

Responses to Questions on Notice -
Inquiry of the Joint Standing Committee
on Electoral Matters into the
preparations of the NSW Electoral
Commission for the 2015 State General
Election

General Administration of the Election

Q1. You have considerable experience of administering elections - does the 2015 election pose any distinct new challenges?

1. The NSWEC is mindful that as a result of the 2013 Redistribution of Electoral Districts, there will be a level of confusion to varying degrees for the approximately one million electors who have been affected by the redistribution. It is anticipated that this confusion will result in a longer processing time to mark these electors off the roll and issue them ballot papers due to the questions they may have regarding their electorate and enrolled address.
2. To mitigate this, the NSWEC is increasing its communications to these electors to raise awareness of the redistribution prior to election day. In addition, a greater number of election officials - in particular, enquiry officers - will be recruited at polling places most affected by the redistribution. In areas most affected, there will also be an increase in the number of multi polling places and multi pre-polls which will enable electors to issue an ordinary vote for their district even if the voting venue is in an adjoining district. This will decrease the number of absent votes, and ensure more efficient processing of these electors.

Q2. What do you see as the key recommendations from the Keelty report and how have you ensured your preparations have taken these recommendations into account?

3. The fundamental message of the Keelty report is that a system is only as good as its weakest link. Therefore:
 - when there are complex processes involving many manual/logistical tasks undertaken by a largely temporary staff, human errors should be expected;
 - such errors, however apparently small, can lead to disastrous outcomes if they occur in critical processes; and
 - the critical processes must be considered in the end-to-end context, i.e., the process only ends with the last ballot paper arriving at the warehouse and accounted for, ready for disposal.
4. This process-wide view underpins the Keelty recommendations, with a significant impact on election operations management. The NSWEC has raised benchmarks and standards applicable to all processes, people and systems, and is not simply focusing on one particular aspect or point of the process.
5. For further detail, I would refer Committee Members to pp 28 - 33 of the Commissioner's submission to the current Inquiry, which details the NSWEC preparations that directly relate to the Keelty Report. Should further detailed information be required, the NSWEC would be happy to provide it.

Q3. In your submission you advise that your current SGE 2015 Risk Register contains 196 risks [para 37]. What risks are in the major and catastrophic range and what mitigation strategies do you have in place to reduce the likelihood of these occurring?

6. As part of its SGE 2015 Programme governance, the NSWEC maintains a Risk Register. This Register is a consolidation of all risks identified by each of the 20 projects within the Programme of work for the election. The risks are rated according to probability and impact, and a list of current controls in place determines the original risk assessment.
7. Following this, any additional proposed mitigation treatments are identified that will reduce the risk rating and a residual risk assessment score is noted. The Risk Register is reviewed by the Programme Board on a fortnightly basis, and individual project risks undergo regular monitoring by each Project Owner, and adjustments made as proposed mitigation treatments are implemented.
8. The NSWEC Audit and Risk Committee also reviews the top 20 risks on the SGE 2015 Register at each of its six meetings held throughout each year.
9. A sample of the most recent Risk Register has been provided for the confidential review of Committee Members.

iVote

Q4. What have been the main changes since the 2011 election to the provisions for iVoting?

10. Since the 2011 SGE, the NSWEC has made the following improvements to the iVote service:
 - addition of “Verification Service” to allow voters to check that their vote as cast has been captured in iVote;
 - improved assurance of the integrity of the iVote system by comparison of votes held in the Verification Service with those decrypted from the Core Voting System after close of polls;
 - immediate distribution of iVote numbers, eliminating the delay of up to one day, and allowing voters to register and vote immediately thereafter;
 - improved security of the vote by encrypting at source in the browser on the voter's PC or mobile device, preventing tampering with the vote over the internet; and

- reduction of operator manual steps to manage the system by automation of processes.

Q5. The Committee notes that there have been delays in the procurement of the verification service and issues regarding the ability of vendors to provide the service [para 70-71]. What progress has been made with this project?

11. The Verification Service will be developed by the NSWEC, and operational management services will be procured from a third party, so as to preserve the principle of independent operation of the Verification Service. The NSWEC believes the timeline for completion is achievable.

Q6. What testing is going to be done on the verification service and how is this testing going to be completed?

12. A full testing program is being developed for the Verification Service, which will include functional, integration, performance and security testing. The NSWEC has its own internal test team and will engage specialist third-party testers for some aspects of this testing.

Q7. You have estimated that the use of iVote at the SGE 2015 will increase to 250,000 based on data from by-elections [para 66]. Given that the use at the SGE 2011 was 46,862 are you confident that this estimate is correct? Given that the original project was based on an expected usage of 100,000 electors, are the systems in place to cope with the additional capacity if the estimates prove to be accurate?

13. The 250,000 estimate was arrived at by projecting trends evidenced in recent by-elections, in which there has been significantly higher usage than at SGE 2011. The NSWEC has also allowed for additional votes anticipated from the encouragement of the use of iVote instead of postal voting where appropriate. It is important to note that the design capacity of iVote must be on the higher side to ensure the system is not underspecified.
14. Since May 2014 the system infrastructure has been planned with capacity to handle 1,000,000 votes in total, with an allowance for peak rates of 1,000 concurrent web voters; this is sufficient for the maximum potential numbers which could reasonably be expected. Performance and stress testing of the iVote system will be undertaken to determine the actual capacity limits under real voting scenarios. All system activity will be monitored in real time and 'throttling' of registrations can be used to moderate peak loads if necessary, by which is meant that the NSWEC is able to release iVote numbers gradually. In particular, at 8.00 a.m. on the opening iVoting day of Monday 16 March 2015, the potentially pent-up pool of voters will be released incrementally. Appropriate messaging to voters will be developed to handle any instances where inbound capacity is in fact exceeded.

Q8. The iVote Strategy states that on election day the iVote system will be fully backed up periodically during operation to an independent site, as well as the primary and replicated systems. Where is the independent site hosted and who is it managed by?

15. iVote Core Voting System hosting will be at the two Government Data Centre [GovDC] sites at Silverwater and Unanderra. This is a state of the art hosting facility developed by a private sector operator to NSW Government requirements for reliable and secure hosting. The primary site will be Silverwater and the disaster recovery site will be at Unanderra, with near real time replication of all data over secure links. Both sites are managed by the GovDC operator, Metronode, and NSWEC hosting operations are provided as a managed service by a GovDC Marketplace provider, Secure Logic.

16. Periodic backups will be taken of the primary system and will be located off-site. These backups are taken more for audit purposes than data recovery, as they ensure that a point-in-time snapshot of the system is available if required for audit purposes.

Q9. Professor Rodney Smith in his 2013 'Internet Voting and Voter Interference' report for NSWEC [quoted in the iVote Strategy] stated that

'Internet voting attacks are able to target a large number of votes with a fraction of the budget....Security flaws in operating systems and applications make it easy to write a virus that would be active on election day to change the voter's vote.' (p.31)¹

a) Given the relatively small amount of lost votes that resulted in the new election in WA, and in light of Professor Smith's comment, what assurances can the Commissioner give the Committee about the security of the iVote system

17. The security environment for the iVote system has been developed taking account of the following:

- CSC Australia was commissioned to undertake an analysis of the potential threats to iVote;

¹ It is noted that at this point of his report, Professor Smith was quoting R Joaquim, C Ribeiro. and P Ferreira, (2010) 'Improving Remote Voting Security with CodeVoting', in D Chaum, et al (eds), *Towards Trustworthy Elections* (Heidelberg, Springer) at p 311, where the authors contrast the fact that an attack only works if it can be hidden from the voter, such that if voters somehow find out that it has occurred, they are likely to report it; whereas vote-buying and voter coercion involve social relationships in which the actors are identified to each other.

- a security implementation plan was then developed to ensure that measures are in place to counter identified threats; and
- the iVote system meets internationally accepted principles for online voting systems;
- an international group of technical experts (the iVote Technical Advisory Group - TAG) reviewed iVote plans and implementation documents at a number of points in the development of the iVote project, with particular focus on aspects affecting the integrity and security of the overall iVote system;
- the NSWEC has plans for extensive secure logging and monitoring of system activity to identify anything unexpected; and
- the resulting security planning is being implemented in the system and hosting arrangements are being designed in association with the hosting provider.

18. The overall system architecture of iVote is underpinned by the principle of independence of data held by - and operation of - key system components. Thus, any attempt to change a vote would require overcoming the security measures surrounding more than one system. Even if a hacker were successful in changing a vote at the point of submission, the voter would subsequently identify that his or her vote held on the Verification Service was not recorded as cast. In this case, the voter can re-vote using a new iVote number and the old vote will be deleted.

b) What progress has been made in the implementation of the recommendations from the iVote threat analysis and risk assessment for SGE 2015?

19. The NSWEC is confident that the processes around the security of the iVote system outlined above fully addresses the recommendations in the CSC threat analysis.

Q10. What are the Commission's plans for expanding iVoting in future elections?

20. The NSWEC has made provisions in its contracts with suppliers for iVote to be available for use by other Electoral Commissions in Australia and New Zealand. It is expected that these other jurisdictions are waiting to see the outcome of the use of the iVote system in SGE 2015 before committing to trials.

21. Pending the successful operation of the iVote system at SGE 2015, the NSWEC is hopeful that the Committee's recommendations in relation to the LGE 2016 may result in iVote being trialled at those elections, despite the Government's response.²

² The Committee proposed that technology-assisted voting (or the iVote system) be available to electors at the 2016 LGE. However, the Government response noted that, considering councils need to decide on the conduct of the 2016 LGE by March 2015 at the latest, it is unlikely that the logistical questions could be settled in time for iVote to be available to councils in 2016. Nonetheless, the Government was supportive of making iVote available for use at the 2020 LGE.

The iVote system has the potential to address the lack of absent voting at local government elections and to support attendance voting operations at larger venues.

22. Despite the Government's concerns about potential logistical issues with the conduct of elections for individual councils, the NSWEC is hopeful that all councils will be prepared to support the operation of iVote, even if they have not opted for the NSWEC to conduct their election. This approach was proven at the LGE 2012, where Sydney Town Hall operated as a State-wide polling place and took ordinary votes for those councils which did not use the NSWEC as their election manager. Moreover, the cost of operating iVote at the LGE 2016 will be competitive compared to any other approach which might be adopted to resolve the recurrent issue of electors' inability to absent vote. However, it is noted that the use of iVote for LGE 2016 will require legislative changes.

Polling places

Q11. What provisions will be made to facilitate access to voting and to polling places for people with disabilities?

23. Wherever possible, the NSWEC uses polling places previously used by the Australian Electoral Commission [AEC]. This is to reduce elector confusion, as it is known that the majority of electors, if in their own district on election day, will go to the same venue they have previously used in order to vote. Given that these venues are not owned by either the AEC or the NSWEC, and the considerable number of polling places that are required to be used on election day, the NSWEC is always constrained by the availability of suitable premises that are accessible to people with disabilities.
24. Despite this, the NSWEC publishes on its website the accessibility level of every polling place - i.e., fully accessible, partially accessible and not accessible. If partially accessible, a description of that partial accessibility is given on the website to enable people with a disability to assess whether or not they will be able to access the venue. For example, where a polling place is itself accessible, but there is no accessible toilet, that venue will be listed as only partially accessible.
25. Within each polling place, a wheelchair accessible voting screen, maxi pens and magnifiers are available for electors with a disability to assist them to vote. In addition, the NSWEC has contacted every Declared Institution on its database to discuss the most suitable method of voting for their electors, to ensure that people in Declared Institutions can utilise the most accessible form of voting for them, be it

via a visit from a mobile team to cast their vote in person, a postal vote or the use of the iVote system.

26. In addition, iVote will be offered at Sydney Town Hall for electors with disabilities.
27. Also at Town Hall, it is proposed that the NSWEC will provide Registered Political Parties with the option of storing election material in the Marconi Room up until the Thursday before election day, although it will be need to be removed by 7:45 a.m. each voting day. After that date, the NSWEC will try and arrange a room in the entry foyer for such election material. If Sydney City Council is unable to provide a room, the NSWEC will allow the parties to store material in the foyer areas - which are separate from the polling place - and will again require the material to be removed by 7:45 a.m. every voting day.

Q.12 How accessible are the polling places for the 2015 election for people who rely on public transport?

28. As noted above, the NSWEC is constrained by the availability and choice of polling places, given that none are owned by the NSWEC, but does provide significant access information on those polling places to electors. However, over half of the polling places for the 2015 SGE are located within schools, which by definition are accessible by public transport. For the remaining polling places, accessibility to public transport is part of both the AEC and NSWEC venue check list. Unfortunately, this data is not currently captured within a database. Also, it should be noted that it is likely that some polling places in rural NSW may not be well-serviced by public transport on a Saturday.

Q13. The Committee's review of the 2011 recommended that it be made an offence for the providers of polling places to interfere with the display of compliant electoral material. Without any change to the law as yet - is there more that your officers can do to prevent such incidents occurring at the 2015 election?

29. In the absence of any legislative authority, all a Polling Place Manager can do is to request that any interference that they have observed or that is reported to them on election day ceases immediately. Should the person interfering with the display of compliant material not desist from doing so, the next course of action would be for the Polling Place Manager to inform their Returning Officer and to call the appropriate authorities, i.e., NSW Police, to attend the polling place to deal with the matter.

Counting the votes

Q14. For the first time NSWEC will data enter information from Legislative Assembly ballot papers into a computer counting engine [para 100]. What are the potential risks with this innovation; and what mitigation strategies have you developed?

30. NSWEC has a successful track record managing system delivery. The proposed system is built on the existing computing counting platform which the NSWEC successfully delivered for the 2011 Legislative Council Election and the 2012 LGE. It is considered that any system risks are managed well within NSWEC's capabilities and resources, such that there are no real risks associated with this approach, which was used highly successfully in Returning Offices at the LGE 2012.
31. In addition to the usual quality checks associated with data entry processes - which are significantly higher than the manual count processes - the main advantage of such data entry is that the NSWEC can hone its results during recounts and checking of ballots, which will provide a greater level of certainty and accuracy than manual recounts.
32. After election day, the integrity of computer counting will be able to be confirmed by the public as the NSWEC input data files will be published on the website, together with the specification for the count system. Thus, any interested person will be able to develop his or her own count system, to compare with the NSWEC count. This approach worked well for the NSWEC at the 2011 Legislative Council count, and it is anticipated that the public interest in the WA Senate recount will mean that more individuals will undertake this type of check.
33. NSWEC will also put in place a Results Management Team to provide further oversight and assurance of results processing.

Integrity of the electoral roll

Q15. How does the Commission ensure integrity of the electoral roll? (in evidence before the public hearing on 24 October 2014, the Commissioner offered to provide the Committee with further information from the Director of Enrolments on this subject).

34. Having regard to the strict time frame in which the Committee seeks responses to its question, the NSWEC considers that it would be of more use if a more extensive

response were prepared by the Director Enrolment and made available in the near future. This will therefore be provided to the Committee at the earliest date possible after SGE 2015.

Q16. When will advertising promoting the election commence?

35. It is planned to commence State wide advertising on Sunday 22 February 2015 and run through until Friday 27 March 2014.

Q17. What proportions of advertising expenditure are spent on television advertising, newspapers, social media and other media?

36. The Budget Split allocation for the placement and buying of the advertising space is currently (as it is subject to change) at the following amounts:

Media	Amount
TV & Online Video	\$ 700,000
Radio	\$ 500,000
Print	\$ 500,000
Online	\$ 450,000

37. In addition to the above state-wide communications campaign, is the cost account management and producing the adverts of approximately \$900,000. Approximately \$60,000 will be spent on social media in addition to the on-line advertising above.

38. The NSWEC has budgeted a further \$1.369 million to produce the following:

- (i) a range of specific communications to special interest groups including electors with a disability, culturally and linguistically diverse electors and Aboriginal and Torres Strait Islander electors;
- (ii) candidate information and registered third party campaign advertising;
- (iii) information to inform electors who are eligible to use iVote services; and
- (iv) communication messages to electors impacted by redistribution.

39. This brings the total spend to an estimated \$4.48 million.

Q18. What total targeted audience rating points (TARP) does the Commission expect?

40. The estimated TARPs across TV for Brand, Prepoll, and Remember to Vote is approximately 460 state wide TARPs across the 5 week campaign period.

41. The impact of the advertising would typically be measured using pre/post campaign awareness testing. In terms of measuring success for the media component of the campaign, this can be done using standard media metrics such as Reach and Frequency figures for TV, press and radio activity, as well as online metrics such as clicks to site and new registrations (online analysis depends on the tagging that will

be implemented). These measures will allow the NSWEC to ascertain how much of the total NSW audience was exposed to the messaging and engaged with the campaign.

Q19. What analysis does the Commission undertake of the impact of its advertising?

42. The NSWEC takes the issue of evaluation very seriously, as it provides both vital information for the improvement of electoral services for future elections, and a mechanism for the Parliament to hold the NSWEC to account for the conduct of elections. This degree of accountability also engenders trust in the community that the NSW electoral system is robust and impartially administered.
43. In terms of the analysis of the impact of advertising, the NSWEC will evaluate the effectiveness of its communication campaign across all stakeholders – electors, candidates, political parties and media - as it has done for each major election event since the 2008 LGE.
44. The evaluation preparation is well advanced; the procurement process for an independent research company to undertake the evaluation is almost concluded and the design of the evaluation is scoped. The assessment of the proposed advertising communication campaign will include a comparison of electors’ awareness both before and after the election. The assessment will be undertaken at the following two levels:
- the campaign’s ability to reach the target audience; and
 - the ability to achieve a response in terms of knowledge and behaviour having regard to the outcomes sought from the campaign (see paragraph 49, p 15 of the Commissioner’s submission).
45. Measurement will include all elements of the communication campaign (television, social media, radio, etc.,) and address awareness of the components of compliance with the statutory requirement to vote, namely:
- the need to check enrolment;
 - knowledge of the when and where to vote; and
 - the correct method to cast a valid vote.
46. The follow up component will assess the campaign’s reach. The sample size will be sufficient to enable conclusions to be drawn reliably. In addition, the surveys of electors being undertaken at pre-poll locations, as well as the post-election phone and focus group components, will include the impact of the communication

campaign. Also, iVote online advertising will be monitored and managed in real time and spend allocations will be directed to the most effective advertiser.

47. The NSWEC's planned evaluation of the 2015 SGE is described in the Commissioner's submission to the Committee's Inquiry on pp 25 – 26.

Printing

Q20. From where is the paper sourced on which the Commission prints its ballot papers?

48. Paper to be used for the SGE 2015 Ballot Papers is being procured via Australian Paper, which has developed the specifications of the paper to ensure paper stock will work effectively on its equipment. The paper mill for this product is located in Maryvale, Victoria.

Eligibility of candidates

Q21. Is a person with dual citizenship eligible to stand as a candidate for election in New South Wales?

49. The role of the NSWEC does not go beyond checking that a candidate is in fact enrolled; it does not extend to going 'behind' a nomination to determine whether a person is disqualified under the *Constitution Act 1902*. Such questions are to be determined by the NSW Supreme Court in its capacity as the Court of Disputed Returns, or for Parliament itself in respect of deciding whether or not a Member should be expelled for such disqualification.

50. However, it is noted that Professor Anne Twomey, in her *Constitution of New South Wales*, concludes as follows:

While persons who hold dual Australian and foreign citizenship *may validly be elected to the New South Wales Parliament*, if any action is taken after election to acknowledge the foreign allegiance, such as the application for a foreign passport, or perhaps even the renewal of a foreign passport, then the Member may become disqualified.³

51. These comments were made in the context of Professor Twomey's consideration of s 13A(1)(b) of the Constitution Act, which provides that a seat of a Member of the NSW Parliament becomes vacant if the Member:

... takes any oath or makes any declaration or acknowledgment of allegiance, obedience or adherence to any foreign prince or power or does or concurs in or adopts any act whereby he may become a subject or citizen of any foreign

³ A Twomey, *The Constitution of New South Wales*, (Federation Press: 2004), p 424. Emphasis added.

state or power or become entitled to the rights, privileges or immunities of a subject of any foreign state or power.