Introduction and summary

This submission concerns the *Commonwealth Electoral Amendment Bill 2016*. A critique of the currently existing Senate voting system was given in my previous JSCEM submission[1] , at the Hobart public hearing[2] and in many articles on my website[3] . I see no need to add anything to my previous evidence that the existing system is broken and must be replaced with a better one prior to the 2016 election. However I have also since formed the view that the existing system, to a small degree, breaches Australia's human rights commitments.

The slow pace on Senate reform during this Parliament has been regrettable. Very close to the election we finally have legislation on the table but the exact model it refers to has had relatively little debate. This is suboptimal, but it should not be viewed as a reason to reject this Bill and risk retaining the current system for another election. It is clear that the system created by this Bill would resolve the core problem of preference-harvesting and ensure that elected candidates were elected on merit. Furthermore, claims that the system would unfairly advantage the Coalition are not supported either by theoretical argument or by simulations of past elections.

Given that there is still time to amend the Bill, this submission recommends:

* acceptance of the proposed arrangements for above-the-line voting
* rejecting the proposed change for below-the-line voting
* instead instructing voters to number at least 12 squares below the line for a valid vote, with the same savings provisions as for above-the-line voting
* certain measures to discourage abuse of savings provisions through "just vote 1" campaigns or how-to-vote cards
* adding ACT provisions covering the exhaust of votes that would otherwise be included in a surplus

Recommendations are subject to the ability to implement them practically in time for the election - and especially to AEC findings on data entry feasibility. In the event that the proposed system is incapable of being implemented in time, then the original JSCEM proposal should be legislated instead.

This submission also includes a refutation of some common objections to the system, and (for what such things are worth - note the disclaimers) simulations of all Senate election results since 1990 under the proposed system in both half-Senate election and double-dissolution scenarios.

To the "author background" previously supplied, I add that I have recently worked on consultancies for the Tasmanian Electoral Commission, including two involving

---

[1] http://www.aph.gov.au/DocumentStore.ashx?id=f34cf0eb-afc0-4ee2-aab3-53443540cd78&subId=251049
[2]
http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22committees%2Fcommjnt%2Fa8133347-1857-4295-bcf7-30ee1e81f6af%2F0000%22
[3] http://kevinbonham.blogspot.com.au/search/label/Senate%20reform

computer testing of a new system for the count of Tasmanian Local Government elections and casual-vacancy recounts.

Above The Line Voting

The Bill's proposed reform to above-the-line voting is excellent in theory, subject to data-entry practicality and some policing regarding misuse of savings provisions (see later section "Savings Provisions and Publicity").

The instruction to number at least six party or group boxes is likely to overcome the only valid objection to the original JSCEM model - its potential for a very high rate of exhaust. While a high rate of exhaust as a result of voter choice is not a problem by itself, some potential issues became apparent in prolonged debate about the original JSCEM model.

The first is the potential for misleadingly-named spoiler parties to be created to try to siphon above-the-line votes away from other parties; these votes would then exhaust, damaging the target party. The second is that the strange dynamics of a Senate cutup with a very high rate of exhaust made it often difficult to predict whether it would be best for each of (the Liberals + Nationals) and (Labor + the Greens) to run as separate or joint tickets.

The revised model will lead to stronger preference flows (making both the advantages and disadvantages of split tickets much less acute) and does not in the process compromise formality (because of the savings provisions). In principle it is therefore an improvement over the original JSCEM model.

Below The Line Voting

The Bill - on the surface disappointingly - fails to significantly liberalise below-the-line voting. It may be that there are very valid practical reasons for the decision taken to make only very minor amendments to the savings provisions for BTL voting, but no valid arguments for this have been advanced by any proponent of the Bill at the time of writing. Furthermore, given the Greens' support for semi-optional preferencing below the line, it is not apparent that there is any conclusive political barrier to liberalising BTL voting.

The proposed increase in the number of allowable errors from three to five, absent of any other changes, appears to be poor policy because it:

* is tokenism, in that it appears to address concerns about the difficulty of below-the-line voting, but actually does not do so to any significant degree

* will make a very small difference to the number of votes admitted to the count as formal, and will not significantly improve the attractiveness of voting below the line

* makes the process of manually checking the formality of a vote more difficult.

* requires reprogramming and testing of reprogramming for the assessment of formality of BTL votes, without sufficient gains to justify this effort.

Also, as other submission authors have pointed out (eg Michael Maley), the current Bill creates the very odd situation that a vote could be formal above the line but the numbering of the equivalent boxes below the line would be informal (although it seems unlikely anyone would actually do this).

Reluctance to further liberalise below-the-line voting might be seen as flow-on effect of the decision to encourage multiple preferences above the line. In the Victorian Legislative Council an option to just vote 1 to 5 below the line is available, but only 6% of electors vote below the line, many of whom may be doing so to circumvent preference-dealing rather than to vote across party lines. However, in Victoria the alternative is to vote 1 above the line (which then becomes a group ticket vote).

There may be concern that if six spaces are instructed for an above the line vote, then allowing a below-the-line vote that is equally easy could result in high rates of below-the-line voting. Aside from data-entry practicality issues, the impacts of very high rates of below-the-line voting (eg 20+%) are difficult to model. Elections could develop a character more similar to that of Hare-Clark elections in Tasmania and the ACT, with the distribution of votes between candidates sometimes producing "strange" results that would not be expected based on party quota totals[4], and with leakage of votes a significant factor.

Leakage could be a problem in Senate contests because of the extremely low profile of many sitting Senators, who are accustomed to being elected based on party totals. This is different to the Hare-Clark state jurisdictions in which MPs are well aware of the need for constant profile-building.

In my view these considerations justify discouraging below-the-line voting to some extent at least for the upcoming election, but it should be more liberalised than in the current Bill unless this is impractical from a counting perspective. My provisional suggestion therefore is that the ballot paper should instruct voters to number at least twice the number of boxes if voting below the line as if voting above the line (ie 12). This would:

* discourage most parties from recommending below-the-line voting on how-to-vote cards.

* discourage voters whose main concern is effort from voting below-the-line.

* allow for relatively easy below the line voting for voters who have some actual political-preference based reason to do it.

* ensure that if a vote above-the-line is formal and in accordance with instructions, then the equivalent vote below-the-line is likewise (as a consequence of the requirement of two candidates per group).

[4] In the ACT electorate of Ginninderra in 2012 the ALP with 2.4 quotas won three seats while the lone Green with 0.6 quotas was defeated, primarily because the split between two ALP candidates was such that the Green candidate was unable to overtake either.

If this system is adopted then I recommend the adoption of the same savings provision as for above-the-line voting (a single 1 with 1 as the lowest number is always formal). A vote that would be saved above the line should also be saved if the same preferences are written below the line. Arguments can be made that no savings provision is required for below-the-line voting at all (since there is not a habit of voting 1 below-the-line that nees to be protected) but it is likely that voters will make various errors in using the new below-the-line system, including repetitions, omissions, and not filling out quite enough squares. In the 2014 Hobart City Council elections, for which voting from 1 to 12 without error was required for a valid vote, a significant proportion of the very high informal vote was caused by voters stopping after 10 or 11 squares, presumably thinking "close enough".

These recommended changes to BTL voting are provisional on practicality. Someone may advance a convincing argument that liberalising BTL voting would be impractical, in which case I might agree with the Bill's proposal.

I would be pleased with any meaningful liberalisation of BTL provisions. While I have argued above for 12 boxes as a sensible instruction, something like, say, 20 boxes would still be a significant improvement on the Bill, even if there was no particular logic behind it.

Savings Provisions and Publicity

A common issue surrounding the use of savings provisions is the potential for parties or commentators to advocate "just vote 1" style voting, which is contrary to the instructions on the ballot paper but formal as a result of the savings provision.

A balance has to be struck between freedom of political communication and protecting the system from actions that could increase differences in the exhaust rate between parties.

My suggestion is that the following be banned:

∗ Issuing any how-to-vote card that recommends that voters vote in a manner contrary to the instructions on the ballot paper (even if the instruction represents a formal vote).

∗ Encouraging a voter to vote in a manner contrary to the instructions on the ballot paper.

∗ Publishing or purchasing any advertisement that states that voters can vote in a manner contrary to the instructions on the ballot paper.

While there has been some suggestion that even discussing the existence of the savings provision should be banned, I am strongly opposed to going that far. It is necessary that people be able to discuss a voting system and its operation for the purposes of research, analysis and debate.

Savings Provisions And Exhaust

The ACT Electoral Act Schedule 4 part 1C defines "transfer value" in a way that ensures that if an elected candidate is carrying some votes that would exhaust from the count on the next transfer, the surplus as far as reasonable excludes those votes and is made up of continuing votes. I recommend that this be adopted.

Common Objections

Several objections have commonly appeared in public debate about the original JSCEM proposal and the proposal in this Bill. I here refute some of these:

1. That the bill will disenfranchise the c. 23% of Australians who vote for parties other than Labor, Coalition or Greens in the Senate

This objection is based on noting that "other" parties received 23% of the vote and won a reasonably "proportional" seven of 40 seats. Under the proposed system they would have won either four or five seats based on the votes actually cast (Xenophon, Griff, Leyonhjelm, Lazarus and possibly Lambie). One of those (Leyonhjelm) owed a high vote share to voter confusion and would not have won had there been fewer parties. The suggestion therefore is that "other" parties would be under-represented.

This claim rests on the completely false belief that a person who prefers one other party to Labor, the Coalition or the Greens will also generally prefer different minor parties to the "big three". In an article published on my site[5] I analysed sample preference flows from micro-parties when their candidates were excluded from House of Representatives counts. In cases where a micro-party candidate was excluded from the count, I found that between 33% and 71% of preferences (varying by micro-party) flowed directly to one of the "big three" even when there was still at least one other micro-party in the count.

Obviously not every micro-party can be represented in any given state. The House of Representatives preferences show that once voters are making a choice involving the "big three" parties and *any given* micro-party, their support for the latter is nothing like as strong as the 23% support for all non big-three parties combined. A vote for a given micro-party is not a vote for any micro-party come what may, and therefore the idea of measuring the proportionality of support for micros by the proportion of seats they win collectively is a furphy.

2. That exhaust will disadvantage parties trying to win seats from low primary votes and hence entrench advantages for the "big three"

This objection is similar to objection 1. Exhaust rates under the proposed system are likely to be relatively low, but they are also largely irrelevant to assessing this objection. Micro-parties trying to win from low primary vote shares will be doomed by weak preference flows even if there is *no* exhaust. The natural scattering of voter-

---

[5] http://kevinbonham.blogspot.com.au/2014/06/optional-senate-preferencing-not.html

chosen preferences means that parties on 3% of the vote in a half-Senate election will simply not catch parties on, say, 9%.

To imagine a micro-party in a realistic contest with the "big three" for a seat it is necessary to assume that a micro-party will poll a competitive primary vote, which is exactly what opponents of the change are assuming will not happen.

3. That the Coalition's higher primary vote will advantage it compared with Labor

This objection is based on the argument that since the "right-wing" vote is more concentrated in the Coalition, that therefore Labor will suffer more from loss of preferences as "left-wing" parties are excluded and their preferences leak or exhaust.

The objection is unsound because most of the "left-wing" vote consists of Green votes and the Greens frequently win seats in their own right or are the last unsuccessful party standing. In the first case only their surplus can "leak" away from Labor and in the second their vote does not leak at all.

I addressed this argument in detail when Peter Breen made it against the original JSCEM model.[6] The scenario being proposed was that Green ticket preferences cause Labor to beat the Coalition for the final seat (or vice versa), but weaker-than-100% flows under the proposed model would cause the Coalition to win.   I could actually find no case at all in which this (under the original JSCEM proposal) would have caused Labor or the Greens to miss out on a seat they actually won. Reasons for this include that Labor and the Greens are often fighting each other rather than the Coalition for the final seat, and that the proportion of votes being transferred between the parties when there is a transfer is relatively small compared to in the House of Representatives. The model in the Bill is even less sensitive to this situation than the original JSCEM model.

4. That the proposed system will see a loss in political diversity and a loss of Senators who are using the Senate for its proper function

This argument is basically elitist and anti-democratic. It implies that the crossbench Senators who were elected at the 2013 election are better Senators than those who would have won instead under any other voting system, and that this justifies the system. Effectively this is an argument that the system is good because it *fails* to translate voting intention into seats appropriately, and hence elects some different kinds of Senators. However if the voters want those kinds of Senators they are free to vote for them at any time and if enough do so, those Senators will be elected.

This argument has been strong on the merits of one particular surprise Senator, Ricky Muir, and much less willing to make the case for the other "accidental Senators". It is also not so willing to consider the sorts of Senators who could easily have been elected but were not. In particular, the election of Peter Madden (FF) off a very small primary vote in Tasmania was avoided by just 821 votes. Madden is an anti-gay-rights activist who among other things has praised Vladimir Putin's illiberal approach

---

[6] http://kevinbonham.blogspot.com.au/2015/11/another-unsound-attack-on-proposed.html

to gay rights rallies. The election of Madden to a share of the balance of power would in no way have reflected voter choice, but Madden had an exceptionally good ATL preference flow, perhaps because some left-wing parties who preferenced him did not do their homework.

Some further common objections are also addressed in the section below.

Simulations

I am also submitting my simulations of all elections since 1990 (excluding the WA 2014 rerun) under the current system. I include one set of results assuming all elections are half-Senate elections and one assuming all are double-dissolutions. For the half-Senate simulations I include for comparison the actual national totals of seats won ("Actual" for the half-Senate election, and "Act Total" for the makeup of the Senate post-election.)

In most cases the **half-Senate simulations** suggest little difference. In the early 1990s the ALP would have won some seats that were won by Greens or Democrats. Key differences are:

* while it is likely the Coalition would have won an outright majority in 2004 (as they did anyway) this is not certain
* Labor would have governed more easily in the 2007 term since Steve Fielding (FF) would have been replaced by a Green.
* The Coalition would have encountered an ALP/Green blocked Senate on coming to power in 2013, probably leading to an early double dissolution.

The simulations suggest that if anything the system would have favoured the left parties more than the right (compared to actual election outcomes), but this is partly because of the very large number of right-wing micro-parties. Mergers among such parties into larger forces are likely to reduce vote wastage on the right under the new system, on balance over time making it a net disadvantage only to those micro-parties or minor parties that refuse to merge into larger movements or have no such movements to merge into.

Of course if micro-parties win fewer seats then this does slightly increase the chance of one "side" or other (Coalition or Labor+Greens) winning exactly half or more than half the seats. However if that is the result that voters in the various States actually voted for, then the system should reflect that. The projected blocked Senate based on combined 2010 and 2013 elections in fact reflects the distortion caused by Tasmania having twelve Senators, rather than anything wrong with the proposed Bill.

The **double dissolution simulations** cannot be compared to actual election results. They do however show that double dissolutions under the current system do not generally produce blocking or outright majorities for the Coalition as feared by opponents of the system. In one case the Coalition would have probably won an outright majority - that being the case in which it did so based on half-Senate elections anyway.

The following points and disclaimers should be noted:

1. The simulations assume that all votes cast are exactly the same. However under the new system some parties would probably have amalgamated into more competitive units, and the Liberal Democratic Party would not be likely to gain votes caused by confusion with the Liberals.

2. I assume that most voters will follow the instructions on the new ballot papers, but that a substantial minority (say 15%) will not, at least at the first attempt.

3. The simulations show Pauline Hanson's One Nation (PHO) gaining a share of the balance of power for double dissolutions in 1998 and 2001. This would probably also have happened had a double dissolution been held under the existing system, since most One Nation seats would have been won on pure quota and hence not susceptible to adverse ticket preferences. Because the balance of power during these years was held by the moderate Australian Democrats, there was no reason for the Coalition to provoke a double-dissolution election at which a large One Nation contingent could have emerged, even if this would have given it new avenues for passing bills. Therefore the result is not all that relevant.

4. The simulations show the Coalition just winning an outright majority at the 2004 election had it been held as a double dissolution. The seat giving the Coalition its majority in Western Australia could have been very close with spare quotas of Coalition .413, One Nation .318, Democrat .260, Labor .227, Nat .116 etc. I have assumed One Nation voters would prefer the Coalition over the Democrat or at least break reasonably evenly, but the preferencing behaviour of One Nation voters was often unpredictable, so this isn't completely certain. In any case, the Coalition won a majority anyway based on the combined results of the 2001 and 2004 half-Senate elections. However in a double dissolution based on the existing system it would probably have only won 38 seats, or perhaps even one or two fewer.

5. The double-dissolution scenarios are especially artificial for the years 1990, 1996, 2001 and 2010 because in each of these years there was a Senator who would have run and won in a double-dissolution (first Harradine then Xenophon) but did not need to run since their seat was not up for grabs. Thus while the 2010 simulation shows only two non-Green crossbenchers for a double-dissolution, in practice there would have been at least three.

Human Rights

It may seem strange for a submission of this kind to JSCEM to actually address the standard human rights statements in Bills, but I do so because the point that the current Senate voting system is a breach of human rights is under-appreciated. This is not to trivialise the fact that most breaches of human rights that are discussed are far more serious in their impact on individuals, but Australia should not avoidably breach human rights to even a small extent.

Article 26 of the International Covenant of Civil and Political Rights addresses discrimination, and states:

All persons are equal before the law and are entitled without any discrimination to the equal protection of the law. In this respect, the law shall prohibit any discrimination and guarantee to all persons equal and effective protection against discrimination on any ground such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.

The current Senate system breaches Article 26 by discriminating against voters whose preferences between parties are not captured by any of the available above-the-line options in a given election. Such voters are forced to choose between compromising their political principles in choosing a party to vote 1 above the line for, or completing their vote by an unduly arduous method that places their enfranchisement at risk should they make too many errors. They are not equally protected from having their vote invalidated, nor from having to spend an unreasonably long time voting in order to express their basic political view validly.

The successful abolition of above-the-line voting in NSW, for example, shows that this discrimination cannot be justified by practical necessity in a wealthy country like Australia, and therefore that if Australia retains the current system it is breaching the human rights of some voters. This concern could, however, be addressed just by greatly reducing the number of squares required for a valid below-the-line vote - it is the below-the-line voting restrictions specifically, not the existence of group ticket voting, that cause the breach.

I mention this because while the current Bill improves human rights by increasing the range of choices between parties that can be easily expressed, there is a *prima facie* case that it continues to breach the human rights of those voters who prefer to vote for candidates across party lines or in a different order. Some examples of such voters include:

* voters who prefer to vote for candidates of a specific ethnicity or gender
* voters who prefer to vote for candidates who have specific positions on moral issues that cross party lines (for instance voters who wish to vote for all candidates who support same-sex marriage, or all candidates who oppose abortion)
* voters for a left-wing or right-wing party who wish to preference those major party candidates most aligned with that view.

 This would not be a problem if there was a practical need to compel below-the-line voters to number at least 90% of boxes, however no such need has yet been demonstrated. Unless such a need is demonstrated it should be assumed that the current Bill, while improving the human rights status of Australia's Senate voting, remains suboptimal from that perspective.

Finally ...

There has unfortunately been no progress on ridding the Senate preference system of distortions caused by use of the unweighted Inclusive Gregory system. I realise there

have been many far more important things to try to solve in this cycle but I hope it can
be addressed next time.

(Dr) Kevin Bonham
Hobart, 28 Feb 2016

Senate Reform Simulations 1990 - 2013 Half Senate Election

		L-NP	ALP	GRN	PUP	FF	LDP	DLP	NXG	DEM	HAR	PHO	AMEP	???	COMMENT
2013	NSW	2	2	1			1								
	Vic	3	2	1											
	QLD	3	2		1										
	SA	2	2						2						
	WA	3	2	1											
	TAS	3	2	1											Lambie may have caught 3rd Lib on prefs, I doubt it
	ACT	1	1												
	NT	1	1												
	THIS EL	18	14	4	1		1		2						
	ACTUAL	17	12	4	3	1	1		1				1		
	TOTAL	**34**	**28**	**10**	**1**		**1**		**2**						**Grn balance of power (except disallowance)**
	ACT TOTAL	**33**	**25**	**10**	**3**	**1**	**1**	**1**	**1**				**1**		**L-NP needs Grn or 6/8 crossbenchers**
		L-NP	ALP	GRN	PUP	FF	LDP	DLP	NXG	DEM	HAR	PHO	AMEP	???	COMMENT
2010	NSW	3	2	1											
	Vic	2	3	1											
	QLD	3	2	1											
	SA	3	2	1											
	WA	3	2	1											
	TAS	2	3	1											
	ACT	1	1												
	NT	1	1												
	THIS EL	18	16	6											
	ACTUAL	18	15	6			1								
	TOTAL	**34**	**33**	**8**					**1**						**Grn sole balance of power**
	ACT TOTAL	**34**	**31**	**9**				**1**	**1**						**Grn sole balance of power**

		L-NP	ALP	GRN	PUP	FF	LDP	DLP	NXG	DEM	HAR	PHO	AMEP	???	COMMENT
2007	NSW	3	3												
	Vic	3	3												
	QLD	3	3												
	SA	2	3						1						
	WA	3	2	1											
	TAS	2	3	1											
	ACT	1	1												
	NT	1	1												
	THIS EL	18	19	2					1						
	ACTUAL	18	18	3					1						
	TOTAL	**37?**	**33**	**5**					**1**						**ALP needs Grn+probably NXG**
	ACT TOTAL	**37**	**32**	**5**		**1**			**1**						**ALP needs Grn+NXG+FF**
		L-NP	ALP	GRN	PUP	FF	LDP	DLP	NXG	DEM	HAR	PHO	AMEP	???	COMMENT
2004	NSW	3	3												Grns might win last ALP seat
	Vic	3	2	1											
	QLD	4?	2												Last L-NP seat could be won by Greens
	SA	3	3												
	WA	3	2	1											
	TAS	3	2	1											
	ACT	1	1												
	NT	1	1												
	THIS EL	21?	16	3											
	ACTUAL	21	16	2		1									
	TOTAL	**39?**	**28**	**5**					**4**						**Probably L-NP outright majority**
	ACT TOTAL	**39**	**28**	**4**		**1**			**4**						**L-NP outright majority**

		L-NP	ALP	GRN	PUP	FF	LDP	DLP	NXG	DEM	HAR	PHO	AMEP	???	COMMENT
2001	NSW	3	2							1					
	Vic	3	2							1					
	QLD	3	2							1					Large primary gap PHO to DEM but GRN prefs.
	SA	3	2							1					
	WA	3	2	1											Close 3-way contest ALP, Grn, Dem for GRN seat
	TAS	3	2	1											
	ACT	1	1												
	NT	1	1												
	THIS EL	20	14	2											
	ACTUAL	20	14	2						4					
	TOTAL	**35**	**29**	**2**						**8**	**1**	**1**			**L-NP needs Dem or (Grn+Har+PHO)**
	ACT TOTAL	**35**	**29**	**2**						**8**	**1**	**1**			**L-NP needs Dem or (Grn+Har+PHO)**
		L-NP	ALP	GRN	PUP	FF	LDP	DLP	NXG	DEM	HAR	PHO	AMEP	???	COMMENT
1998	NSW	3	3												
	Vic	2	3							1					
	QLD	2	2							1		1			
	SA	3	2							1					
	WA	3	2							1					
	TAS	2	3								1				
	ACT	1	1												
	NT	1	1												
	THIS EL	17	17							4	1	1			
	ACTUAL	17	17							4	1	1			
	TOTAL	**35**	**29**	**1?**						**9**	**1**	**1**			**DEM sole balance of power (excl. disallowance)**
	ACT TOTAL	**35**	**29**	**1**						**9**	**1**	**1**			**DEM sole balance of power (excl. disallowance)**

		L-NP	ALP	GRN	PUP	FF	LDP	DLP	NXG	DEM	HAR	PHO	AMEP	???	COMMENT
1996	NSW	3	2							1					
	Vic	3	2							1					
	QLD	3	2							1					
	SA	3	2							1					
	WA	3	2							1					
	TAS	3	2	1?											Slightly favour Brown win on Dems prefs
	ACT	1	1												
	NT	1	1												
	THIS EL	20	14	1?						5					
	ACTUAL	20	14	1						5					
	TOTAL	**37**	**31**	**1?**						**6**	**1**				**LNP needs Dem, or (HAR+Grn) if Grn wins**
	ACT TOTAL	**37**	**29**	**2**						**7**	**1**				**LNP needs Dem or Grn**
		L-NP	ALP	GRN	PUP	FF	LDP	DLP	NXG	DEM	HAR	PHO	AMEP	???	COMMENT
1993	NSW	3	3												
	Vic	3	3												
	QLD	3	3												
	SA	3	2							1					
	WA	3	3												
	TAS	2	3								1				
	ACT	1	1												
	NT	1	1												
	THIS EL	19	19							1	1				
	ACTUAL	*19*	*17*	*1*						*2*	*1*				
	TOTAL	**36**	**33**	**1**						**5**	**1**				**ALP needs Dems + (GRN or HAR)**
	ACT TOTAL	***36***	***30***	***2***						***7***	***1***				***ALP needs Dems + Greens***

		L-NP	ALP	GRN	PUP	FF	LDP	DLP	NXG	DEM	HAR	PHO	AMEP	???	COMMENT
1990	NSW	2	3							1					
	Vic	3	2							1					
	QLD	3	2							1					
	SA	3	2							1					
	WA	3	2	1											Assuming ALP pref GRN over DEM
	TAS	3	3												
	ACT	1	1												
	NT	1	1												
	THIS EL	19	16	1						4					
	ACTUAL	19	15	1						5					
	TOTAL	**36**	**31**	**1**						**7**	**1**				**ALP needs Dems + (GRN or HAR)**
	ACT TOTAL	***36***	***30***	***1***						***8***	***1***				***ALP needs Dems + (GRN or HAR)***

Senate Reform Simulations - Double Dissolution

		L-NP	ALP	GRN	PUP	FF	LDP	KAP	NXG	DEM	HAR	PHO	???	COMMENT
2013	NSW	5	4	1	1		1							
	Vic	5	4	2	1									
	QLD	5	4	1	1			1						
	SA	4	3	1		1			3					
	WA	6	3	1	1		1							Coalition includes one WA National
	TAS	5	4	2	1									
	ACT	1	1											
	NT	1	1											
	TOTAL	32	24	8	5	1	2	1	3					**GRN, PUP, 5/7 others each pass L-NP bill**
		L-NP	ALP	GRN	PUP	FF	LDP	KAP	NXG	DEM	HAR	PHO	???	COMMENT
2010	NSW	5	5	2										
	Vic	4	5	2		1								
	QLD	5	4	2		1								LNP may have won FF seat
	SA	5	5	2										
	WA	6	4	2										
	TAS	4	5	3										
	ACT	1	1											
	NT	1	1											
	TOTAL	31	30	13		2								**GRN sole balance of power**

		L-NP	ALP	GRN	PUP	FF	LDP	KAP	NXG	DEM	HAR	PHO	???	COMMENT
2007	NSW	5	6	1										
	Vic	5	6			1								
	QLD	5	5	1									1	unclear PHO vs Lib vs FF
	SA	5	4	1					2					
	WA	6	5	1										
	TAS	5	5	2										
	ACT	1	1											
	NT	1	1											
	TOTAL	33	33	6		1			2				1	**GRN sole balance of power**
		L-NP	ALP	GRN	PUP	FF	LDP	KAP	NXG	DEM	HAR	PHO	???	COMMENT
2004	NSW	6	5	1										
	Vic	6	5	1										
	QLD	6	4	1								1		PHO = Hanson as independent
	SA	6	5	1										
	WA	7	4	1										Seventh Coalition seat WA not certain
	TAS	6	4	2										
	ACT	1	1											
	NT	1	1											
	TOTAL	39	29	7								1		**L-NP outright majority (not certain)**

		L-NP	ALP	GRN	PUP	FF	LDP	KAP	NXG	DEM	HAR	PHO	???	COMMENT
2001	NSW	5	4	1						1		1		
	Vic	5	5	1						1				
	QLD	6	4							1		1		
	SA	6	4							2				
	WA	5	4	1						1		1		
	TAS	5	5	2										
	ACT	1	1											
	NT	1	1											
	TOTAL	34	28	5						6		3		**Grn, DEM, PHO can each pass L-NP bill**
		L-NP	ALP	GRN	PUP	FF	LDP	KAP	NXG	DEM	HAR	PHO	???	COMMENT
1998	NSW	5	5							1		1		
	Vic	5	5	1						1				Grn seat might go to ALP or DEM
	QLD	5	4							1		2		
	SA	5	4							2		1		
	WA	5	4	1						1		1		
	TAS	5	4	1						1	1			
	ACT	1	1											
	NT	1	1											
	TOTAL	32	28	3						7	1	5		**DEM, PHO can each pass L-NP bill**

		L-NP	ALP	GRN	PUP	FF	LDP	KAP	NXG	DEM	HAR	PHO	???	COMMENT
1996	NSW	6	5							1				S+F would win final L-NP seat if preffed by CTA
	Vic	5	5	1						1				DEM would win GRN seat if preffed by ALP
	QLD	6	4							2				
	SA	6	4							2				
	WA	6	4	1						1				
	TAS	5	5	1						1				
	ACT	1	1											
	NT	1	1											
	TOTAL	36	29	3						8				**Grn, DEM can each pass L-NP bill**

		L-NP	ALP	GRN	PUP	FF	LDP	KAP	NXG	DEM	HAR	PHO	???	COMMENT
1993	NSW	5	6							1				
	Vic	6	6											
	QLD	6	5							1				
	SA	6	5							1				
	WA	6	5	1										
	TAS	5	5	1							1			
	ACT	1	1											
	NT	1	1											
	TOTAL	36	34	2						3	1			**Grn + Dem combined can pass ALP bill**

		L-NP	ALP	GRN	PUP	FF	LDP	KAP	NXG	DEM	HAR	PHO	???	COMMENT
1990	NSW	5	5							2				
	Vic	6	4							2				tight 3-way race for last 2, assumed ALP loses
	QLD	5	5							2				possible L-NP wins 6 over second DEM
	SA	5	5							2				
	WA	6	4	1						1				
	TAS	5	5	1						1				GRN = United Tasmania Group
	ACT	1	1											
	NT	1	1											
	TOTAL	34	30	2						10				**DEM sole balance of power**