



Submission to the Joint Standing Committee on Electoral Matters

**Regarding the
Federal Election 2013**

Submission by

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Disclaimer

This submission is made by the author in a personal capacity. The information contained in this submission has been prepared by the author and only reflects the views of the author.

Although the submission has been prepared with care the author is aware there may be errors and would be grateful for any comments and/or clarifications from reviewers.

Introduction

This submission examines two aspects of the 2013 federal election which need improvement. The first is the scrutiny and accuracy of current manual counts, the second is the instability of Senate elections using the current Senate voting method and count.

Scrutiny and Count Accuracy

Lack of Scrutiny

The current electoral processes used in Australia rely on partisan scrutiny to ensure electoral integrity.

Current scrutiny of Senate elections is minimal on election night, as most scrutineers in polling places do not stay to scrutinise the Senate count, and very little effective scrutiny is conducted away from the polling place between election night and the final count. The lack of election night scrutiny in polling places further exacerbated by polling places not undertaking election night counts. About 15% of polling places did not return Senate results on election night, which suggests these polling places may not have done an effective election night count and as such there would have been no scrutiny done in these polling places.

The House of Representatives typically enjoys greater scrutiny than the Senate during election night at polling places. Most polling places have scrutineers who observe the House of Representatives first preference count and two candidate preferred (TCP) count on election night. However, post election night scrutiny in the DRO office is very limited. Typically scrutiny is only undertaken for electorates which have a close result. It should also be noted that about 7.6% polling places did not return House of Representative results on election night hence potentially had no election night scrutiny.

It is highly probable most of the polling places which did not return results on election night, did not undertake an election night count or the count was such that that the result was unreliable and as such unreportable. Therefore the final result for polling places without results rely entirely on their ballot papers having a provable “good chain of custody” between the polling place and the place of the final count. If there was a deficiency in the chain of custody, the final result would have to be considered doubtful.

Inaccurate Counting

The current manual count process experiences miscounting at all stages of the count and does not formally identify or track and reconcile miscount variances. The AEC like most Australian electoral authorities operate on an unstated assumption that the last count is the correct count and that all preceding counts, if at variance with the last count, are wrong. I would contend this is not a valid assumption and I present evidence below to support this contention.

Appendix A and D identifies the variance at the polling place group level between the final count and the recount for the WA Senate election at selected polling places and pre-poll venues. These appendices highlight results which probably have been miscounted after election night by identifying a count which election night results do not align with either the final or recount result.

The counts shown in Appendix A were selected by identifying election night results which aligned with either a final or recount result and these results did not match. This suggests the election night result is probably correct because it was equal to an independently counted final or recount result. It should be noted that the potential miscounts are almost evenly distributed between the final and the recount results, which suggests errors were made in both of these counts.

The effect of this miscounting can be seen at the election level in Appendix B which shows the variance between the final count and the recount after the “lost” ballot papers have been adjusted from the first preference result for the WA Senate election. The highlighted column in Appendix B shows that miscounting could be on the same scale as the lost ballot papers and therefore have a similar impact on the election outcome.

When the House of Representatives election night counts are examined Australia wide, it can be seen that the election night result is of a low quality. This outcome has the effect of reducing the public’s confidence in the final count. Table 1 below shows 21% of polling places undertook a House of Representatives count and returned very bad or poor count accuracy, for the election night first preference count by candidate. This means that these polling place results cannot be relied upon to validate the final count and as such these election night results would have been substantially ignored, notwithstanding polling place scrutiny is the main security control against vote tampering.

Table 1 – Assessment of Polling Place Election Night Result Accuracy

Description	PP Quality	Number PP	% of Total	
More than 10% Candidate vote by PP in error	1-Very Bad	67	0.81%	
Btw 5% & 10% Candidate vote by PP in error	2-Bad	247	2.98%	
Btw 2% & 5% Candidate vote by PP in error	3-Poor	1,468	17.74%	21.53%
Btw 0.5% & 2% Candidate vote by PP in error	4-OK	3,894	47.06%	47.06%
Btw 0% & 0.5% Candidate vote by PP in error	5-Good	1,713	20.70%	
No error between EN and Final count	6-Perfect	886	10.71%	31.41%
Total number of PP that returned on election night		8,275		

The main problem with using the last count is the correct count assumption, is that the final results, from polling places with unreliable election night counts, have no independent point of reconciliation. Therefore it is difficult to prove ballot tampering did not occur for these polling places. The final results from these polling places rely entirely on proving a “good chain of custody” between polling places and the place of the final count, which is a difficult task and not currently done well by the AEC or other electoral authorities in Australia.

Recommended Solution

The following are suggested reforms to improve count accuracy and integrity;

Increased Scrutiny

- Improve scrutiny – establish an agency separate to the AEC to undertake scrutiny of the election process using nonpartisan temporary staff. The independent scrutiny will include;
 - Scrutinise handling and reconciliation of ballot papers at;
 - all polling places and voting centres
 - DRO offices
 - movement of ballot papers between voting and counting venues
 - storage and disposal of ballot papers after the election is declared
 - Publish count variance observations for each stage of the count and also publish the AEC’s explanation of why the variance occurred and the remediation taken by the AEC.
- Determine the certainty by which candidates are elected – assess the final count result against the variances observed in earlier counts and calculate and publish the confidence limit associated with each candidate’s election.
- Ensure all ordinary votes taken at polling places on election day are counted under scrutiny to at least first preference on election night at the polling place.

Reduce Miscounting

- Improve temporary staff recruiting practices
- Improve temporary staff training
- Ensure staffing levels match the required workload
- Implement effective performance based assessment for temporary staff and use the assessment for future employment decisions

Senate Elections

Issues with Current Approach

The current Senate voting system coupled with its current count method is an unstable electoral system. The term unstable describes an election system where the electoral outcome potentially changes significantly with small and ostensibly insignificant changes of vote preference inputs.

The count instability is best illustrated by the WA Senate election where a change in a small number of votes caused one third of the elected candidates to change i.e. two of the six candidates elected changed after recounting due to a small number of votes changing at count 141. Appendix C illustrates the process by which changes in order of exclusion result in changes to the candidates elected.

This instability is potentially not a unique situation which only happened at the WA 2013 Senate election. Table 2a and 2b below shows that both the NSW and Victorian Senate elections had close counts at several points late in their distribution of preferences. The below tables show selected counts for NSW and Victoria. The table identifies that the progressive total for several excluded candidates were close to the progressive total of the nearest continuing candidate. This means that like WA a relatively small change in the input preferences could have changed the order of exclusion and this could have significantly affected the final result. See Appendix C for WA changes in order of exclusion.

Table 2a – Difference between excluded and closest continuing candidate for 2013 NSW Senate Election

Count	Ticket	Surname	Given Nm	Prog. Total of closest Continuing Candidate	Progressive Vote Total	Diff. at Exclusion
230	AK	FRASER	Gordon Graham	6817	6777	40
254	E	HIGSON	Shayne	15103	15016	87
264	X	BOHM	Tim	16477	16404	73

Table 2b – Difference between excluded and closest continuing candidate for 2013 Victorian Senate Election

Count	Ticket	Surname	Given Nm	Prog. Total of closest Continuing Candidate	Progressive Vote Total	Diff. at Exclusion
193	J	DAWSON	Chris	5247	5187	60
253	A	NALLIAH	Daniel	39745	39570	175

It is interesting to note that even without ballot papers being lost, as was the case in WA, there is still significant miscounting in the most elections with some of this miscounting potentially impacting the election outcome.

Even the recount result for critical candidates in the WA Senate count can be seen as doubtful. Appendix D shows Dropulich and Bow initial first preference counts conflicting with recount results for selected polling places. Appendix D would suggest that their first preference recount results may not be accurate, as they do not align with previous independent count results. Appendix D also illustrates the difficulty in ever knowing the correct first preference result for any election where a large number of ballot papers are to be counted. Human error will always mean that we can never have absolute confidence to the final result when a manual count is used.

Causes of Current Issues

The main cause for the current Senate system's instability is the use of Ticket votes coupled with the requirement the elector must fully preference the ballot paper. The use of Ticket Votes and full preferencing means most ballot papers will contribute to the preference flow until the last count. This means that under current full preferencing rules nearly every elector is contributing to the election of the last candidate regardless of whether they believe they voted for them or not.

The above situation allows micro parties to arrange ticket preferences between themselves ahead of preferencing major parties. This approach potentially allows a micro party to accumulate enough votes to be elected ahead of the tail end major party candidate, by the accumulation of all micro party preferences into the last micro party candidate remaining in the count. The interesting point with the above situation is that an elector who votes for a micro party will never know at the time of voting which micro party will emerge as the winner hence they can never know which candidate their vote will ultimately elect.

The removal of tickets and full preferencing from the Senate voting method and count will substantially remove the problems outlined above. Instability in the Senate will be reduced through votes being exhausted once an elector's explicit preferences cease. This means only candidates who electors explicitly vote for can be elected.

It is also worth noting that the application of my recommended changes below for the Senate voting method and count are the only changes needed to significantly improve the stability of the Senate count. Several submissions have suggested that a threshold should be applied to first preference votes for groups, such that if a group's vote falls below the threshold level all their votes would be removed from the distribution of preferences count. The implementation of thresholds would have the effect of removing votes for minor groups from the count, therefore electors who voted for these groups will not at the time of voting know if their vote will be included in the final count. The effect of implementing thresholds will be to strongly disadvantage emerging minor parties and unreasonably favour the current established major parties.

Recommended Solution

The below changes to the current system would substantially reduce the instability problems identified above.

- Remove tickets and replace with optional preferential above the line voting.
- Replace full preferencing below the line with optional preferential and allow a vote to be formal with just one preference.

Appendix A – WA Senate Miscounts

The table below illustrates the level of miscounting which occurred in WA Senate election. The columns show the total first preference votes for a given group or informal votes. The column “EN FP” shows the election night first preference results while the next column “Final FP” shows the results of the first count which initially would have been used to declare the election. The “Recount FP” column shows the count for the current recount.

The highlighted numbers are the results which are suspect. Note all the data below was sourced from the AEC VTR website.

Division	Polling Place/PPVC	Grp	PartyNm/Informal	EN FP	Final FP	Recount FP	Variance
Canning	Dawesville	I	Sex Party	24	24	28	4
Canning	Kelmscott		INFORMAL	72	72	76	4
Cowan	Alexander Heights	C	Australian Christians	56	72	56	-16
Cowan	Alexander Heights	Z	Australian Labor Party	745	728	744	16
Cowan	Ballajura South		INFORMAL	126	126	141	15
Cowan	Greenwood	V	Australian Fishing and Lifestyle Party	18	18	13	-5
Cowan	Warwick West	AA	Liberal	427	427	432	5
Curtin	Claremont	P	Stable Population Party	9	14	9	-5
Curtin	Leederville West		INFORMAL	34	34	39	5
Curtin	Subiaco		INFORMAL	38	38	42	4
Durack	Eneabba	F	Palmer United Party	6	0	6	6
Durack	Eneabba	M	Katter's Australian Party	0	6	0	-6
Durack	Geraldton - Bluff Point	AA	Liberal	689	689	680	-9
Durack	Geraldton - Waggrakine	P	Stable Population Party	0	12	0	-12
Durack	Geraldton - Waggrakine	U	The Nationals	283	278	283	5
Durack	Kununurra	S	The Greens (WA)	118	118	122	4
Durack	Kununurra	Z	Australian Labor Party	300	300	305	5
Forrest	Collie	X	Australian Sports Party	7	7	0	-7
Forrest	South West Health Campus	E	Socialist Equality Party	0	9	0	-9

Division	Polling Place/PPVC	Grp	PartyNm/Informal	EN FP	Final FP	Recount FP	Variance
Fremantle	Spearwood South	E	Socialist Equality Party	3	3	8	5
Fremantle	Spearwood West		INFORMAL	160	161	172	11
Hasluck	Middle Swan	AA	Liberal	362	362	357	-5
Hasluck	Thornlie	AA	Liberal	1067	1067	1063	-4
Moore	Connolly	I	Sex Party	40	50	40	-10
Moore	Duncraig North		INFORMAL	55	69	55	-14
Moore	Heathridge	Z	Australian Labor Party	589	603	590	-13
Moore	Joondalup MOORE PPVC	Q	Stop The Greens	9	9	5	-4
Moore	Joondalup MOORE PPVC	R	Australian Democrats	8	8	12	4
Moore	Ocean Reef	M	Katter's Australian Party	7	1	7	6
Moore	Padbury	B	Liberal Democrats	45	66	46	-20
Moore	Padbury South	G	Shooters and Fishers	26	26	21	-5
O'Connor	Broomehill	E	Socialist Equality Party	0	5	0	-5
O'Connor	Corrigin		INFORMAL	18	19	3	-16
O'Connor	Kalgoorlie North	S	The Greens (WA)	75	75	71	-4
Pearce	Joondalup PEARCE PPVC	T	Animal Justice Party	8	0	8	8
Pearce	Stratton	X	Australian Sports Party	8	0	8	8
Pearce	Yanchep	U	The Nationals	12	12	31	19
Stirling	Joondanna	AA	Liberal	649	649	645	-4
Stirling	Osborne		INFORMAL	82	82	89	7
Swan	Como	D	Help End Marijuana Prohibition (HEMP) Party	20	10	20	10
Tangney	Canning Vale Central	M	Katter's Australian Party	0	0	8	8
Tangney	Canning Vale Central	N	Family First Party	8	8	0	-8

Appendix B – WA Senate Group Variance

The table below illustrates the level of variance between the final count and the recount. The highlighted numbers are the miscount variance at the group level after the “missing” ballot papers are taken into account. Note all the data below was sourced from the AEC VTR website.

Group	First Count	Recount	Variance btw Final and Recount	Absolute Difference at Group Level	Absolute Variance at PP Level	First to Recount Grp Variance for 4 PP with Missing BP	First and Recount Grp Variance adjusted for Missing BP	Absolute Grp Variance for adjusted Variance	% Adjusted Grp Variance
A-Smokers Rights	8694	8719	25	25	165	-8	33	33	0.378%
B-Liberal Democrats	44932	44902	-30	30	230	-1	-29	29	0.065%
C-Australian Christians	21473	21499	26	26	174	-2	28	28	0.130%
D-Help End Marijuana Prohibition (HEMP) Party	13927	13973	46	46	124	-7	53	53	0.379%
E-Socialist Equality Party	1155	1143	-12	12	52		-12	12	1.050%
F-Palmer United Party	65511	65595	84	84	264		84	84	0.128%
G-Shooters and Fishers	13628	13622	-6	6	132	-14	8	8	0.059%
H-Australian Voice Party	1137	1139	2	2	26	1	1	1	0.088%
I-Sex Party	19517	19519	2	2	180	-2	4	4	0.020%
J-Secular Party of Australia	1480	1486	6	6	22	-1	7	7	0.471%
K-Australian Independents	4040	4041	1	1	51	-4	5	5	0.124%
L-The Wikileaks Party	9775	9767	-8	8	60	-11	3	3	0.031%
M-Katter's Australian Party	3894	3909	15	15	65	-3	18	18	0.460%
N-Family First Party	8778	8783	5	5	113	-11	16	16	0.182%

Group	First Count	Recount	Variance btw Final and Recount	Absolute Difference at Group Level	Absolute Variance at PP Level	First to Recount Grp Variance for 4 PP with Missing BP	First and Recount Grp Variance adjusted for Missing BP	Absolute Grp Variance for adjusted Variance	% Adjusted Grp Variance
O-No Carbon Tax Climate Sceptics	1494	1481	-13	13	57	-2	-11	11	0.743%
P-Stable Population Party	1376	1352	-24	24	46		-24	24	1.775%
Q-Stop The Greens	2243	2215	-28	28	94	-3	-25	25	1.129%
R-Australian Democrats	3834	3841	7	7	51		7	7	0.182%
S-The Greens (WA)	124268	124354	86	86	546	-111	197	197	0.158%
T-Animal Justice Party	9701	9720	19	19	133	-21	40	40	0.412%
U-The Nationals	66275	66421	146	146	286	1	145	145	0.218%
V-Australian Fishing and Lifestyle Party	5727	5729	2	2	64	-1	3	3	0.052%
W-Australian Motoring Enthusiast Party	7727	7748	21	21	59		21	21	0.271%
X-Australian Sports Party	2997	2997	0	0	80		0	0	0.000%
Y-Rise Up Australia Party	3843	3861	18	18	38		18	18	0.466%
Z-Australian Labor Party	348650	348401	-249	249	917	-163	-86	86	0.025%
AA-Liberal	514948	513639	-1309	1309	1785	-886	-423	423	0.082%
UG-One Nation	416	422	6	6	6		6	6	1.422%
Grand Total	1311440	1310278	-1162	2196	5820	-1249	87	1307	0.100%

Appendix C – WA Senate Count Comparison

The table below illustrates how a change of 25 first preference votes for van BURGEL affected the order of exclusion at count 141 for the WA Senate and changed two of the six candidates elected. Note all the data below was sourced from the AEC VTR website.

Count	Final Count					Recount				
	Ticket	Surname	Status	Prog. Total of closest Continuing Candidate	Prog. Total	Ticket	Surname	Status	Prog. Total of closest Continuing Candidate	Prog. Total
1	C	van BURGEL	Continuing		21285	C	van BURGEL	Continuing		21310
		van BURGEL Transfers			2216		van BURGEL Transfers			2216
1	G	Bow	Continuing		13550	G	Bow	Continuing		13543
		Bow Transfers			9965		Bow Transfers			9971
141	C	van BURGEL	Excluded	23515	23501	G	BOW	Excluded	23526	23514
145	X	DROPULICH	Excluded	42040	34292	C	van BURGEL	Excluded	42309	29121
149	D	BALDERSTONE	Excluded	59144	46034	D	BALDERSTONE	Excluded	59198	42395
153	B	FRYAR	Excluded	76147	72077	B	FRYAR	Excluded	68378	59459
157	U	WIRRPANDA	Excluded	83613	76330	U	WIRRPANDA	Excluded	71995	68591
158	AA	REYNOLDS	Elected			AA	REYNOLDS	Elected		
162	G	BOW	Excluded	132981	101050	X	DROPULICH	Elected		
163	F	WANG	Elected			F	WANG	Excluded	131022	79023
164	S	LUDLAM	Continuing		185346	S	LUDLAM	Elected		200866
164	Z	PRATT	Elected		188718	Z	PRATT	Continuing		166551

Appendix D – WA Senate Miscounts for Dropulich and Bow

The table below identifies polling places which returned on election night for the WA Senate election and the recount first preference result differed from the election night (Sunday) result and the subsequent first count result for the critical candidates Dropulich and Bow. It is interesting to note that the actual number of votes miscounted is about 8 times greater than the net counting error. That suggests the error is random in nature, which is consistent with human miscounting error. Should the error have been skewed then it is possible partisan vote tampering may have occurred.

Table D1 – Dropulich First Preference counts

Division - Venue/Dec Type	Sunday FP Votes	First FP Votes	ReCnt FP Votes	ReCnt-First	Abs(ReCnt-First)
Brand-Greenfields East	2	2	3	1	1
Canning-Armadale South	4	4	1	-3	3
Cowan-Pearsall	7	7	8	1	1
Cowan-Woodvale North	5	5	6	1	1
Curtin-Subiaco Central	4	4	3	-1	1
Forrest-Carbunup River	2	2	1	-1	1
Forrest-Collie	7	7	0	-7	7
Fremantle-Melville (Fremantle)	1	1	2	1	1
Hasluck-Kalamunda North	1	1	2	1	1
Moore-Beldon	2	2	3	1	1
Moore-Joondalup	9	9	10	1	1
Moore-Joondalup MOORE PPVC	20	20	19	-1	1
Moore-Padbury South	8	8	9	1	1
Pearce-Mahogany Creek	2	2	3	1	1
Pearce-Northam North	3	3	2	-1	1
Pearce-Northam PPVC	2	2	3	1	1
Stirling-Karrinyup	4	4	5	1	1

Division - Venue/Dec Type	Sunday FP Votes	First FP Votes	ReCnt FP Votes	ReCnt-First	Abs(ReCnt-First)
Stirling-Nollamara	7	7	6	-1	1
Swan-Cloverdale West	5	5	6	1	1
Swan-Kewdale West	8	8	7	-1	1
Tangney-Bateman	8	8	7	-1	1
Tangney-Canning Vale Central	4	4	5	1	1
	115	115	111	-4	30

Table D2 – Bow First Preference counts

Division - Venue/Dec Type	Sunday FP Votes	First FP Votes	ReCnt FP Votes	ReCnt-First	Abs(ReCnt-First)
Brand-Parmelia	19	19	20	1	1
Brand-Secret Harbour	25	25	24	-1	1
Canning-Serpentine	23	23	22	-1	1
Cowan-Greenwood East	11	11	12	1	1
Cowan-Wanneroo East	14	14	16	2	2
Cowan-Woodvale North	20	20	21	1	1
Durack-Karratha	20	20	19	-1	1
Durack-Merredin	12	12	11	-1	1
Durack-Northampton	24	24	23	-1	1
Forrest-Bunbury	6	6	7	1	1
Forrest-Collie	22	22	21	-1	1
Forrest-Eaton	56	56	55	-1	1
Forrest-Elgin	5	5	4	-1	1
Forrest-Witchcliffe	7	7	8	1	1
Fremantle-Coogee Beach	13	13	12	-1	1

Division - Venue/Dec Type	Sunday FP Votes	First FP Votes	ReCnt FP Votes	ReCnt-First	Abs(ReCnt-First)
Fremantle-White Gum Valley	6	6	7	1	1
Moore-Kallaroo	16	16	15	-1	1
Moore-Padbury South	26	26	21	-5	5
O'Connor-Boyup Brook	19	19	20	1	1
Pearce-Herne Hill	13	13	14	1	1
Pearce-Northam North	12	12	13	1	1
Perth-Beechboro West	14	14	13	-1	1
Perth-Highgate	7	7	6	-1	1
Perth-Lockridge	10	10	11	1	1
Stirling-Yokine North	1	1	2	1	1
Swan-Bentley West	6	6	4	-2	2
Swan-Cloverdale West	17	17	15	-2	2
Swan-Como South	0	0	2	2	2
Swan-Lathlain	12	12	13	1	1
Swan-Wilson	11	11	10	-1	1
Tangney-Mt Pleasant	7	7	6	-1	1
Tangney-Parkwood (Tangney)	12	12	13	1	1
Tangney-Rossmoyne	5	5	6	1	1
	471	471	466	-5	41