, using a real ballot such as from the November 2004 election; a "stress test" of the maximum number of voters that the system will ever have to handle on one election day; entry of all possible vote combinations; use of all devices including the touch screen or pushbuttons, all accessible devices, minority language interfaces, and the printer, showing the handling of overvotes, undervotes, straight party voting, modification of choices by the voter, second-chance voting, and all other capabilities; extraction of the end-of-day information from the system; and a complete audit of results and logs created by the DREs.

(b) Examination by respected computer scientists such as Dr. Avi Rubin, Dr. David Dill, or Dr. Rebecca Mercuri, of all internal and external memory of all kinds including all files, programming, operating system code, and any other memory contents.

(c) A "red test" in which skilled and knowledgeable professionals and activists attempt to subvert the system, posing as insiders as well as outside hackers.

G. BALLOT VARIATIONS

28. How many ballot variations can your machine handle?

For example, last year Wake County had 67 variations for early Voting? What options are there?