

# Broadband Connect and Clever Networks: supporting investment in sustainable broadband infrastructure

## Victorian Government Submission

### Overview

The Commonwealth Government's Connect Australia funding programs have the potential to contribute to far reaching improvements in quality and availability of broadband telecommunications in regional Australia. Having said this, the funding announced under Connect Australia, while greater than for previous programs, is small when considered against the telecommunications challenges facing Australia in the coming years.

As a once-off injection of funding it will have to be applied very strategically or it will be readily absorbed by activities that offer little long term gain. It is also important that the programs respond to the real telecommunications needs of diverse regional communities. At stake is the potential for Australia's broadband telecommunications sector to propel economic development and social wellbeing for regional communities and for the nation as a whole.

The challenges for Australia's regional broadband development are in three key areas:

- 1) providing equitable availability of broadband in regional areas and, more fundamentally, equitable access to the economic development and social benefits that broadband can bring to regional communities;
- 2) maintaining and expanding competition and contestability (that is, sustaining the threat of new suppliers entering the markets) when revenues may only support one supplier in a region; and
- 3) ensuring investment in regional broadband is channelled to innovative technology, keeping pace with improving metropolitan and international standards of connectivity and applications.

### Connect Australia strategy

For reasons elaborated in this submission, there is a danger that the broadband programs proposed under Connect Australia will not address these challenges of equity, contestability and innovation in a balanced way. The programs as presented in the Discussion Paper take a compartmentalised approach: Broadband Connect is focussed on equity outcomes; Clever Networks provides lesser funding for innovation.

At this stage there is an absence of underlying strategy in the way that these objectives are prioritised and resources are allocated to them. This has consequences for the likely long term effectiveness of the programs and should be regarded as a crucial consideration in program design.

If the Connect Australia programs are to make a lasting contribution, the program design must reflect that:

- regional economic development and social benefits of broadband are the ultimate program goals;
- Australia needs to be on a technology pathway to next generation broadband services;
- one-size-fits all programs run the risk of not meeting the needs of our diverse regional markets, which include remote communities, small towns, regional centres and urban/rural interface communities - we need a more flexible and integrated approach; and
- cooperation with regional communities, local and State Governments, and a fact based approach, is essential to understanding local needs and therefore the development of sustainable and cost effective solutions.

## **Economic development and social benefit objectives**

Strategic objectives for Connect Australia programs need to reflect that maximising the regional economic development and social benefit potentials of broadband should be the ultimate goal. Victorian Government research has found 70% broadband uptake across the State by 2015 should generate an additional \$15 billion in Victoria's Gross State Product and an additional 153,000 jobs, with strong benefits flowing to regional areas<sup>1</sup>.

However, this research also found that gaps in regional broadband coverage cost Victoria \$251 million in lost production in 2004. This research is supported by the recent Australian Local Government Association State of the Regions report, which estimates that the expenditure of \$3 billion nationally on improved regional broadband would, over 30 years, add \$27 billion to GDP.

Economic development potential is realised when regional businesses can access the broadband services and make effective use of broadband applications relevant to their various industries. Localities with different local economies and industries may have different broadband priorities. For example, sparsely populated rural areas where agriculture is the predominant industry may benefit from tailored low cost wireless services to support on farm operations (monitoring of stock, trading, accessing aerial imaging, etc), while regional centres may demand high bandwidth services on par with metropolitan business users.

The use of broadband to deliver high quality government services can deliver real social benefits to regional communities. The Victorian Government's Broadband Innovation Fund (BIF) is supporting projects that demonstrate the benefits of advanced broadband applications in regional areas. Through BIF projects regional school communities are becoming better connected and resourced through networked teaching, videoconferencing links, 24/7 at home access to learning materials, digital curriculum and content creation, and embedded use of laptops and electronic equipment.

BIF projects in regional health are improving patient care by enabling local access to specialist health services, reducing travel costs and time, and increasing the range of services for people living in areas where there is currently no or minimal health care presence. Regional health

---

<sup>1</sup> The research, *Economic Impacts of Broadband Adoption in Victoria*, along with other research reports on the Victorian broadband market are available from the Victorian Government's Broadband Access Office (<http://www.mmv.vic.gov.au/broadband/BroadbandHome>).

care agencies and professionals are better connected to each other and able to more effectively utilise scarce expert medical staff, servicing a broader community of patients.

## Broadband Connect

The \$878 million Broadband Connect program is described as the centrepiece of Connect Australia. The principal objective of Broadband Connect is to ensure that all Australians can have access to equitable broadband services. The Discussion Paper states that it is to provide subsidy for regional broadband based on the model established under the Commonwealth Government's Higher Bandwidth Incentive Scheme (HiBIS). A range of more complex objectives and program design options beyond the scope of the current HiBIS model are canvassed in the Discussion Paper.

The main concern with Broadband Connect relates to the fact that so much of the Connect Australia funding is pooled in this program. As a large allocation of funding for a single program, Broadband Connect entails a large risk if not targeted effectively. As discussed previously, there should be a number of policy objectives for Connect Australia funds within a variable set of local market conditions.

It is very unlikely that a single program with a one-size-fits-all set of guidelines can accommodate these demands. A more flexible approach to Broadband Connect program design is called for.

## The HiBIS model

The experience of the HiBIS has demonstrated that large scale customer subsidy can accelerate the provision of broadband in regional areas. However, the HiBIS program has limitations and should not be the model for the bulk of Connect Australia funds.

## Cost effectiveness

According to the Victorian Government's modelling of the potential impact of the HiBIS program in Victoria, the scheme has delivered an increase in broadband coverage, but at a higher cost than necessary<sup>2</sup>. To date, an estimated 19,090 customers have taken up services funded through HiBIS. By 2007, the modelling forecasts that HiBIS (under current guidelines) will provide an estimated total subsidy of approximately \$55 million for approximately 36,000 broadband customers in regional Victoria, and 97,000 households and businesses having access.

This apparent benefit must be weighed against the finding that more than half of the households expected to gain coverage from non-satellite broadband funded through HiBIS would have gained coverage without subsidy - in the absence of HiBIS, there would have been an additional 20,000 customers, with 53,000 having access. This means that the scheme would have invested \$55 million for an additional 16,000 customers and 44,000 having access - indicating that the cost of the scheme per premises covered is relatively high.

---

<sup>2</sup> The ACIL Tasman report 'Implications of HiBIS for Victorian Regions' is available from the Victorian Government Broadband Access Office (<http://www.mmv.vic.gov.au/broadband/ImplicationsofHiBISforVictorianRegions>)

This situation arises because:

- demand for broadband is growing – consistent with usual adoption of new technology in society but at a far superior rate;
- new low cost terrestrial wireless technologies are emerging, such as WiMax, and established fixed technologies such as ADSL are becoming mature and high volume, and are therefore reducing in cost; and
- accordingly, the business case for broadband in regional areas is improving over time.

The HiBIS subsidy, because it is fixed and based on a cost of supply rather than a provider's business case (taking into account market revenue growth over time), necessarily over-funds the provision of services. On this basis, the Victorian Government does not consider HiBIS as the most cost effective and sustainable model for Broadband Connect.

A further issue is coordination with State Government initiatives. For example, the Victorian Government has triggered a major rollout of business grade DSL and fibre to the premises services across the State as a result of its aggregated purchasing strategy and budget support for high bandwidth services for schools. While fibre optic services will be delivered to schools within four years, in the interim smaller schools, many in small regional towns without broadband, will have DSL services provisioned as part of the rollout.

With appropriate Commonwealth and State Government coordination and adaptable program design, this sort of State Government contribution could be leveraged by Broadband Connect funding, driving more efficient use of government funds.

### **Sustainability - technology pathway**

It is also questionable whether the current HiBIS approach provides a pathway to new broadband technologies and long term sustainable quality broadband solutions for regional, rural and remote Australians.

While being to some degree technology neutral in design, HiBIS in practice has overwhelmingly supported two dominant technologies: ADSL in 'urbanised' regional centres (56% HiBIS share in Victoria, 59% nationally) and satellite services elsewhere (27% in Victoria, 30% nationally).

HiBIS is expected to support the rollout of more wireless broadband services over time (to date 17% in Victoria and 10% nationally) but the potential market for wireless services is currently being reduced by the share of HiBIS customers going to ADSL and satellite.

Technology choice is a high risk issue in a fast evolving technological and commercial environment. Current HiBIS guidelines are apparently technology neutral, in that they allow suppliers to choose their preferred technology and business model, provided service and pricing parameters based on standard ADSL "metropolitan equivalent" services, are met.

In effect, this approach favours investment in ADSL. This is a remedial outcome, providing access to very basic household grade broadband services. It does not deliver the services that will deliver long term economic and social benefits. Neither does this outcome provide a lasting contribution to equity as next generation technologies are deployed in metropolitan markets – it provides a short term deferral of the equity problem. Broadband Connect must be more than a

remedial program and must look beyond current ADSL as a benchmark for broadband services.

Already near 90% of Victorian households and business have access to ADSL or equivalent service. This market is primed for next generation broadband services that are ready for commercial deployment, such as fibre to the home or near home (FTTH) and high quality mobile and fixed wireless services.

If regional wireless broadband, for example, has the potential to play a major role in providing a quality terrestrial broadband service at reduced cost to satellite and with greater regional coverage than DSL services, then it is fair to conclude that HiBIS has not been effective in supporting this outcome.

The Discussion Paper recognises that Broadband Connect needs a longer term view and is seeking means to ensure that the program fosters investment in new technologies. A single HiBIS based approach is unlikely to achieve this.

### **Contestability**

While there are a large number of registered HiBIS suppliers, there is no published data on the level of subsidy received (either directly or indirectly as a wholesaler) by each from the program.

However, what is known is that within a relatively short period of time, Telstra reached its soft cap of 60% of available HiBIS funding (\$158 million). Also 59% of HiBIS share nationally has been directed to ADSL infrastructure in regional areas. In nearly all instances, this subsidy would have resulted in the deployment of Telstra ADSL infrastructure. Telstra would have also gained a share of the 30% of HiBIS subsidy flowing to satellite services.

As well as underpinning Telstra infrastructure, HiBIS has also supported increased market share in regional Australia for BigPond, Telstra's Internet service arm.

Accordingly, the HiBIS subsidy program itself has not generally yielded a contestable infrastructure or services outcome. One concern with the HiBIS model is that payment of the subsidy on a per customer basis, rather than as an upfront subsidy, fails to encourage market entry by alternate regional broadband carriers. The availability of an upfront subsidy could be a critical factor in the business model of alternate carriers seeking to establish new infrastructure and service capability in regional markets. Telstra, with its established regional presence and unparalleled financial resources, is not as sensitive to the timing of subsidy.

It should not be overlooked that Telstra's propensity to charge uniform prices for broadband services irrespective of location, and the regulatory role of the Australian Competition and Consumer Commission's (ACCC) provide mechanisms for a degree of consumer welfare and contestability in regional areas. However, Broadband Connect should be designed to achieve a clear positive impact on regional contestability. Providing a flexible approach to allowing upfront subsidy and per customer subsidy could contribute to greater regional contestability.

### **Recommended approach**

The Victorian Government recommends that a more flexible approach be adopted for Broadband Connect. A single set of guidelines for Broadband Connect cannot deliver complex

objectives, such as remedial broadband access, a contestable regional market and innovative, sustainable broadband solutions. The Victorian Government recommends partitioning of funds into separate streams to support remedial access on one hand and more strategic opportunities on the other. This will maximise the achievement of long-term broadband needs through strategic spending of Connect Australia funds.

### **Standard access stream**

Despite some of the limitations of the HiBIS scheme, there is a strong case for a broadband subsidy program to address remedial coverage issues. Some remote areas with a dispersed population base may not have prospects (for example, due to the lack of potential revenue) for broadband coverage other than satellite in the foreseeable future. These populations should have reasonable equity of access to broadband.

The standard access stream of Broadband Connect could be deployed along similar lines to the current HiBIS/Broadband Connect scheme (as amended over time to ensure reasonable price and services outcomes). However, this element of the program must be implemented in line with an overall strategic approach to Connect Australia funds. This would include ensuring coordination with other Commonwealth, State and local initiatives. For example, the standard access stream could exclude areas where strategic projects funded through Broadband Connect (see below) are current or imminent.

To improve the cost effectiveness of the scheme the subsidy should be set at a level which takes into account customer and revenue growth potential over time, in addition to costs of supply.

### **Strategic projects stream**

There is also a role for more strategic investment of Broadband Connect funds. This stream would be invested under different guidelines, which provide flexibility and counter the considerable cost, technology and contestability risk of a one-size-fits-all program. A strategic stream would be more capable of supporting particular policy objectives, such as facilitating the commercial deployment of next generation wireless or FTTH networks, or developing cost effective solutions for very small towns. This stream of funding would also support projects with strong links to local community economic development and/or social benefits.

This project based approach is similar to the Coordinated Communications Infrastructure Fund (CCIF) which is the model for the Clever Networks program. Key elements for the proposed strategic stream of Broadband Connect could include:

- Projects will yield strategic benefits for the region, such as investment in next generation broadband services, or will deliver economic development and social benefit.
- Projects will be backed by well documented needs analysis, business case, and aggregation of demand. Funding could be allocated via competitive process, with up front subsidy and per customer subsidy contemplated.
- Projects will incorporate new or enhanced (on terms the equal or better than the standard access stream) broadband coverage to private customers (households, SME's, not for profits).

- Projects will have active commitment of community participants, such as local government, State and/or Federal Government agencies.
- Projects may complement other Connect Australia initiatives and/or State and local government initiatives.
- Projects will not be feasible without Broadband Connect subsidy, but are commercially sustainable with the subsidy.
- Projects would be assessed and coordinated by the National Broadband Strategy Implementation Group (NBSIG) under similar arrangements to the CCIF.

This approach, in combination with the standard access program, would offer several advantages:

- The cost effectiveness of the program would be improved by the requirement that suppliers bid competitively for projects.
- Contestability would be improved by staging a range of projects that vary in size and objectives (such as next generation technology, small populations or leveraging government or industry networks) at different times over the 3 years of the program.
- Departing from a single set of guidelines for strategic projects could also improve contestability outcomes by allowing a flexible approach to upfront subsidy or per customer subsidy based on the most suitable mix for the business model of a given project.
- The proposed program would provide a model for investment of funds under the Future Fund. Allocation of returns from the Future Fund would provide for sustainability of this approach.
- The strategic program would build capacity at the national, state and community level for development and delivery of strategic broadband solutions in partnership with the telecommunications industry.

A more strategic, project based approach to Broadband Connect would not guarantee benefits to all households and small businesses without equitable access to broadband. The standard access program would provide a fall back position, ensuring that subsidy is available to address coverage requirements not covered by an existing or imminent strategic project.

Allocation of funding to the proposed strategic projects stream could be determined by demand, that is the readiness of appropriate projects for funding. Alternatively, allocations of funds could be determined annually, subject to regular review. In the initial stages, claims on Broadband Connect funds for the strategic stream would be modest as projects are developed. In the transitional period, as strategic projects are ramped up, the existing arrangements under a standard access stream could apply.

It may be argued that the Clever Networks program is available to support strategic projects, but the program is currently too constrained to take advantage of the potential opportunities. Clever Networks is not sufficiently resourced (at \$113 million it has less than one seventh the resources of Broadband Connect) and is too limited in scope (targeting network and applications for regional education, health and similar service sectors). There is, however, a strong potential for Clever Networks and strategic Broadband Connect to be complementary. For example, extending household access to education networks and applications initiated

under Clever Networks could be supported by Broadband Connect, thus building on Commonwealth and State Government investment.

### **Demand aggregation or broadband planning**

A 'strategic projects stream' alternative to a HiBIS style program allows more effective targeting of Broadband Connect funds. The obvious additional requirement for this approach is a degree of planning necessary to develop projects and see them established through robust commercial arrangements. Without adequately resourcing project development, projects will not get off the ground, risks will not be managed and projects will not deliver the required outcomes.

This issue is not insurmountable. The CCIF has demonstrated that Commonwealth, State and community collaboration can yield successful and strategic regional broadband projects.

The Demand Aggregation Brokers program could be adapted to play a role in developing strategic projects. However, this would be an expansion of the current scope of the brokers program and would require a higher degree of structure and coordination than has been necessary to date.

The State Governments can contribute organisational assistance, local knowledge and, where possible, coordinated effort through existing State Government broadband initiatives. The Victorian Government already commits considerable effort to research and publication of market information to assist fact based policy development and initiatives. The Victorian Government is ready to contribute to a cooperative approach to enable strategic investment of Broadband Connect funding.

## **Clever Networks**

The principles behind the Clever Networks program are generally sound. As noted above, the Victorian Government's BIF program is demonstrating the potential for funding of innovative broadband applications to deliver both direct social benefits and underpin investment in advanced regional broadband networks. The Loddon Mallee Health Alliance and BreastScreen Victoria projects are proving successful collaborations, jointly funded by the Victorian Government and the Commonwealth under its CCIF program.

The Victorian Government considers that there is more scope in this activity than can be resourced by the \$113 million over 4 years allocated to Clever Networks. The Commonwealth Government should consider providing additional funding to the Clever Networks program.

A potential limitation on the program is the apparent requirement for the building of additional broadband infrastructure as part of project funding. This could have the effect of limiting the opportunities for funding of projects in States, including Victoria, that have recently invested in high quality broadband access for health, education and other government service delivery. It also underestimates the resources necessary to support innovative applications and effective use, such as in new applications software, digital equipment, change management and retraining. Clever Networks guidelines must be flexible enough to target the real barriers to effective broadband use in a given region - infrastructure is not always the main obstacle to innovation.

As noted previously, Broadband Connect funds can be used in concert with Clever Networks to subsidise enhanced access for residential, SMEs and not for profit customers. There is an exciting opportunity for Broadband Connect and Clever Networks to create a pathway for regional communities to access the benefits of advanced applications being developed for medical, education, research and business networks.

## Conclusion

The Broadband Connect and Clever Networks have the potential to contribute to far reaching improvements in quality and availability of broadband telecommunications in regional Australia. However, the funding will not be effective if it is deployed in isolation, without regard to the many and increasing opportunities for cooperation between all levels of government, communities and the telecommunications sector.

State Governments have a key role to play. The Victorian Government is driving broadband coverage and investment in next generation infrastructure by aggregating its broadband purchasing across the State, funding adoption of innovative applications and using its existing infrastructure to encourage broadband deployment. The Victorian Government also invests substantially in research to understand Victoria's telecommunications market and to share this information with those who can help us accelerate the development of broadband.

The Victorian Government is committed to working cooperatively with the Commonwealth Government to realise the benefits of broadband for all Australians.