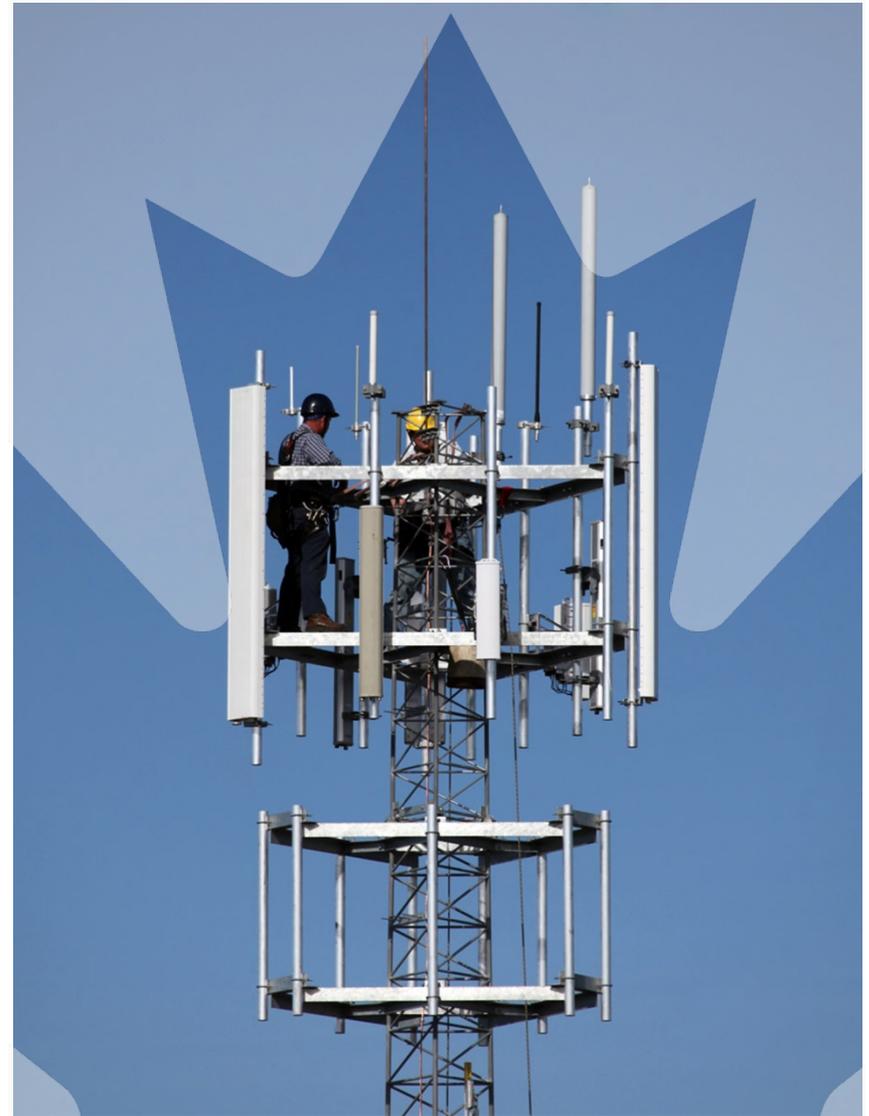




Start of DTV Transition – 600 MHz repacking

April 21, 2017



Brief Recap of Prior Presentations

- DTV Application Process – 600 MHz Repacking (*Nov. 21, 2016*)
 - Application – simplified vs. standard
 - Process – streamlined vs. standard
 - Included overview, some details, and associated timelines
- DTV Application Procedures and Technical Requirements – 600 MHz Repacking (*March 9, 2017*)
 - Transition Period
 - Plans for:
 - ISED Notifications to Broadcasters
 - End of TV Moratorium
 - Application Priority and Timeframes
 - Transition Technical Requirements, SC6, Reports on Transition Progress
 - On-Air Testing and Issuance of Broadcasting Certificates

Overview of Today's Presentation

New topics:

- Start of Transition: Publications and Letters
- Transitioning per the *Schedule*
- Status of TV stations: Primary vs. Secondary, Hierarchy, Associated Conditions
- Unused Allotments: Stations Shut Down, Stations Operating Secondary

Brief review/update of prior topics:

- Applicable NLBC Tolerance: For the *Plan* and Streamlined Process
(*Presentation of Nov. 2016*)
- Interference Ceilings: Additional Clarification (*Presentation of March 2017*)
- Priority of Applications: Reminder – Within First 6 Months (*Presentation of March 2017*)

Additional Prioritization of Applications

Questions/Feedback:

- New telephone number for broadcasting enquiries

Next Session...

Start of Transition

The Transition began on **April 13, 2017** with:

- The publication of the following documents:
 - *Digital Television (DTV) Allotment Plan (the Plan)*
 - *Digital Television (DTV) Transition Schedule (the Schedule)*
 - Broadcasting Procedures and Rules BPR-11, *Broadcasting Television Application Procedures during the 600 MHz Transition*
 - SAB-002-17 – *Lifting of the Moratorium on TV Broadcasting Certificate Applications*
- Letters sent to broadcasters providing specific details applying to their TV stations according to the *Plan* and the *Schedule*
 - By e-mail, where possible
 - By registered mail, where no e-mail was available

Letters to Broadcasters

Categories for TV stations in letters to broadcasters:	How existing operations are affected	Notice for modification or displacement	Possibility to continue on a secondary basis
• Transmitters not requiring any changes	No change, already conform to the <i>Plan</i>	N/A	N/A
• Transmitters requiring changes according to the Transition Schedule	Need to transition per the <i>Schedule</i> , would cause more than 0.5% interference	Included in letter	No
• Transmitters requiring changes on an as needed basis	May transition per the <i>Schedule</i> or wait for displacement notice when spectrum is needed for mobile deployment	As required for mobile deployment	N/A
• Transmitters identified as conversions to digital only	May transition per the <i>Schedule</i> , do not cause more than 0.5% interference with respect to <u>current</u> <i>Plan</i>	Included in letter	Yes
• Transmitters identified as reassignments	May transition per the <i>Schedule</i> , do not cause more than 0.5% interference with respect to <u>current</u> <i>Plan</i>	Included in letter	Yes

- Refer to section 2.3 of BPR-11, *Broadcasting Television Application Procedures during the 600 MHz Transition*, for more details.

Transitioning per the *Schedule*

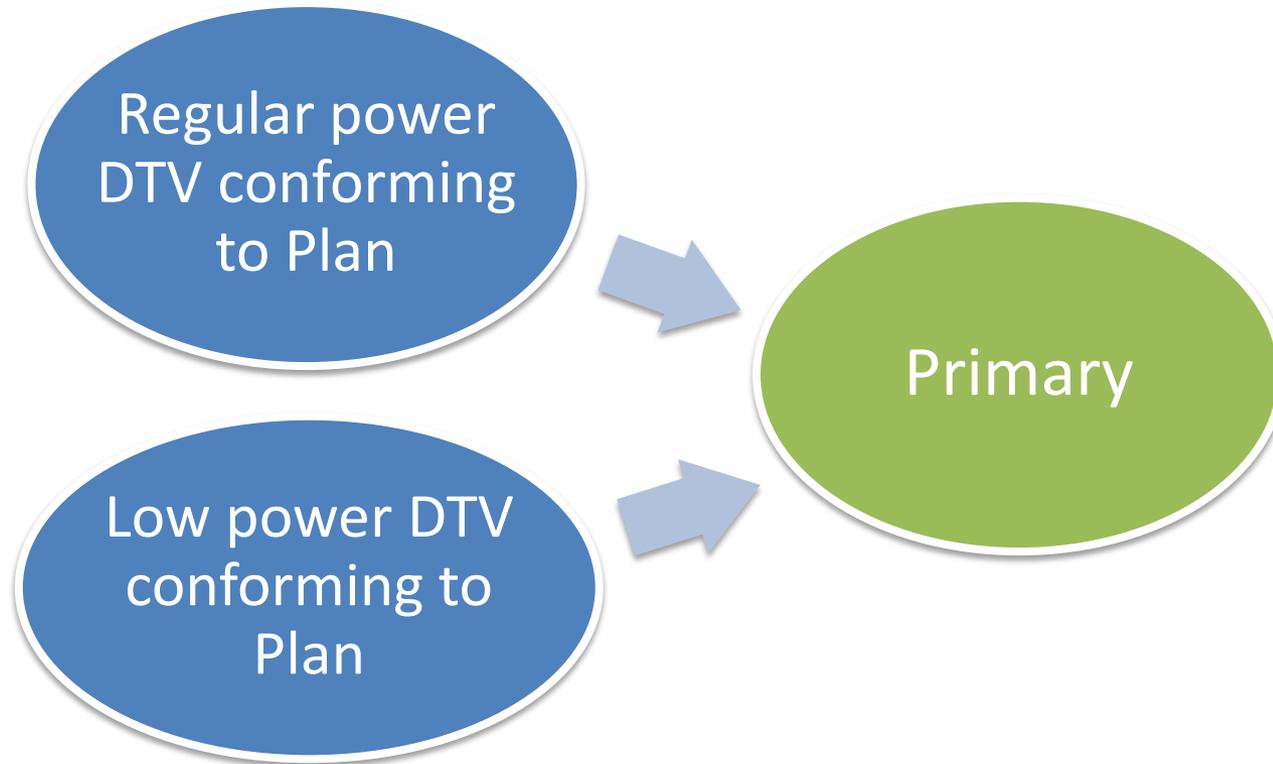
- Required for transmitters identified as requiring changes and given official notice (2nd category in Table in previous slide)
- Beneficial for transmitters identified as not requiring immediate changes (categories 3 to 5 in Table in previous slide), but planning to transition:
 - takes advantage of the simplified application and streamlined process which are only available during the transition period
 - minimizes the impact of the transition on viewers by transitioning at the same time as other stations within their viewing range
 - ensures availability of the station's associated allotment
 - may be able to benefit from available resources in the area for the station's transition phase

The *Schedule* must be respected for stations transitioning

Status of TV Stations

- Certain changes to the status of TV undertakings are introduced with this transition
 - From the start of transition, all Canadian TV stations will be afforded equal protection
 - Low power, regular power, analog and digital are protected equally
 - Ensures stations have equal opportunity to conform to the *Plan* at their scheduled transition date
 - Possible status changes would only come into effect at the scheduled transition date
 - Some stations will be unaffected and some stations can benefit from changes (e.g. opportunity to change from secondary to primary)

Status of TV Stations: Primary

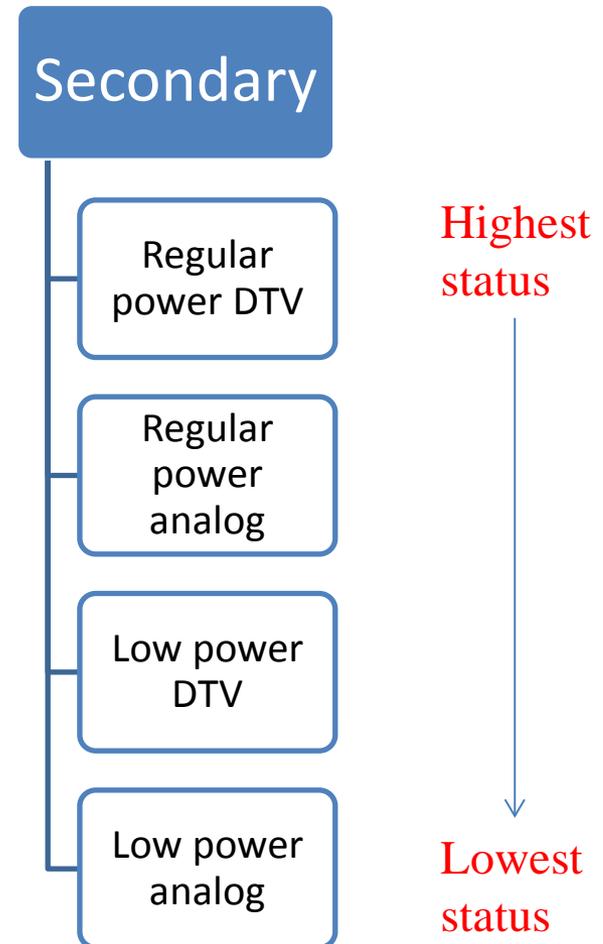


Status of TV Stations: Secondary

- ISED's *Decision on Repurposing the 600 MHz Band* (August 2015) permits regular and low power TV undertakings to operate on a secondary basis on their existing channels relative to other TV undertakings
- Secondary status means:
 - Required to mitigate any potential interference to assignments with a higher protection status, even to the extent of shutting down their station
 - Accept interference from an undertaking that has transitioned or a new or modified higher protection assignment
- If regular or low power stations are allowed to continue operating after the end of their transition phase not in accordance with the *Plan*, they become secondary

Hierarchy in Secondary Assignments

- Within secondary status, order of protection between analog and digital TV is preserved:
 - Within the same power category, secondary analog TV have lower status than secondary DTV
 - Between the power categories, secondary low power have lower status than secondary regular power



Conditions to Operate Secondary

- Prior to operating on a secondary basis past the end of their transition phase, stations need to:
 - Ensure their continued operation will not cause more than 0.5 % unique interference to primary assignments or allotments
 - Where applicable, submit an application with reduced parameters including analysis demonstrating that they would not cause more than 0.5% unique interference to primary TV undertakings or allotments
 - Sign an attestation¹ that
 - they understand and accept the conditions of opting to operate on a secondary basis
 - In addition, for Low Power, they understand they may be relinquishing their opportunity to achieve primary status if they do not transition by the end of their scheduled transition phase

¹ We are assessing the necessity of requiring this attestation. Please note, however, that the conditions for operating on a secondary basis will apply nevertheless.

Conditions to Operate Secondary

- There may be undertakings that cannot continue to operate on a secondary basis, even with reduced parameters
- If approved, conditions related to their secondary status will be added to or retained on their broadcasting certificates

Unused Allotments (Stations Shut Down)

TV undertakings that have already shut down or will shut down following the release of the *Plan*

- Will relinquish their association to specific allotments in the *Plan*
- Removing the association in the *Plan*:
 - allows for future growth
 - may accommodate demand in areas which previously had over-the-air TV service

Unused Allotments (Stations Operating Secondary)

TV undertakings which are permitted to operate on a secondary basis past their scheduled transition date

- Spectrum should not be reserved indefinitely if not being used
- A station “occupying” two channels² within the new 600 MHz TV band will relinquish their association to specific allotments in the Plan thirty days after the end of the transition
 - Regular and Low Power stations operating on a secondary basis need to apply to transition to their associated allotment prior to this date
 - No guarantee that the previously allotted channel may still be available after this date

² a station continuing to operate on a secondary basis on its current channel and having an associated allotment in the Plan, both within the new re-packed TV band

Unused Allotments (Stations Operating Secondary)

TV undertakings which are permitted to operate on a secondary basis past their scheduled transition date

- Stations that are not “occupying” two channels in the new 600 MHz band:
 - Stations continuing to operate secondary and requiring an on-channel digital conversion will only be protected to their digital equivalent and associated parameters from their allotment in the *Plan*
 - Stations operating in the to-be repurposed (Mobile) band are not “occupying” two channels in the new 600 MHz band
 - The associations for these allotments may be subject to review at a future date

Applicable NLBC Tolerance (for *Plan* and Streamlined Process)

From Nov. 2016 Presentation:

To qualify for streamlined process:

- *Noise-limited bounding contour (NLBC) not exceeding contour as calculated using reference parameters in the Plan by more than 1% in any direction and not causing more than 0.5% increase in interference to population to any allotment within the Plan*
 - *Allows for minor adjustments where there are difficulties in implementing reference parameters from the plan*

Additional Clarification:

- For the streamlined process, the NLBC will generally only be allowed to exceed the contour (within the tolerance specified above) as calculated using the baseline parameters for:
 - Channel changes or analog to digital conversions that require a new antenna that cannot match the pattern specified in the Plan.

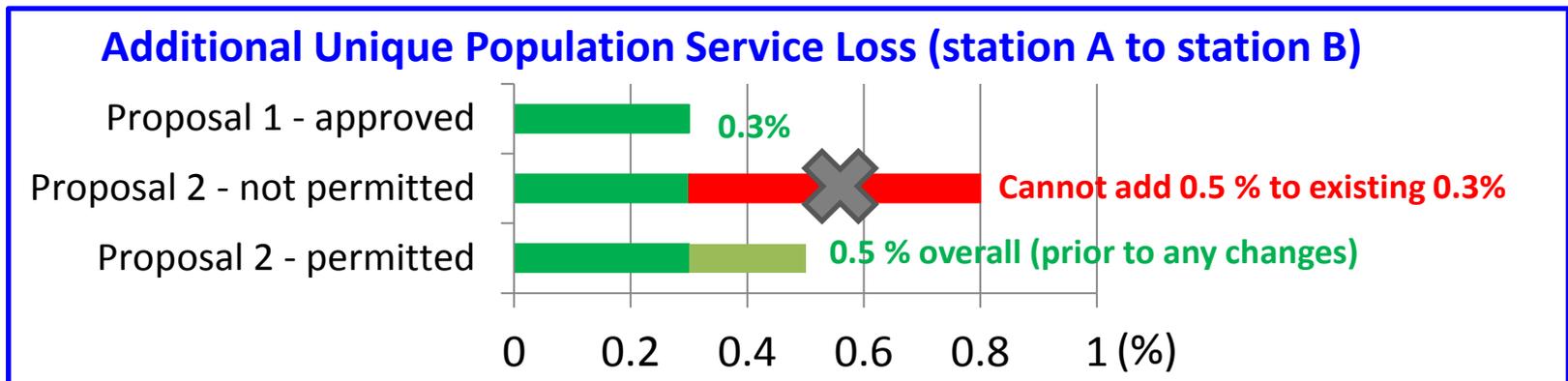
Interference Ceilings

March 2017 Presentation:

- *Included details regarding 0.5% steady-state and 2.0% temporary interference ceilings*
- *Some questions raised at last meeting with respect to the application of these criteria*

Additional Clarification:

- Detailed information provided in Section 8 of BPR-11
- Additional unique population service loss caused by a proposal (station A) compared to the interference-free service population of the affected station (station B) prior to any proposed changes (of station A)
- Multiple increases in service loss exceeding the prescribed limits are not permitted



Priority of Applications (Reminder - Within First 6 Months)

From March 2017 Presentation:

- *Stations scheduled to transition in the early phases in accordance with the Plan (streamlined process)*
- *Any stations proposing modifications to Plan parameters – e.g. unable to build to allotment/reference parameters, proposing increases (standard process)*
- *Applications for new stations*
 - *Processed on a case-by-case basis, generally lower priority*

Important note:

- Regardless of scheduled phase, it is important to identify to ISED any major constraints with respect to building to allotment in the *Plan* asap within the first 6 months.
 - These applications will be afforded higher priority and prioritized based on the constraints
 - Associated changes to the *Plan* will be negotiated with the FCC at the end of this period

Additional Prioritization of Applications

- Clients are encouraged to submit **applications online**.
- Higher priority is also associated with these applications since the online system:
 - facilitates and accelerates bringing applications into the system for evaluation.
 - minimizes delays as it reduces the possibility for errors or omissions
- The online system also simplifies application submission for clients since it:
 - allows for the retrieval of existing station data from the ISED database for review and modification.

Questions / Feedback

- ISED Broadcasting email:
IC.Broadcasting-Radiodiffusion.IC@canada.ca
- New ISED telephone number for Broadcasting enquiries:
343-291-1568

Next Session...

- Proposal to schedule a demonstration of our [online application](#) for the entry of DTV applications within the next 2 weeks.

Canada 