Consultation on Renewal Process for 2300 MHz and 3500 MHz Licences

Spectrum Licensing and Spectrum Requirement

Introduction

Access to high-speed Internet service is an essential service and critical foundational element for economic development in Alberta. The GoA has been working to make access possible for all Alberta homes and businesses.

In 2005, the GoA’s completion of the Alberta SuperNet resulted in delivery of a high-speed communications backbone across Alberta connecting over 4,200 schools, hospitals, libraries, government and municipal offices in 429 communities. Delivery of Internet access from this communications backbone and others was and still remains the responsibility of local Internet Service Providers (ISPs). Alberta has a competitive environment for providing Internet services in rural areas. Outside of urban areas, this is accomplished primarily through Fixed Wireless Access (FWA).

- There is on the order of 45 Wireless Internet Service Providers (WISPs) in the province
- Some areas have as many as 4 or 5 WISPs providing service, while other, more remote locations have only 1
- Currently, 98%+ of Alberta households (HH) have access to a minimum of 1.5 Mbps Internet service. Activities are underway to enable service providers to reach the remaining HHs.
- Approximately 16% of Alberta’s 1.3 million households are rural (2006 Canada Census)
  - The majority of these are provided access to the Internet with FWA.

For ensuring that rural Albertans have access to high-speed Internet, the principles that the GoA has been following in policy and decisions that impact Internet service delivery are:

1. Support and promote rural development in Alberta;
2. Enhance access and delivery of government services to Albertans;
3. Leverage ongoing innovation and incorporate and leverage existing projects, programs and innovation underway across Alberta;
4. Ensure supplier proposals conform to consistent standards and are financially and operationally sustainable without ongoing subsidies from the GoA;
5. Commit to open and fair participation by industry in delivery of high-speed Internet access to unserved Albertans;
6. Utilize existing Infrastructure where available, leverage investments made by private and public sectors where feasible, and ensure a fair process where no supplier receives preferential treatment, pricing, or access;
7. Require scalability in high-speed Internet access so that services continue to meet the expectations of Albertans;
8. Ensure service offerings to unserved areas offer fair value;
9. Enable open access and/or co-location opportunities at fair market value; and
10. Enable market driven forces through a one-time government investment without ongoing government ownership or management involvement.

Broadband Canada (Industry Canada) has identified a tentative target of 10 Mbps Internet access for 95%+ of HH by 2020. In urban areas, this capability currently exists, so the difficulty is ensuring that rural areas have access at these speeds. To achieve this in Alberta, significant infrastructure upgrades will be required by the ISPs. This will include installation of new radio systems and use of additional frequencies than are currently in use across much of the province.

Currently, the Alberta WISPs use a combination of unlicenced, lightly licenced and fully licenced frequencies to deliver their services. While all offer FWA, their infrastructure spectrum configurations differ significantly.

Consultation with the WISPs has identified that one of their biggest concerns and current difficulties is getting access to spectrum for use in delivering their services. Congestion on the unlicenced bands has many WISPs looking for access to licenced spectrum. The Industry Canada policy for TV White Space is very progressive in allowing its use as unlicenced spectrum as well as keeping in place the Rural Remote Broadband Service RRBS licensing process for remote rural applications.

However, the auction process for licenced spectrum (2300 MHz and 3500 MHz) has resulted in access to that spectrum for small WISPs being difficult if not impossible to get. This lack of access puts Alberta at a disadvantage.

The current licencing process for spectrum that is intended for FWA:

- Does not support a model where there is a lot of competition and a large number of service providers
- Licence areas include urban centres with large populations that are served through alternate means
- Large licence areas mean companies must bid on areas where they may not plan on providing service to get the licence for the areas that they do plan on serving
- Licences are sold to companies that may not offer FWA in a particular area
- There are no sub-licencing requirements that would ensure spectrum is being fully utilized
- There are no sub-licencing requirements that ensure a sub-licensee has continued use of that licence at fair market value
- Rural areas are being ignored so that urban area licences can be held

**Integrated Strategy for Internet Access**

There is a need for a good understanding of future Internet access needs and the technology roadmap to deliver it to Canadians, both urban and rural. The options for urban and near urban areas includes a full range of technologies, but the options for rural areas are more limited. In the rural areas Fixed Wireless Access is currently the predominant technology and will continue to be the mainstay. It is important that any spectrum plans take into account the special needs of rural areas.
• Consideration could be given to redefining the licencing areas into smaller segments and separating urban areas from rural areas
• Treatment of spectrum in rural areas may be different than in urban areas
  o Licencing frequencies in urban areas and leaving them unlicenced or lightly licenced in rural areas. This may require database management of frequencies in use
• Establishing of requirements for sublicensing of spectrum should be investigated.

As for the questions Industry Canada posed in their consultation, and the comments received:

**Point-to-Point Links**

“When the WCS and FWA spectrum was first designated, it was expected to be used primarily for the provision of broadband wireless access (BWA).”

The GoA supports the original intent for the use of the spectrum. The use for point-to-point links is not prohibited, but use in this manner should not count towards requirement fulfillment. For some service areas a single point-to-point link is adequate to keep the licence, thereby removing that frequency in that service area from being used for broadband wireless access.

The GoA has a concern that current licence holders are most interested in deployment of service in limited parts of a service area, and that much of the service area (rural parts) will remain unserved with the specific frequency.

Under the current service area definition and for the current licences the GoA does not agree that point-to-point links constitute an adequate use of the spectrum and they should not count towards the usage requirement. We are in agreement with those who have expressed opposition to a change in the deployment requirement that allows point-to-point use to constitute an adequate use of spectrum.

**Licence Extension and Licence Renewal**

We understand the need to coordinate spectrum use in Canada with its use in the US and throughout the world, but it is important to recognize the differing requirements of urban and rural environments. There is considerable interest in using 2300 and 3500 MHz bands for mobile data, but as has been pointed out, there are other bands that will be deployed for these purposes much sooner. Also, the need for spectrum for mobile data in rural areas will not likely require use of this spectrum for that purpose. Other bands are more suitable for mobile data in a rural setting.

We would like to see the needs of rural residents kept in mind both in terms of use and timing.

The policy around this spectrum should:

• Address the Fixed Wireless Access needs of rural citizens
o Look at the difference between urban and rural requirements and make adjustments to ensure access to service providers in rural areas

- Not allow spectrum to remain unused when the technology is available for its use
  o Use of the spectrum should not be tied to a specific technology as there is always a new and improved one in the works

- Consider how small service providers can get fair and reasonable access to spectrum

- Reclaim and repurpose spectrum for its most efficient and effective use

The Government of Alberta does not feel that licence extensions are needed. Indications are that there are numerous companies interested in using the spectrum now, and extending the licences at this time will only delay its use.

Licence renewal should be granted for licencees that have met the current deployment requirements. If the deployment requirements have not been met at the end of the licence period, the spectrum should be reclaimed.

Other Comments

Industry Canada’s spectrum licencing service areas include urban and rural environments, but the needs of these two environments are very different. As the commercial value of the service area is dominated by the urban requirements, rural needs are often ignored or neglected. The GoA would like to see Industry Canada address this disparity by:

- redefining the service areas and separating rural and urban areas
- licencing spectrum in rural areas in a manner that enables access to all rural service providers that are looking for spectrum in those rural areas.

Conclusion

Industry Canada should work to ensure that spectrum licensing regulations, auctions, requirements, and processes enable the expansion of Internet in rural areas across Canada.