



Choosing Electoral Systems in Local Government in New Zealand

A Resource Document

Produced by the STV Taskforce
May 2002

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Introduction

This resource document is designed to help local government elected members and officials as they consider whether or not to change from a First Past the Post (FPP) electoral system to a Single Transferable Vote (STV) electoral system for the 2004 local elections. It may also be useful to members of the public.

Councils may decide that an STV electoral system would be beneficial to their district or region. Others may decide that FPP is the preferable system. Some councils may choose to watch others try out STV first before deciding whether or not to adopt it. Communities also have a role to play through the consultative processes and through polls initiated by electors or by the council itself.

Whatever councils decide, all territorial authorities will be involved with STV in 2004, as they run the elections for the District Health Boards (DHBs) which must use STV.

The document has been prepared with contributions from a number of expert authors and reviewers. It is not intended to be a textbook and does not attempt to explain the innermost workings of the STV 'calculator', nor to test the mathematical aptitude of readers with detailed tables.

The document does not present an argument for or against STV, nor is it a 'how to' document. It simply sets out the facts, and tries to describe processes in objective and relatively straightforward terms. It addresses:

- why a change must be considered
- what STV is
- how STV compares with FPP
- the impact of DHB elections
- the possible cost implications for councils, and
- how the STV 'calculator' does its job.

We intend to update this document from time to time, as new information comes to hand, and as comments are received from readers. Updated versions will be available on the Internet from www.dia.govt.nz under Local Government Services.

We hope that this resource document will be helpful.

The STV Taskforce
May 2002

In a nutshell

This document contains some facts that anybody considering local government electoral systems in New Zealand should know. It also identifies a number of important issues for consideration. These facts and issues are summarised very briefly here.

The essence of STV

Under STV, each voter has one vote, which is exercised by ranking candidates in order of preference, 1st, 2nd, 3rd etc. Voters may rank as many or as few candidates as they wish, as long as they indicate just one first preference and consecutively rank other candidates without skipping or repeating a ranking.

The rationale of STV is that when a candidate receives sufficient votes to be elected, any surplus votes are not wasted, but instead are available to help other candidates become elected, based on the second or subsequent preferences of voters. Similarly, votes given to candidates without sufficient support to be elected are available to help other candidates become elected, according to voters' second and subsequent preferences. This means most voters are represented by the member or members for whom they voted.

The mechanics of counting

Vote counting under STV will be carried out using computers after all votes have been received. To do this, councils will have their own software which will relate to an STV 'calculator' provided by the Department of Internal Affairs.

Council considerations

To reach their decisions on what electoral system to use, councils will need to consider:

- the electoral principles of:
 - fair and effective representation,
 - equal opportunities for participation, and
 - public understanding of, and confidence in electoral processes
- the representation review process (review of membership and basis of election)
- encouraging electors to vote
- the timeliness of final election results
- the impact of DHBs using the STV electoral system

- the costs associated with the different electoral system options.

When making their decisions, councils will also need to consider:

- the importance of community participation
- the need for community information and education on electoral systems
- the promotion of local government elections
- the costs of polls.

Timing

Key last dates for councils to note in relation to the 2004 elections are:

By 12 September 2002	Council decision whether to change electoral system
By 19 September 2002	Public notice of right for community to demand a poll on electoral system
By 18 December 2002	Community may demand a poll on electoral system
By 28 February 2003	Council decision to hold a poll on electoral system
By 8 September 2003	Public notice of council's proposed representation arrangements

1.0 Choosing between electoral systems

1.1 Electoral systems

The *Local Electoral Act 2001* prescribes a choice of two electoral systems that may be used in council elections from 2004 onwards:

- First Past the Post (FPP), and
- Single Transferable Vote (STV).

The *Local Electoral Act 2001* defines STV as 'STV using Meek's method of counting'. Schedule 1 of the Act, however, includes a number of modifications to Meek's method. Further necessary modifications have been identified in the development of the STV 'calculator' to reflect the New Zealand local elections environment. It is anticipated that these further modifications will be reflected in the new STV regulations and, as a result, it is considered appropriate to refer to the New Zealand STV (NZSTV) electoral system in this document.

1.2 How electoral systems can be changed

The *Local Electoral Act 2001* sets out a procedure by which the electoral system used for council elections may be changed.

In practice, any decision to change electoral systems prior to the 2004 local elections, means a change from FPP to NZSTV.

There are 3 alternative methods for changing electoral systems:

- by a resolution of a council
- as a result of a poll demanded by electors
- as a result of a poll held on the initiative of the council.

A change in the electoral system will have effect for at least the next 2 successive triennial general elections subject to the enactment of the Local Government Bill presently before Parliament.

The statutory decision-making procedure is briefly as follows:

Resolution of a council

Procedure	Statutory provision	Deadline
Council may resolve to change electoral system	s. 27 Local Electoral Act 2001	Not later than 12 September in the year that is 2 years before the next triennial general election

Poll demanded by electors

Procedure	Statutory provision	Deadline
Council must give public notice of right to demand poll	s. 28 Local Electoral Act 2001	Not later than 19 September in the year that is 2 years before the next triennial general election
Electors demand for poll	s. 29 Local Electoral Act 2001	Before the date of the public notice given under s. 28, or no later than 90 days after the date of that public notice

Poll initiated by council

Procedure	Statutory provision	Deadline
Council may resolve to hold poll	s. 31 Local Electoral Act 2001	Not later than 28 February in the year immediately before the next triennial general election
Poll of electors (either as a result of a demand or council initiative)	s. 33 Local Electoral Act 2001	Not later than 82 days after the date on which notice under s. 33(1) is received or the last notice under s. 33(2) is received

Council resolution

A council **may** resolve to change its electoral system not later than 12 September in the year that is 2 years before the next triennial general election (s. 27 LEA). Therefore, a resolution to change the electoral system to be used for the 2004 local elections, would need to be made by 12 September 2002.

The *Local Electoral Act 2001* does not specify what, if any, form of consultation is required prior to such a decision being made. However, good practice would suggest that the community should be consulted over an issue as significant as this. This is particularly so as there will not always be a poll held following a council resolution.

A council is **not required** by law to make a decision on its electoral system for the next triennial general election by 12 September – the current system will continue to apply unless changed either by council resolution or as a result of a poll of electors. It is however important that elected members are briefed on the statutory provisions and have the opportunity to consider the issue.

Poll demanded by electors

A council is required to give public notice no later than 19 September in the year that is 2 years before the year in which the next triennial general election is to be held:

- of any resolution made by it under section 27, and
- of the right of electors to demand a poll on the electoral system to be used at the next 2 triennial general elections of that council.

To be successful, a demand for a poll must be signed by at least 5% of the electors enrolled to vote at the previous triennial general election of the council (s. 29(3) LEA). There are also some technical requirements that need to be met for a demand to be valid. These are set out in s. 30.

Demands for polls may be lodged either:

- before the date of public notice, or
- not later than 90 days after the date of public notice.

The first of these requirements means that in relation to the following triennial general election, a poll could be requested at any time before 18 December in the year that is 2 years before the next triennial general election.

The second requirement means a poll could be requested between 18 September and 18 December in the year that is 2 years before the next triennial general election.

Good practice would suggest that only one poll is held in any triennium, and that this be in the period March to May in the year before the next triennial general election. This would avoid, for example, the risk of the poll coinciding with Parliamentary elections.

A demand for a poll would arise in the following circumstances:

- where the council has not resolved to change the electoral system, the demand would propose a change in the electoral system, or
- where the council has resolved to change the electoral system the demand would propose that the existing system be retained.

Poll initiated by council

A council may resolve that a poll be held on a proposal that a specified electoral system be used for its next 2 triennial general elections (s. 31 LEA). A resolution to hold a poll must be made not later than 28 February in the year immediately before the year in which the next triennial general election is to be held. In relation to the 2004 elections, this means 28 February 2003.

A council may resolve to hold a poll whether or not:

- the deadline for a demand from electors for a poll has expired, or
- a valid demand for a poll from electors has been received.

1.3 Polls

Where electors have successfully demanded a poll or the council has decided to conduct a poll, the electoral officer must give public notice of the poll and arrange for the poll to be held in the normal manner prescribed by the *Local Electoral Act 2001* for polls.

The poll must be held not later than 82 days after the date on which the electoral officer is advised by the principal administrative officer of a valid demand for a poll or of a resolution of the council to hold a poll. The principal administrative officer is required to give the electoral officer this advice as soon as practicable. In practice this means that a poll would have to be held at the latest in the second half of May in the year immediately before the year in which the triennial general election is held.

If the electoral officer receives more than one valid demand for a poll, or, one or more valid demands for a poll and advice of a decision of the council to hold a poll, the polls required to be held must be combined and only one poll is to be conducted. The result of a poll is **binding**.

1.4 Effect of decision

A decision on the electoral system made solely by way of a resolution of a council at present continues in effect until either:

- a further resolution takes effect, or
- a poll of electors is held.

Note: The Local Government Bill currently before Parliament proposes that any such decision apply for at least the next two triennial general elections.

A decision on the electoral system made by a poll continues in effect:

- for the next two triennial general elections, and
- for all subsequent triennial general elections until the council makes a resolution under section 27 to change the electoral system or a further poll is held, whichever occurs first.

This applies whether or not the poll has resulted in a change in the existing electoral system.

A decision on the electoral system relating to a territorial authority also applies to the elections of any community boards in the district of that territorial authority.

Territorial authorities, regional councils and other local authorities to which the *Local Electoral Act 2007* applies, make their own decisions about the electoral system to apply to their elections. The exceptions to this rule are:

- District Health Boards (DHBs), which are required to be elected by STV
- any local authority required by another Act to be elected by a particular electoral system (s. 32(b) LEA).

1.5 Electoral systems for other polls

Section 35 of the *Local Electoral Act 2007* provides that a council may adopt a particular electoral system for the purposes of a particular poll or for the purpose of **two** or more polls being held at the same time.

If a council has not made a resolution about the electoral system to be used for a poll, the system to be used is the FPP electoral system.

Sections 27 to 35 of the *Local Electoral Act 2007* are attached as an **Appendix**.

2.0 The Single Transferable Vote electoral system (STV)

2.1 Introduction

The Single Transferable Vote electoral system (STV) is a form of preferential voting where voters rank some or all candidates in order of personal preference. In order for a vote to be valid, each voter needs to rank only one candidate. However, the more candidates that are ranked by a voter the greater the contribution that vote makes to the final result.

STV was first proposed in the mid-nineteenth century. The goal was to develop a voting system in which voters' votes could be transferred from one candidate to another so that every vote would be as effective as possible regardless of whether it was used to support a political party or organised political grouping, or an individual candidate.

Today, STV is used to elect the national assemblies of Eire and Malta, some Australian State legislatures, as well as Tasmanian and some other local authorities.

The form of STV to be used for local elections in New Zealand is based on the 'Meek method' of counting votes. This counting method uses the power of modern computers to more accurately reflect voters' wishes and to avoid the arbitrary rules for traditional hand counting of votes. The method has been further modified for New Zealand local electoral conditions and can be referred to as 'New Zealand STV'. Details of modifications additional to those included in the *Local Electoral Act 2001*, are set out in Section 2.5. NZSTV also applies to mayoral and single-member wards and constituencies as a 'reduced' form of STV or 'majority-preferential' vote.

2.2 How STV works

With STV, voters' entitlement to vote does not change. What changes is the way that they exercise their vote.

In an STV election each voter has only one vote, hence the name Single Transferable Vote, but is able to rank some or all candidates in preferred order. This enables each voter's single vote to be transferred from their most preferred candidate to their second preference, and so on, if their preferred candidate has either more votes than required to be elected, or so few as to have no chance of being elected.

Successful candidates are those who win enough support to reach the quota. This is established by dividing the total number of valid votes cast by one more than the number of vacancies to be filled, and adding a fraction or a whole number to that quotient. The following table provides examples.

	1 vacancy	2 vacancies	4 vacancies
$Q = \frac{\text{total valid votes (100)}}{\text{no. of vacancies} + 1} + 1^*$	$Q = \frac{100}{1+1} + 1^*$ $= 51$	$Q = \frac{100}{2+1} + 1^*$ $= 34$	$Q = \frac{100}{4+1} + 1^*$ $= 21$

* this figure is either a whole number or a fraction

Votes can be made more effective by being transferred to other candidates in accordance with voters' wishes as expressed on the voting document. In effect, voters are saying, *'The candidate I most wish to see represent me on the council is Joe Bloggs. If Joe wins so many votes that he doesn't need my vote to be elected, then my vote is to be transferred to Bill Smith to help him get sufficient votes to be elected. But if Joe has so few votes that he can't possibly be elected, my vote is to be transferred to Bill'*.

Districts and regions using STV are often divided into multi-member wards or constituencies, although STV can also be used in both single-member wards and constituencies, and wards encompassing an entire territorial authority district – an 'at large' election. The number of representatives to be elected from each ward or constituency can vary. There is no pre-determined size for STV wards or constituencies, but between three and nine representatives is generally regarded as providing benefits of additional proportionality reflecting voters' preferences. Larger units electing a greater number of representatives are possible, but risk making the voters' task very onerous.

Under STV, elections for mayoralities and single-member wards and constituencies will provide an absolute majority (50% + 1 of all valid votes cast) for the winning candidate. Since there are usually a number of candidates contesting these elections, it is likely that voters' second and even third preferences will have to be allocated before the winning candidate attains the quota. Although there is only one vacancy to be filled, voters will cast their votes in exactly the same way as for multi-member ward or constituency elections.

As a broadly proportional electoral system, the political composition around the council table under STV should reflect the range of opinions within the community that elects the council. An odd number of representatives in each ward or constituency is likely to achieve a more proportional outcome in districts or regions where political groupings predominate by preventing each party gaining an equal number of positions.

2.3 General outline of how votes are counted in STV elections

Once all votes are cast and voting has closed, counting can commence. Usually, several counting stages are needed to determine which candidates are elected. The count proceeds as follows:

- the quota is determined
- each voter's first preference is allocated to his or her most preferred candidate
- any candidate who achieves the quota is declared elected, and any surplus votes for that candidate, that is votes in excess of the quota required for the candidate to be elected, are transferred to other candidates in accordance with those voters' second preferences
- after the transfer of these surpluses, any candidate who has attained the quota is declared elected and any further surpluses arising from the transfer of votes are transferred on to the candidates who are the voter's next preferences
- once all or any surpluses have been dealt with, or if there are no surpluses to transfer, the candidate with the lowest number of votes is excluded and next preferences listed on the voting documents which gave preference to the excluded candidate are transferred to the remaining candidates. If two or more candidates are tied for last place the candidate who had the smallest number of votes credited after the first count is excluded
- at the conclusion of this redistribution of preferences any candidate who has reached the quota of votes required for election is declared elected and any surpluses are redistributed 'pro rata' across those candidates who remain.

These procedures are repeated in turn until all vacancies have been filled. This may take several cycles depending on the number of candidates contesting the election and the number of vacancies to be filled.

The earliest STV elections used a fairly crude method of determining the transfer of surplus votes. It was an arbitrary process which lacked randomness since the selection of voting papers depended on the point at which they were counted and there was no guarantee that they would accurately represent all the second and subsequent preferences of other votes in the pile.

In more recent times surpluses have been distributed pro rata to remaining candidates. While this procedure was a distinct improvement on previous practice in that it ensured that all voters' preferences were acknowledged, it did not totally eliminate the chance of votes being discarded as a result of the order in which candidates were eliminated.

2.4 The “Meek Method” of counting votes

The ‘Meek method’ of counting votes was devised by mathematician Brian Meek in 1969, and designed to eliminate the potential inequalities in the transfer of surplus votes resulting from arbitrary decisions present in previous counting methods. Meek developed an algorithm (a set of rules for solving a mathematical problem) that computes a retention factor – referred to in the *Local Electoral Act 2007* as the ‘keep value’ – for each elected candidate.

This means each elected candidate retains a fraction of each vote received and the balance of each vote is transferred to the voter’s next preference. The effect of Meek’s method is that the count, as far as possible, reflects the voting preferences of each voter and the number of wasted votes is kept to an absolute minimum.

Meek recognised that if the problems of earlier counting methods were to be avoided, votes must be transferred to all candidates other than those already excluded – even candidates who had already attained the quota. This means that repeated transfers of surpluses are required from candidates who have already been elected.

All votes cast are dealt with exactly as voters have specified. A number of key principles apply:

- a candidate who achieves the quota retains a calculated proportion of every vote received and the remainder is transferred to other active candidates. The elected candidate retains only enough votes to equal the quota
- when or if candidates who have already been declared elected gain new surpluses, they must be transferred out again immediately, pro rata, to other active candidates
- all non-transferable votes (votes that do not have any further preferences declared) play no further role in the count, and
- whenever a candidate is excluded’ all voting documents are treated as if that candidate had never stood and the votes credited to that candidate are transferred to candidates who are still ‘active’, including to any candidates who have already been declared elected, strictly in accordance with voters’ preferences.

Whenever non-transferable votes are set aside the quota has to be recalculated because there are fewer valid votes remaining in the count. Because of this, the ‘keep values’ of any elected candidates also have to be recalculated as all candidates are elected at the quota.

In this way the number of votes that cannot be transferred to another candidate is kept to a minimum, the preferences of each voter are taken into account as far as possible, and there is no incentive for voters to cast their vote in any way other than according to their actual preferences.

Meek's method computes the quota and the fractions of votes that each candidate retains to the accuracy of the computer rather than rounding the fraction to tenths or hundredths.

2.5 New Zealand STV

To take account of the New Zealand local electoral environment and to provide refinements in the counting program, New Zealand STV (NZSTV) vote counting further modifies 'Meek's method' as described in the *Local Electoral Act 2007*. These further modifications are:

- the rounding of fractions up to nine decimal places for the calculation of quota and keep values – this will ensure that each candidate retains at least a quota of votes, making it impossible for too many candidates to be elected
- the facility to withdraw a candidate and allow that candidate's votes to be transferred to the next preferred candidate
- the facility to guard elected candidates in the event of a recount after the withdrawal of an elected candidate – this will preserve the position of already elected candidates in the event of a redistribution of votes following the withdrawal of a candidate
- the facility to complete the count in the event of insufficient candidates chosen by voters at any preference level.

How the quota is established and the way in which votes are counted in a NZSTV election, are described in more detail in Chapter 6.0.

It is noted that not all voters will want to follow the complexities of STV counting. What they need to understand is that they are able to express a ranked set of preferences, and that these will be distributed, exactly as they have indicated, to assist their preferred candidates to reach the quota.

2.6 Other issues relating to STV

Representation reviews

Currently councils are required to consider the size of membership and basis of election prior to every triennial general election. Under the Local Government Bill they will be required to undertake these representation reviews at a minimum of every 6 years. The Bill requires achievement of effective and fair representation including criteria for establishing wards and constituencies based on population per member. There is, however, scope to vary this requirement based on recognition of communities of interest.

Any decision to change electoral system will influence issues to be considered as part of the representation review. These issues include:

- representation of women, Maori, and minority ethnic communities
- Maori wards and constituencies
- choice between ward/constituency or 'at large' election, or combination
- elections contested by political parties or organised political groupings
- elections contested by independent candidates
- the number of representatives.

Representation of women, Maori and minority ethnic communities

STV is seen as enhancing opportunities for women, for Maori and for members of minority ethnic communities to be elected to councils. This is because it allows voters to vote for their preferred candidates on the understanding that nearly all voters have an equal effect on the election outcome and candidates with a general level of support reflected across all preferences are likely to get elected.

Maori wards and constituencies

The *Bay of Plenty Regional Council (Maori Constituency Empowering) Act 2007* authorised the Bay of Plenty Regional Council to establish separate Maori constituencies. The Local Government Bill currently before Parliament will, if enacted, permit councils to establish separate Maori wards or constituencies if they choose, or if determined by a poll of electors. Any separate Maori wards or constituencies will work in exactly the same way as wards or constituencies for general electors.

The choice between ward/constituency or 'at large' election or a combination

Where large numbers of members are to be elected, wards or constituencies may be seen as more manageable. If political parties or organised political groupings contest elections under STV, multi-member ward or constituency structures are likely to produce broad proportionality. In districts with smaller populations, 'at large' elections are seen as a practical possibility, particularly where elections are predominantly contested by independents.

If territorial authorities adopt the provision allowing councillors to be elected by wards **and** 'at large', as provided by the Local Government Bill, voting documents will need to be separated into two sub-sections, one for recording voters' preferences for ward representation' and the other to record preferences for 'at large' representatives.

Political parties or organised political groupings contest elections

Where, as in the larger cities, local politics tends to be organised around political parties or organised political groupings' STV has the capacity to produce results that broadly reflect the range of political opinion across the district. Where such groups contest elections, and where broad proportionality is seen as a desirable goal, at least five member wards or constituencies may be seen as desirable. STV provides voters with much greater choice and

helps to moderate 'block' voting.

Districts where elections are contested by independent candidates

Independent candidates often contest elections in smaller councils. STV is still likely to produce results that broadly reflect the range of opinion within the district or region, but the minimum number of members for each ward or constituency can probably be reduced to three.

The number of representatives

Because STV usually produces broadly proportional outcomes in line with voters' preferences, there is no need for all wards or constituencies in a district or region to elect the same number of councillors. As long as the statutory provisions of the *Local Electoral Act 2007* are adhered to, that is, ensuring that the ratio of elected representatives to population is similar across all wards or constituencies, including single-member wards and constituencies, boundaries can be drawn to reflect coherent communities of interest rather than being determined purely on a population basis.

Extraordinary vacancies

Occasionally during the term of a council a mayor or a councillor dies or resigns and a vacancy is created. There are two possible ways of dealing with this issue if STV is in use:

- if the vacancy occurs more than 12 months before the next triennial general election, a by-election must be held. In this case its form will be identical to the election for mayor or single-member ward or constituency (described above)
- if the vacancy occurs 12 months or less before the next triennial general election it is, as under FPP, filled by appointment or left vacant (if the vacancy is that of mayor, an appointment must be made).

Timeliness of election results

Under FPP, preliminary election results are announced on election day. Once the eligibility of special voters has been confirmed, special votes are added to give official election results.

Final policy decisions have yet to be made on the form of election results under STV. Results on election day (i.e. excluding special votes) could comprise first preferences only. Alternatively to provide 'meaningful' results (including special votes once verified) would mean no election results were provided on election day.

Publication of results

When an FPP election result is announced, candidates are listed in order of the number of votes received and it is easy to see who 'won' and who 'lost'.

Generally, STV election results are published by listing the successful candidates in the order that they attained the quota, while unsuccessful candidates are listed in the order they were excluded. It is, however, customary for spreadsheets to be published showing the result of each transfer of votes. Final policy decisions on these matters are still to be made.

Form of the voting document

The *Local Electoral Act 2007* provides that the Secretary for Local Government must approve general formats for voting documents. This is to provide necessary flexibility in the future. Criteria for voting documents are presently being developed to accommodate the different electoral systems and technologies used now (e.g. vote processing by barcode wand or scanning) and into the future (e.g. electronic voting).

3.0 A comparison between FPP and STV

Characteristics of First Past the Post (FPP)

Characteristics of Single Transferable Vote (STV)

How to vote

Voters place a tick alongside the name of the candidate or candidates they wish to vote for.

Voters rank candidates in order of preference – '1' alongside their most preferred candidate, '2' alongside the second-most preferred candidate, and so on. Voters do not have to rank all candidates for their votes to count; they may rank one or more but all rankings must be consecutive.

How candidates are elected

Each voter has one vote for each vacancy to be filled.

Each voter has one vote for each issue, even though there may be more than one vacancy. Each voter can exercise this vote by expressing preferences for any or all candidates.

The candidate who wins the most votes – regardless of his or her share of the total valid votes cast – wins a position.

Candidates who gain sufficient preferences to reach the quota will be declared elected. All candidates are elected with the same proportion of the vote.

The number of vacancies decides the number of candidates to be elected. If, for example, there are four vacancies, the four candidates with the highest number of votes will be successful.

The number of vacancies decides the number of candidates to be elected. To determine which candidates have the greatest support, all first preferences are counted.

Any candidate who has more than the quota is declared elected and any surplus votes are transferred (redistributed) to the remaining candidates strictly in accordance with voters' preferences.

If at any stage there are no surplus votes to be transferred, the candidate with the fewest votes drops out and that candidate's votes are redistributed to the remaining active candidates.

As each candidate achieves the quota he or she is declared elected. This procedure continues until all vacancies have been filled.

Proportionality

FPP is not a form of proportional representation. This means that elected members may not necessarily reflect the range of opinions in proportion to the electors of the district or region holding those opinions.

STV is a broadly proportional electoral system. It provides effective representation for all significant points of view. It cannot, however, guarantee that there will be an increased diversity of representation.

Many voters may not support the candidates who are elected because they did not vote for them. Votes that are not cast for successful candidates are in effect 'wasted'.

Nearly all voters can point to at least one, and probably more than one, person they helped to elect because they were able to transfer their support to another candidate when their first, and sometimes their second or subsequent preference, did not need all of their vote to get elected.

Many votes cast may be 'wasted' STV is widely considered to reflect voters' because successful candidates often wishes better than other electoral receive many more votes than they systems. need to be elected.

Each vote is of equal value at any given point in the count, and – provided votes have not been made non-transferable – very few votes are 'wasted' by not being able to help elect at least one candidate.

Later preferences cannot harm earlier preferences so voters can split their vote between candidates from different parties or organised political groupings.

FPP provides a direct link between voters and their elected representatives because those elected represent everyone, not just those who voted for them. However, even in multi-member wards or constituencies some voters may not have voted for any of the successful candidates.

To place a tick beside the name of one's preferred candidate or candidates represents a positive choice, but this extent of support which is indicated, is restricted to the number of vacancies to be filled. To express a ranked preference for candidates for office is a positive action. Voters are, in effect, saying: 'I prefer candidate B ahead of candidate D, but if both of these candidates can be elected without needing all of my vote I would like part of it to go to candidate A.'

Single vacancies or multiple vacancies

Some wards and constituencies may elect a single member to represent them while others may elect two or more representatives. Some wards and constituencies may elect a single member to represent them while others may elect two or more representatives, with the additional benefits of a more representative and/or proportional result.

Since each territorial authority elects only one mayor there is only one vacancy to be filled for that position. So the election of a mayor is just like an election for a local (constituency) MP.

The candidate who wins the most votes wins the mayoralty, regardless of how big or how small a proportion of all the votes cast. [Note: since councils do not directly elect their chairpersons, this provision does not apply to them.]

Where, as in a mayoral election, there is only one vacancy, if no candidate attains 50% plus 1 of the valid votes cast, the regional candidate with the least votes is excluded and their votes are transferred to the remaining candidates in accordance with voters' 2nd preferences. This process continues until one candidate has an absolute majority – i.e. has 50% plus 1 of all valid votes cast.

Advantages and disadvantages

FPP is a straightforward system of voting and counting. STV is more complex, particularly STV vote counting.

FPP is an electoral system that is familiar to most people and it is generally easy to understand. The STV electoral system is unfamiliar to most New Zealanders. Many people understand how to cast their votes (by ranking candidates in order of preference) but they do not understand how the result is arrived at. Some find it difficult to understand why they have only one vote when there are a number of vacancies to be filled.

Minor political parties or organised political groupings usually find it difficult to be elected in ward or constituency elections because their electoral support is spread thinly across the wards or constituencies of the district or region and certain communities of interest may not be reflected by ward or constituency boundaries.

Minor parties or organised political groupings usually find it easier to win representation under STV. This is because it is an electoral system that produces results that broadly reflect the range of opinions and views in the community. Where there are no political parties or organised political groupings the preferences expressed by voters still usually result in the range of the community's views being represented around the council table.

In multi-member wards or constituencies voters who vote for fewer than the maximum number of vacancies may actually help another candidate whom they do not support, to get elected, and it may possibly count alongside the candidate they most want to see elected.

In STV the way that votes are transferred from one candidate to another makes it virtually impossible to cast a tactical vote. This is because the transferred votes are shared in appropriate proportions between all candidates as identified by the voter and not just across those still active candidates who have not yet been declared to be elected.

It may also encourage 'tactical' voting in certain circumstances – i.e., where a voter's preferred candidate is known to have no chance of being elected, the vote may be used to support a candidate in an attempt to prevent another candidate from winning.

Where council elections are held in multi-member wards or constituencies, or 'at large' (a single ward across an entire district), each voter is able to cast one vote for each vacancy to be filled. This can result in a disproportionate result where political parties or organised political groupings contest the elections. Candidates from one party or organised political grouping can win all the vacancies being contested as a result of 'block' voting without having a majority of the votes.

STV is seen as a fairer system for electing representatives because it allows voters to discriminate among parties or political groupings, and also between different candidates from the same party or political groupings. It therefore provides voters with much greater freedom of choice, and also helps moderate 'block' voting.

Even without party or organised political groupings, a popular candidate can conceivably be defeated in multi-member wards or constituencies by the votes of his/her supporters that are cast for other candidates. Thus tactical voters may be encouraged either not to use their votes, or to vote for a particular candidate to try to prevent another candidate from winning.

FPP preliminary election results are usually announced shortly after polls close. The official results (including special votes) are published simply and are easy to understand, and who 'won' and who 'lost', or who 'topped the poll' or who 'just made it', is easy to determine.

The opportunity to express preferences for all candidates standing for election ensures that the candidates with the greatest level of support will be elected. Tactical voting is virtually impossible.

Under STV any 'on the day' results are far less indicative of final or official results. Accordingly there will be a greater delay before 'meaningful' results are available.

The results of STV elections can be published in a form that enables people to identify which candidates have been successful and which have not. However the notice does not so readily identify the candidate with the greatest level of voter support as all successful candidates are elected with the same proportion of the vote.

Maori may be represented through STV is likely to provide greater general wards or constituencies opportunities to elect Maori to councils from established by councils, or they may be general wards or constituencies. This is represented through designated Maori because candidates are elected as they wards or constituencies (subject to the attain the STV quota through first or enactment of the Local Government subsequent preferences. It will, however, Bill). also be possible for councils to establish separate wards or constituencies for Maori electors.

Whether they are standing in a Maori Whether they are standing in a Maori ward ward or constituency, or in a general or constituency, or in a general ward or ward or constituency, to be successful, constituency, to be successful, candidates candidates are still dependent on are still dependent on enough electors enough electors giving them their vote. including them in their ranked preference list of candidates.

For the same reasons that STV has the potential to give greater representational opportunities to Maori, STV is likely to enhance electoral opportunities for other minority groups such as Pacific and Asian peoples.

4.0 The influence of District Health Boards

4.1 District Health Boards and STV elections

The first District Health Board (DHB) elections were held in 2001 using the same First Past the Post (FPP) electoral system used by councils. At that time there was no requirement for DHBs, or any councils, to use the Single Transferable Vote (STV) electoral system for their elections.

However, from 2004 there is a legal obligation that DHBs use the STV electoral system in their board elections. The legal requirement reads as follows:

“The elections of DHBs to be held at the triennial general election in 2004 and at every subsequent triennial general election must be conducted by the Single Transferable Voting electoral system (STV) using the Meek’s method of counting votes”.¹

4.2 Responsibilities of territorial authorities for DHB elections

DHB elections must be held at the same time as territorial authority triennial general elections.*

Legislation requires that the functions (ie the powers and duties) involved in conducting a DHB election be split between an electoral officer appointed by the DHB and those appointed by the relevant territorial authorities (although these can be the same people). Territorial authorities are obliged to carry out at least some of the DHB election functions.³ In particular, territorial authority electoral officers are required to be responsible for the ‘core’ functions of DHB elections comprising electoral rolls and issuing voting documents as well as processing and counting votes.

DHBs must appoint an electoral officer⁴. As DHBs are local authorities for the purposes of the elections⁵ they can either undertake ‘non-core’ functions (those not carried out by territorial authority electoral officers) themselves or delegate these to the relevant territorial authority.

¹ Section 150 of the Local Electoral Act 2001 inserts this as an additional clause, (9A) into Schedule 2 of the New Zealand Public Health and Disability Act 2000.

² Clause 9, Schedule 2 of NZPH&D Act 2000.

³ Clause 11 of Schedule 2 of the NZPHD Act 2000 and Section 18 of the LE Act 2001

⁴ Section 12 of the LE Act 2001.

⁵ See definition of local authority in Section 5 of the Local Electoral Act 2001 (a DHB is a ‘partly-elected body’).

In 2001, DHBs recognised that their core business and expertise did not include running elections, and only two DHBs⁶ chose to appoint an internal electoral officer to carry out some of the election work. In all other cases DHBs delegated the responsibilities to one of the territorial authority electoral officers in their districts.

Elections in all 21 DHB districts worked satisfactorily. This was assisted by the negotiation of a memorandum of understanding between the Society of Local Government Managers (SOLGM) on behalf of territorial authorities, and the Ministry of Health on behalf of DHBs.

4.3 Payment for DHB elections

DHBs are required to pay territorial authorities for the election work carried out on their behalf.⁷

In 2001, a national formula was negotiated between SOLGM and the Ministry of Health as part of the memorandum of understanding. The vast majority of territorial authorities considered the payment arrangements to be fair. Territorial authority electoral officers will be consulted over a similar arrangement proposed for 2004.

4.4 Numbers and geography

As there are 21 DHBs and 74 territorial authorities, in most cases each DHB encompasses more than one territorial authority. Territorial authorities within a DHB area must work co-operatively to run the DHB elections under the control of a single electoral officer appointed by the DHB after consultation with territorial authorities.

Most DHB boundaries are consistent with (combinations of) territorial authority boundaries but in two cases the DHB boundary cuts across a territorial authority. Where this happens (Queenstown-Lakes and Ruapehu Districts), territorial authorities must work closely together to manage the electoral processes.

It is likely that some territorial authorities within a DHB district will continue to use FPP for their own elections, while others will use STV. This will complicate the administration of the DHB STV election as different vote collecting and counting arrangements will be needed, and these will have to be explained to the public.

⁶ Canterbury and Hawkes Bay DHBs

⁷ Clause 13 of Schedule 2 of the NZPH&D Act 2000.

In 2001, DHBs used electoral constituencies based on territorial authority boundaries and population size. In deciding the DHB constituency boundaries, the local communities of interest were also taken into account. The overall aim was to provide a fair spread of elected representation across each DHB. As yet, no decision has been made as to whether the DHB SW elections will continue to use constituencies or will revert to an 'at large' system. However it is assumed that the same criteria of community of interest and providing a fair spread of representation, will still apply.

Any changes to DHB constituencies, including changing to a single 'at large' constituency, must be made by Order in Council.⁸ In determining its position in relation to any such constituency changes, the Government will be interested in the views of the relevant DHBs and territorial authorities.

4.5 The impact of DHB STV elections on councils

In choosing the electoral system they wish to use in 2004, territorial authorities will need to consider all the philosophical and practical issues raised in other chapters of this document. They must also take into account their obligation to run DHB STV elections and the impact that this will have on their administrative capabilities, costs and on voters.

As all territorial authorities have a legal obligation to undertake at least some of the DHBs' electoral work, the options for territorial authorities are either:

- to use the FPP system for the territorial authority elections and to accommodate the DHB STV elections at the same time, or
- to use the STV system for territorial authority elections as well as for the DHB elections.

Regional councils will also have to consider to what extent their decisions are influenced by the electoral system being used by DHBs and territorial authorities within their respective regions. The territorial authority will then also have to accommodate this independently made decision.

Some may see the prospect of running a dual system – STV for DHB elections and FPP for territorial authority and regional councils elections – as an opportunity to try out STV before committing to it. This would mean that electoral officers would be able to run the familiar and established FPP system for all council elections, while coming to terms with the requirements of STV for only a 'limited' DHB election.

⁸ Section 19(3) New Zealand Public Health and Disability Act 2000.

Others may consider that the administrative complexities of running two different systems outweigh the advantages of a 'limited' exposure to STV in this election.

Further factors to take into account when considering a dual STV and FPP approach are:

- opportunities for electoral cost-sharing between a DHB and a territorial authority will be fewer than under a single system
- there may be a heightened risk of public confusion associated with a dual system, and reduced voting response in council and DHB elections as a result.

5.0 Indicative costs

5.1 Introduction

How much it will cost is likely to be one of the first things elected members want to know when considering changing their electoral system. This chapter attempts to address that question.

The most truthful answer is that what it will cost is not yet clear, as there are many factors which are still unknown. It is possible, however, to make some intelligent and informed assumptions; and from them and what has been learned from recent experience, to produce a range of costing projections.

5.2 Influences on costs

There are many influences on the costs of a Single Transferable Vote (STV) election. They include:

- the number of candidates
- the number of electors
- whether a new electoral system is used for all or just some issues
- whether territorial authorities and regional councils use the same electoral system as DHBs
- how much of the required technology is already in place
- whether new software has to be purchased
- the costs of linking territorial authority election software to the STV 'calculator'
- what data capture processes will be used (eg **wanding**)
- whether separate voting documents are required for different electoral systems
- whether voting documents relating to different electoral systems must be sent out in different envelopes
- how much local publicity is produced
- how many temporary staff will be needed.

What is known is that:

- DHB elections must use STV from 2004
- territorial authorities are required to undertake DHB elections
- DHBs are required to pay territorial authorities for DHB electoral costs
- DHBs and territorial authorities gained some mutual savings in 2001 by working together
- territorial authorities and regional councils have the right to decide independently which electoral system they wish to use (unless a poll is required in which case the electors will decide).

5.3 Assumptions

For the purposes of generating the indicative costs below, a number of important assumptions have been made. When considering the costs, these assumptions must be borne in mind and adjustments made as appropriate. These are the assumptions:

Hard copy voting will continue to be used in 2004 and data capture will be either by barcode **wanding** or by scanning. This assumes that Internet and other electronic means of voting will not be introduced in time for this election.

Current **ward** and constituency arrangements will continue. It is not yet possible to predict any alterations to boundaries, but some will inevitably be needed in time.

The number of **candidates** per issue is likely to be similar to 2001 levels except that the number of DHB candidates is predicted to be lower in at least some constituencies. The number of candidates impacts on printing and other costs, and on the number of preferences that need be indicated by voters.

Data capture will take more than twice as long for STV votes (112.5% longer) than an equivalent process for First Past the Post (FPP). This has been calculated using old 2001 voting documents and barcode **wanding**.

Overall staffing costs will increase significantly, due largely to data capture requirements. (Calculated at about 34% overall, based on assessed costs including the increase in counting time as described above).

Equipment costs, including computers and **wanding**, will increase to reflect the increase in staff (see above).

Accommodation costs may increase. This depends on the capacity of the territorial authority to accommodate the additional short-term staff and their equipment.

Software and administration charges associated with linking the STV calculator to the territorial authority's existing database or software will be imposed. This assumes that a straightforward universal software solution is not available in time for 2004, and that costs arise from analysis, specification drafting, linking the STV 'calculator', coding the software for data-entry and structure, and internal and external testing.

5.4 Mutual cost benefit

In 2001, both DHBs and territorial authorities gained a mutual cost benefit by sharing most electoral costs.

If territorial authorities choose not to use STV in 2004, some of those cost savings will not be available. However, territorial authorities will still be able to recover DHB STV election costs from the DHBs.

If territorial authorities and regional councils choose to use STV in 2004, it is likely that both DHBs and councils will make greater savings than if they do not both use STV.

5.5 Indicative costs

The table on the next page shows the results of calculations of the indicative additional STV election costs for a range of territorial authorities.

For illustrative purposes, the table includes real examples from a range of territorial authorities of different sizes. It is based on 2001 election costs, and uses:

- the eight assumptions above, and
- the additional assumption that the net cost to territorial authorities of DHB elections, is \$0.00.

Variations in the 'indicative extra cost' part of the table reflect anticipated situations in the selected territorial authorities.

Range of territorial authorities									
000s									
Number of electors	7	12	21	25	28	28	123	228	256
\$000s									
Election cost 2001 (excluding DHB contributions)	40	49	75	69	80	58	280	544	548
Indicative extra costs for territorial authority STV elections									
additional; paper and printing (calculated at 20c per sheet)	1	2	4	5	6	6	25	46	51
additional staff (34.17%)	2	3	4	3	5	4	27	43	58
additional hardware for staff	1	0	1	3	1	1	0	7	5
additional accommodation for staff	1	0	0	0	0	0	3	3	3
new software (assuming most use available package)	10	10	10	10	10	10	10	46	10
Total additional indicative STV election cost	15	15	19	21	22	21	65	145	127
Total indicative STV election cost	55	64	94	90	102	79	345	689	675
Percentage increase for STV in 2004	27	31	25	30	27	36	23	27	23

6.0 The STV 'calculator'

6.1 Introduction

To make it possible for councils to use the Single Transferable Vote (STV) electoral system should they so choose, the Department of Internal Affairs has developed specialised software for counting votes under STV.

The objective of developing this software (called the STV 'calculator') was to validate the STV vote counting method to be used in New Zealand, and to provide a basis on which detailed STV electoral regulations could be developed. The development of one software package was also seen as an opportunity to ensure nationally consistent results and to facilitate any future modifications.

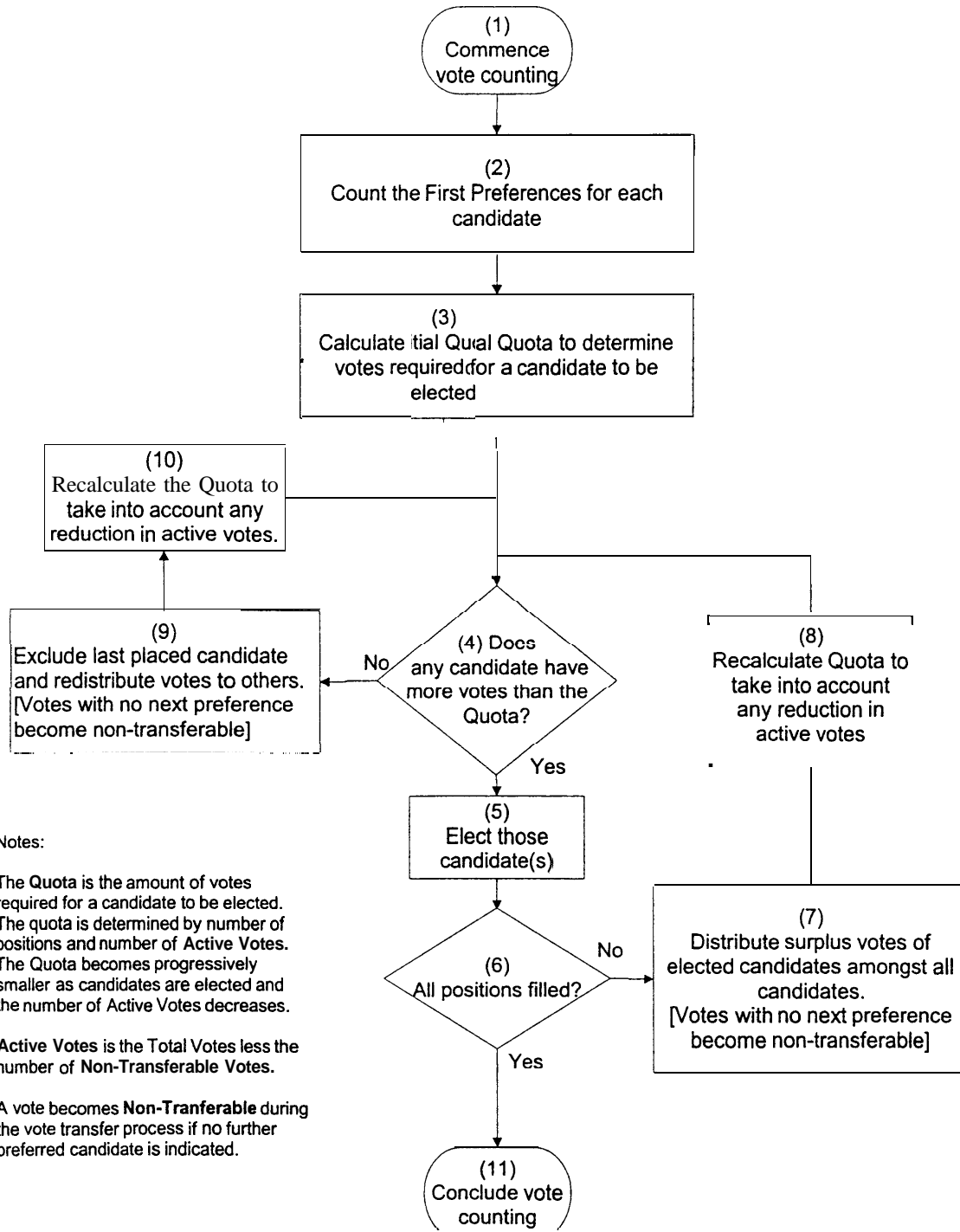
The STV 'calculator' is not a total STV electoral management system. It is a counting program only and will need to interface with territorial authorities' existing electoral systems and data capture programs. The STV 'calculator' will be licensed to STV system developers and users, on the basis that it is the **only** counting software permissible for STV elections under the *Local Electoral Act 2001*.

6.2 How it works

The diagram on the next page (Figure 1) summarises the STV 'calculator' as implemented in the STV vote counting software.

Each of the numbered steps in the diagram is then described in more detail, followed by a glossary of terms.

Figure 1 – The STV vote counting process after close of voting



Notes to Figure 1

(1) **Commence STV vote counting process**

- all valid voting documents have been captured into the database
- each voting document contains the voters' ranked preferences for the candidates
- each voter can rank as few or as many candidates as they wish.

(2) **Count first preferences**

- the first preference of each voter is attributed to the appropriate candidate
- each candidate is assigned a keep value of 1 meaning they keep the whole of each vote attributed to them
- if a candidate is withdrawn, then that candidate's keep value is set to 0 and any vote attributed to them is assigned to the next preferred candidate. If no second preference exists that vote becomes non-transferable.

(3) **Calculate initial quota**

- the initial quota is calculated. The quota is the number of votes that a candidate must attain to be elected
- the quota is calculated (to 9 decimal places after the point with any remainder being disregarded) in accordance with the following formula:

$$q = v/(n+1) + 0.000000001$$

where

q is the quota

v is the total number of valid votes, less the number of non-transferable votes

n is the total number of members to be elected

(In the above formula 0.000000001 is added to ensure that it is impossible for more candidates to be elected than the number of positions)

(4) **Determine candidates who have exceeded quota**

- the number of votes attributed to each candidate is compared to the quota
- if the total votes attributed to a candidate equals or exceeds the quota then that candidate is elected proceed to (5)
- if no candidate reaches the quota at this step then the lowest candidate is excluded proceed to (9).

(5) Elect candidates

- any candidate whose total votes now equal or exceed the quota is elected
- all elected candidates' surpluses are calculated (each candidate's current votes less the current quota), and all such surpluses are summed to get the total surplus.

(6) Determine whether all positions filled

- the number of elected candidates is compared to the number of positions to be filled
- if the number of elected candidates is less than the number of positions, then go to (7), otherwise go to (11).

(7) Redistribute surplus votes after election of candidate

- the keep value of the elected candidate is recalculated using the following formula to ensure that the candidate retains the correct proportion of each vote received to remain at or just above the quota.

$$k = (ck * q)/cv$$

where

k is the candidate's new keep value
ck is the candidate's current keep value
q is the current quota
cv is the candidate's current votes

- the reduction in that candidate's keep value then results in a redistribution of all votes among all candidates. The elected candidate retains enough votes to remain at (or just above) quota while the excess votes go to the other preferred candidates.
- votes with no next preference become non-transferable, thus reducing the total number of active votes (valid votes less the number of non-transferable votes).

(8) Recalculate quo ta (following redistribution of surplus votes)

- the quota is recalculated to take into account the reduced number of active votes. [Note that the quota gets progressively smaller with any increase in the number of non-transferable votes.]
- return to (4) to check whether any candidates have now attained the quota.

(9) Exclude lowest candidate(s) and redistribute votes

- the candidate with the least votes is excluded if:
 - the sum of that candidate's votes and the total surplus (total votes of elected candidates in excess of the quota) is less

- than the votes of any other non-excluded candidate, or
- the total surplus is less than 0.0001. This saves continual vote redistributions which would have virtually no effect on the current result.
- in the event of a tie for lowest position, the tie will be resolved by excluding the tied candidate who had the fewest votes the first time they were different (ahead at first difference method). If this method does not resolve the tie, then a candidate is randomly excluded (utilising a random number generator).
- the keep value of the excluded candidates is set to 0.
- the keep values of the remaining active candidates are recalculated.
- all votes are redistributed among the remaining active candidates. Where no further preferences for active candidates exist among these votes, then the vote becomes non-transferable.

(10) Recalculate quota (following exclusion of lowest candidate)

- the quota is recalculated to take into account the reduced number of active votes. Note that the quota gets progressively smaller with any increase in the number of non-transferable votes
- return to (4) to check whether any candidates have now attained the quota.

(11) Conclude STV vote counting process

- the STV vote counting process finishes when the number of elected candidates equals the number of positions available.

Glossary of terms

The following definitions are based on the commonly used terminology associated with the New Zealand local electoral environment and the New Zealand Single Transferable Voting (NZSTV) electoral system.

Candidate (active) – candidates in the counting process who are either hopeful or elected.

Candidate (elected) – status of a candidate who has reached or exceeded the quota.

Candidate (excluded) – status of a candidate who has been eliminated as a candidate because he or she had the lowest number of votes at the point in the counting process where all surpluses have been allocated and not all positions have been filled.

Candidate (guarded) – candidate already elected, whose position is protected in the event of a rerun of the counting process.

Candidate (tied) – ties occur in NZSTV voting when the candidate with fewest votes must be excluded and two or more have equal fewest.

Candidate (withdrawn) – candidate withdrawn before the commencement of counting process. The votes this candidate receives (if any) are allocated to each voter's next preferred candidate.

Count – iteration of the counting process, repeated until all positions have been filled.

Electoral system - Section 2 of the Local *Electoral Act 2001* defines electoral system as follows:

“electoral system - means any of the following electoral systems that are prescribed for use at an election or poll:

the system commonly known as First Past the Post:

the system commonly known as Single Transferable Voting (STV) using Meek's method of counting of votes”.

Keep value – the proportion of each vote retained by a candidate. The keep value of all candidates is 1 .0, meaning they keep all of every vote (or part of a vote) they receive. One of the key features of Meek's method is that elected candidates continue to receive portions of votes after they have reached the quota. Once a candidate reaches the quota, and is deemed elected, his or her keep value is recalculated as they receive surplus votes, to determine the proportion of all their votes they will retain to remain at the quota, and the remainder of each vote is redistributed as surplus.

In calculating the keep value, both the multiplication and division are taken to

9 decimal places after the point, and in each case, rounded up if not exact.

New Zealand STV – the STV process of counting votes based on, and consistent with Algorithm 123 published in *The Computer Journal (UK)*, Vol 30, 1987, pp 277-81 plus the additional modifications described in this document. (This method of counting votes is referred to as Meek’s Method in the *Local Electoral Act 2007*.)

Preferences – the ranking by the voter of the preferred order of choices for a set of candidates or options.

Quo ta – the number of votes that a candidate [or option] must attain to be elected [selected] under the STV counting system. The quota is based on the number of positions available, and the total number of votes.

Voting document – previously known as voting paper, the actual form (physical or electronic) provided to voters to indicate electoral choices and returned to Electoral Officers.

Vote (non-transferable) – a voting document on which no next preference for a non-excluded candidate is indicated or can be identified by the Electoral Officer.

Appendix

Local Electoral Act 2001 (Sections 27-35)

Part 2: Local elections and polls

Electoral systems for elections

27 Local authority may resolve to change electoral systems

(1) Any local authority may, not later than 12 September in the year that is 2 years before the year in which the next triennial general election is to be held, resolve that that triennial general election will be held using a specified electoral system other than that used for the previous triennial general election.

(2) A resolution under this section-

(a) takes effect, subject to paragraph (b), for the purposes of the next triennial general election of the local authority and its community boards (if any); and

(b) continues in effect until either—

- (i) a further resolution under this section takes effect: or
- (ii) a poll of electors of the local authority is held under section 33.

(3) This section is subject to section 32.

28 Public notice of right to demand poll on electoral system

(1) Every local authority must, not later than 19 September in the year that is 2 years before the year in which the next triennial general election is to be held, give public notice of the right to demand, under section 29, a poll on the electoral system to be used for the next 2 triennial general elections of the local authority and its community boards (if any).

(2) If the local authority has passed a resolution under section 27 in respect of the next triennial general election, every notice under subsection (1) must include—

- (a) notice of that resolution; and
- (b) a statement that a poll is required to countermand that resolution.

(3) This section is subject to section 32.

29 Electors may demand poll

(1) A specified number of electors of a local authority may demand that a poll be held on a proposal by those electors that a specified electoral system be used at the next 2 triennial general elections of the local authority and its community boards (if any).

(2) This section is subject to section 32.

(3) In this section and sections 30 and 31,—

demand means a demand referred to in subsection (1)

specified number of electors, in relation to a local authority, means a number of electors equal to or greater than 5% of the number of electors enrolled as eligible to vote at the previous general election of the local authority.

30 Requirements for valid demand

(1) A demand must be made by notice in writing—

(a) signed by a specified number of electors; and

(b) delivered to the principal office of the local authority, either—

(i) before the date of the public notice given under section 28;

or

(ii) no later than 90 days after the date of the public notice given under section 28.

(2) An elector may sign a demand and be treated as 1 of the specified number of electors only if-

(a) the name of that elector appears,-

(i) in the case of a territorial authority, on the electoral roll of the territorial authority; and

(ii) in the case of any other local authority, on the electoral roll of any territorial authority or other local authority as the name of a person eligible to vote in an election of that local authority; or

(b) in a case where the name of an elector does not appear on a roll in accordance with paragraph (a),—

(i) the name of the elector is included on the most recently published electoral roll for any electoral district under the Electoral Act 1993 or is currently the subject of a direction by the Chief Registrar under section 115 of that Act (which relates to unpublished names); and

(ii) the address for which the elector is registered as a parliamentary elector is within the local government area of the local authority; or

(c) the address given by the elector who signed the demand is-

(i) confirmed by a Registrar of Electors as the address at which the elector is registered as a parliamentary elector; and

(ii) within the district of the local authority; or

(d) the elector has enrolled, or has been nominated, as a ratepayer elector and is qualified to vote as a ratepayer elector in elections of the local authority.

(3) Every elector who signs a demand must state, against his or her signature,--

(a) the elector's name; and

(b) the address for which the person is qualified as an elector of the local authority.

(4) The principal administrative officer of the local authority must, as soon as is practicable, give notice to the electoral officer of every valid demand for a poll made in accordance with section 29 and this section.

(5) This section is subject to section 32.

31 Local authority may resolve to hold poll

(1) A local authority may, not later than 28 February in the year immediately before the year in which the next triennial general election is to be held, resolve that a poll be held on a proposal that a specified electoral system be used for the next 2 triennial general elections of the local authority and its community boards (if any).

(2) A local authority may pass a resolution under subsection (1), irrespective of whether-

(a) the time for delivering a demand specified in section 30(1) has expired; or

(b) any valid demand under section 29 is received by the date specified in section 30(1).

(3) The principal administrative officer of the local authority must, as soon as is practicable, give notice to the electoral officer of any resolution under subsection (1).

(4) This section is subject to section 32.

32 Limitation on change to electoral systems

Sections 27 to 31 do not apply if-

(a) the electoral system to be used at the next triennial general election of the local authority and its community boards (if any) was determined under section 33 by a poll held in the year immediately before the year in which the previous triennial general election of the local authority was held; or

(b) another enactment requires a particular electoral system to be used for the election of members of a local authority.

33 Poll of electors

(1) If the electoral officer for a local authority receives notice under section 30(4) or section 31(3), the electoral officer must, as soon as is practicable after receiving that notice, give public notice of the poll under section 52.

(2) Despite subsection (1), if an electoral officer for a local authority receives 1 or more notices under both section 30(4) and section 31(3), or more than 1 notice under either section, in any period between 2 triennial general elections, the polls required to be taken under each notice must be combined and 1 poll only must be taken.

(3) A poll held under this section must be held not later than 82 days after the date on which--

- (a) the notice referred to in subsection (1) is received; or
- (b) the last notice referred to in subsection (2) is received.

(4) Every poll under this section determines whether the electoral system to be used for the next 2 triennial general elections of the local authority and its community boards (if any) is to be--

- (a) the electoral system used at the previous general election of the local authority; or
- (b) the electoral system specified in any resolution under section 27; or
- (c) the electoral system specified in any demand of which the electoral officer has received notice under section 30(4) and, if notice of more than 1 demand is received, 1 of the systems specified in those demands and, if so, which one; or
- (d) the electoral system specified in any resolution of which the electoral officer has received notice under section 31(3).

34 Effect of poll

If a poll is held under section 33, the electoral system adopted or confirmed must be used-

- (a) for the next 2 triennial general elections; and
- (b) for all subsequent general elections until a further resolution under section 27 takes effect or a further poll is held under section 33, whichever occurs first.

Electoral systems for polls

35 Electoral systems for polls

(1) Every poll conducted for a local authority must be conducted using an electoral system adopted by resolution of the local authority--

- (a) for the purposes of the particular poll; or
- (b) for the purposes of 2 or more polls that are to be conducted at the same time.

(2) If a poll is to be conducted for a local authority and there is no applicable resolution, that poll must be conducted using the electoral system commonly known as First Past the Post.