# Expert Opinions on HB316 on Electronic Ballot Marking Devices (BMD) Auditability

#### 1. Dr. Wenke Lee – SAFE Voting Commission Cybersecurity Expert

"Further, many voters cannot detect the discrepancies between votes they have cast with a BMD and errors on the printouts, especially for "down-ballot" races. And some voters do not feel comfortable to speak up if they discover a discrepancy, perhaps because they think such a discrepancy should not have happened so it must be their own fault. Some, wanting to maintain their right to a secret ballot, he sitate to disclose to poll workers who they intended to vote for and the specifics of the error."

"Therefore, I believe it would be unwise, from a return-of-investment point of view, for the SAFE Commission to recommend that Georgia spend tens of millions of dollars to purchase a new voting system when, compared with the current system, the only major new feature would be paper receipts that cannot even be guaranteed to be valid and cannot be realistically audited."

## 2. Recommendations from 24 Computer Scientists

"A post-election audit requires a valid source document, either marked directly by the voter or voter verified. Since voter verification of printed ballot summary cards (the source document) is sporadic and unreliable, elections conducted with most ballot marking devices are unauditable."

## 3. National Academies of Sciences Report

"Unless a voter takes notes while voting, BMDs that print only selections with abbreviated names/descriptions of the contests are virtually unusable for verifying voter intent."

4. Prof. Phillip Stark – Inventor of "Risk Limiting Audits", Election Assistance Commission Advisor
"There are many reasons I share this opinion, but the main issue is security: widespread use of BMDs makes
voters responsible for ensuring that BMDs function correctly. However, BMDs do not provide voters a way to
demonstrate to pollworkers or election officials that a BMD has malfunctioned, and the available evidence
suggests that voters are not able to check BMDs effectively or reliably, as I shall explain. This makes auditing
elections that were conducted primarily using BMDs meaningless: an audit could easily confirm an incorrect
outcome, because a BMD-generated paper trail is not a trustworthy record of voter intent."

#### 5. National Election Defense Coalition Letter to SAFE Commission

"If Georgia is to purchase BMDs for all voters this would mean that most voters would be using an expensive electronic device that costs several thousand dollars to perform the same task as a pen."

"Opponents of hand-marked paper ballots may claim that the voters' marks vary introducing inconsistencies in vote counting by the scanners. While this may have been a problem fifteen years ago, today's sophisticated scanners are able to discern voter marks carefully and efficiently flag questionable ballots for adjudication. "

"It typically takes considerably longer for a voter to scroll through a ballot, page by page, to make selections on a BMD than to mark a paper ballot. Additionally, the number of voters that can vote at one time is constrained by the number of BMDs at a polling location, which will increase wait times and lines at polling locations. This serious deficiency of BMDs was demonstrated in Johnson County, Kansas which experienced devastatingly long lines in its 2018 primary after implementing BMDs [1]."