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Spectrum Management and Telecommunications

Client Procedures Circular

Radiocommunication and Broadcasting Antenna Systems

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Canada

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1. Introduction

Radiocommunication and broadcasting services are important for all Canadians and are used daily by the public, safety and security organizations, government, wireless service providers, broadcasters, utilities and businesses. In order for radiocommunication and broadcasting services to work, antenna systems including masts, towers, and other supporting structures are required. Antenna systems are normally composed of an antenna and some type of supporting structure, often called an antenna tower. Most antennas have their own integral mast so that they can be fastened directly to a building or a tower. There is a certain measure of flexibility in the placement of antenna systems which is constrained to some degree by: the need to achieve acceptable coverage for the service area; the availability of sites; technical limitations; and safety. In exercising its mandate, Industry Canada believes that it is important that antenna systems be deployed in a manner that considers the local surroundings.

1.1 Mandate

Section 5 of the *Radiocommunication Act* states that the Minister may, taking into account all matters the Minister considers relevant for ensuring the orderly development and efficient operation of radiocommunication in Canada, issue radio authorizations and approve each site on which radio apparatus, including antenna systems, may be located. Further, the Minister may approve the erection of all masts, towers and other antenna-supporting structures. Accordingly, proponents must follow the process outlined in this document when installing or modifying an antenna system. Also, the installation of an antenna system or the operation of a currently existing antenna system that is not in accordance with this process may result in its alteration or removal and other sanctions against the operator in accordance with the *Radiocommunication Act.*

1.2 Application

The requirements of this document apply to anyone (referred to in this document as the proponent) who is planning to install or modify an antenna system,[1] regardless of the type. This includes telecommunications carriers,[2] businesses, governments, Crown agencies, operators of broadcasting undertakings and the public (including for amateur radio operation and over-the-air TV reception). Anyone who proposes, uses or owns an antenna system must follow these procedures. The requirements also apply to those who install towers or antenna systems on behalf of others or for leasing purposes ("third party tower owners"). As well, parts of this process contain obligations that apply to existing antenna system owners and operators.

1.3 Process Overview

This document outlines the process that must be followed by proponents seeking to install or modify antenna systems. The broad elements of the process are as follows:

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1 For the purposes of this document, an "antenna system" is normally composed of an antenna and some sort of supporting structure, normally a tower. Most antennas have their own integral mast so that they can be fastened directly to a building or a tower. Thus, where this document refers to an "antenna," the term includes the integral mast.

2 For the purpose of this document, a "telecommunications carrier" means a person who owns or operates a transmission facility used by that person or another person to provide telecommunications services to the public for compensation.

1. Investigating sharing or using existing infrastructure before proposing new antenna-supporting structures.

2. Contacting the land-use authority (LUA) to determine local requirements regarding antenna systems.

3. Undertaking public notification and addressing relevant concerns, whether by following local LUA requirements or Industry Canada's default process, as is required and appropriate.

4. Satisfying Industry Canada's general and technical requirements.

5. Completing the construction.

It is Industry Canada's expectation that steps (2) to (4) will normally be completed within ***120 days***. Some proposals may be excluded from certain elements of the process (see Section 6). It is Industry Canada's expectation that all parties will carry out their roles and responsibilities in good faith and in a manner that respects the spirit of this document. If the requirements of this document are satisfied and the proposal proceeds then, under step (5), construction of the antenna system must be completed within three years of conclusion of consultation.

2. Industry Canada Engagement

There are a number of points in the processes outlined in this document where parties must contact Industry Canada to proceed. Further, anyone with any question regarding the process may contact the local Industry Canada office[3] for guidance. Based on a query by an interested party, Industry Canada may request parties to provide relevant records and/or may provide direction to one or more parties to undertake certain actions to help move the process forward.

3. Use of Existing Infrastructure (Sharing)[4]

This section outlines the roles of proponents and owners/operators of existing antenna systems. In all cases, parties should retain records (such as analyses, correspondence and engineering reports) relating to this section.

Before building a new antenna-supporting structure, Industry Canada requires that proponents first explore the following options:

- consider sharing an existing antenna system, modifying or replacing a structure if necessary;

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[3] Please refer to Radiocommunication Information Circular RIC-66 for a list of addresses and telephone numbers for Industry Canada's regional and district offices. RIC-66 is available via the Internet at: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h_sf06073.html.

[4] See also Client Procedures Circular CPC-2-0-17, *Conditions of Licence for Mandatory Roaming and Antenna Tower and Site Sharing and to Prohibit Exclusive Site Arrangements*. CPC-2-0-17 is available via the Internet at: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf09081.html.

- locate, analyze and attempt to use any feasible existing infrastructure such as rooftops, water towers etc.

A proponent is not normally expected to build a new antenna-supporting structure where it is feasible to locate an antenna on an existing structure, unless a new structure is preferred by the land-use authority.

Owners and operators of existing antenna systems are to respond to a request to share in a timely fashion and to negotiate in good faith to facilitate sharing where feasible. It is anticipated that 30 days is reasonable time for existing antenna system owners/operators to reply to a request by a proponent in writing with either:

- a proposed set of reasonable terms to govern the sharing of the antenna system; or
- a detailed explanation of why sharing is not possible.

4. Land-use Authority and Public Consultation

Contacting the Land-use Authority

Proponents must always contact the applicable land-use authorities to determine the local consultation requirements and to discuss local preferences regarding antenna system siting and/or design, unless their proposal falls within the exclusion criteria outlined in Section 6. If the land-use authority has designated an official to deal with antenna systems, then proponents are to engage the authority through that person. If not, proponents must submit their plans directly to the council, elected local official or executive. The 120-day consultation period commences only once proponents have formally submitted, in writing, all plans required by the land-use authority, and does not include preliminary discussions with land-use authority representatives.

Proponents should note that there may be more than one land-use authority with an interest in the proposal. Where no established agreement exists between such land-use authorities, proponents must, as a minimum, contact the land-use authority(ies) and/or neighbouring land-use authorities located within a radius of three times the tower height, measured from the tower base or the outside perimeter of the supporting structure, whichever is greater. As well, in cases where proponents are aware that a potential Aboriginal or treaty right or land claim may be affected by the proposed installation,[5] they must contact Industry Canada in order to ensure that the requirements for consultation are met.

Following the Land-use Authority Process

Proponents must follow the land-use consultation process for the siting of antenna systems, established by the land-use authority, where one exists. In the event that a land-use authority's existing process has no public consultation requirement, proponents must then fulfill the public consultation requirements contained in Industry Canada's Default Public Consultation Process (see Section 4.2). Proponents are not required to follow this requirement if the LUA's established process explicitly excludes their type of

[5] Proponents are encouraged to refer to local community and online resources (for example, the Aboriginal and Treaty Rights Information System (ATRIS) (http://sidait-atris.aadnc-aandc.gc.ca/atris_online/home-accueil.aspx) as applicable.

proposal from consultation or it is excluded by Industry Canada's criteria.[6] Where proponents believe the local consultation requirements are unreasonable, they may contact the local Industry Canada office in writing for guidance.

Broadcasting Undertakings

Applicants for broadcasting undertakings are subject to Canadian Radio-television and Telecommunications (CRTC) licensing processes in addition to Industry Canada requirements. Although Industry Canada encourages applicants to consult as early as practical in the application process, in some cases it may not be prudent for the applicants to initiate public and municipal/land-use consultation before receiving CRTC approval, as application denial by the CRTC would have result in unnecessary work for all parties involved. Therefore, assuming that the proposal is not otherwise excluded, broadcasting applicants may opt to commence land-use consultation after having received CRTC approval. However, broadcasting applicants choosing this approach are required, at the time of the CRTC application, to notify the land-use authority with a Letter of Intent outlining a commitment to conduct consultation after receiving CRTC approval. If the land-use authority raises concerns with the proposal as described in the Letter of Intent, applicants are encouraged to engage in discussions with the land-use authority regarding their concerns and attempt to resolve any issues. Refer to Broadcasting Procedures and Rules, Part 1 (BPR-1), for further details.

4.1 Land-use Authority Consultation

Industry Canada believes that any concerns or suggestions expressed by land-use authorities are important elements to be considered by proponents regarding proposals to install, or make changes to, antenna systems. As part of their community planning processes, land-use authorities should facilitate the implementation of local radiocommunication services by establishing consultation processes for the siting of antenna systems.

Unless the proposal meets the exclusion criteria outlined in Section 6, proponents must consult with the local land-use authority(ies) on any proposed antenna system prior to any construction. The aim of this consultation is to:

- discuss site options;
- ensure that local processes related to antenna systems are respected;
- address reasonable and relevant concerns (see Section 4.2) from both the land-use authority and the community they represent; and
- obtain land-use authority concurrence in writing.

Land-use authorities are encouraged to establish reasonable, relevant, and predictable consultation processes[7] specific to antenna systems that consider such things as:

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6 In all cases, telecommunications carriers, broadcasting undertakings and third party tower owners must notify and consult with the local public when proposing a new antenna tower either by following Industry Canada's Default Public Consultation Process or, where one exists, the land-use authority's public consultation process..

7 Industry Canada is available to assist land-use authorities in the development of local processes. In addition, land-use authorities may wish to consult Industry Canada's guide for the development of local consultation processes.

- the designation of suitable contacts or responsible officials;
- proposal submission requirements;
- public consultation;
- documentation of the concurrence process; and
- the establishment of milestones to ensure consultation process completion within ***120 days***.

Where they have specific concerns regarding a proposed antenna system, land-use authorities are expected to discuss reasonable alternatives and/or mitigation measures with proponents.

Under their processes, land-use authorities may exclude from consultation any antenna system installation in addition to those identified by Industry Canada's own consultation exclusion criteria (Section 6). For example, an authority may wish to exclude from consultation those installations located within industrial areas removed from residential areas, low visual impact installations, or certain types of structures located within residential areas such as personal antenna systems (e.g. used for over the air and satellite television reception or amateur radio operation).

4.2 Industry Canada's Default Public Consultation Process

Proponents must follow Industry Canada's Default Public Consultation Process where the local land-use authority does not have an established and documented public consultation process applicable to antenna siting. Industry Canada's default process has three steps whereby the proponent:

1. provides written notification to the public, the land-use authority and Industry Canada of the proposed antenna system installation or modification (i.e. public notification);
2. engages the public and the land-use authority in order to address relevant questions, comments and concerns regarding the proposal (i.e. responding to the public); and
3. provides an opportunity to the public and the land-use authority to formally respond in writing to the proponent regarding measures taken to address reasonable and relevant concerns (i.e. public reply comment).

Public Notification

1. Proponents must ensure that the local public, the land-use authority and Industry Canada are notified of the proposed antenna system. As a minimum, proponents must provide a notification package (see Appendix 1) to the local public (including nearby residences, community gathering areas, public institutions, schools, etc.), neighbouring land-use authorities, businesses, and property owners, etc.

Municipalities may also wish to refer to the protocol template developed in partnership between the Federation of Canadian Municipalities (FCM) and the Canadian Wireless Telecommunications Association (CWTA). The FCM/CWTA template can be found on the FCM's website www.fcm.ca.

located within a radius of three times the tower height.[8] The radius is measured from the outside perimeter of the supporting structure. For the purpose of this requirement, the outside perimeter begins at the furthest point of the supporting mechanism, be it the outermost guy line, building edge, face of the self-supporting tower, etc. Public notification of an upcoming consultation must be clearly marked, making reference to the proposed antenna system, so that it is not misinterpreted as junk mail. The notice must be sent by mail or be hand delivered. The face of the package must clearly reference that the recipient is within the prescribed notification radius of the proposed antenna system.

2. It is the proponent's responsibility to ensure that the notification provides at least 30 days for written public comment.

3. In addition to the minimum notification distance noted above, in areas of seasonal residence, the proponent, in consultation with the land-use authority, is responsible for determining the best manner to notify such residents to ensure their engagement.

4. In addition to the public notification requirements noted above, proponents of an antenna system proposed to be 30 metres or more in height must place a notice in a local community newspaper circulating in the proposed area.[9] Height is measured from the lowest ground level at the base, including the foundation, to the tallest point of the antenna system. Depending on the particular installation, the tallest point may be an antenna, lightning rod, aviation obstruction lighting or some other appurtenance. Any attempt to artificially reduce the height (addition of soil, aggregate, etc.) will not be included in the calculation or measurement of the height of the antenna system.

Responding to the Public

Proponents are to address all reasonable and relevant concerns, make all reasonable efforts to resolve them in a mutually acceptable manner and must keep a record of all associated communications. If the local public or land-use authority raises a question, comment or concern relating to the antenna system as a result of the public notification process, then the proponent is required to:

1. respond to the party in writing within ***14 days*** acknowledging receipt of the question, comment or concern and keep a record of the communication;

2. address in writing all reasonable and relevant concerns within ***60 days*** of receipt or explain why the question, comment or concern is not, in the view of the proponent, reasonable or relevant; and

3. in the written communication referred to in the preceding point, clearly indicate that the party has ***21 days*** from the date of the correspondence to reply to the proponent's response. The proponent must provide a copy of all public reply comments to the local Industry Canada office.

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8 Proponents are advised that municipalities may set reasonable public notification distances appropriate for their communities when establishing their own protocols.

9 The notice must be synchronized with the distribution of the public notification package. It must be legible and placed in the public notice section of the newspaper. The notice must include: a description of the proposed installation; its location and street address; proponent contact information and mailing address; and an invitation to provide public comments to the proponent within ***30 days*** of the notice. In areas without a local newspaper, other effective means of public notification must be implemented. Proponents may contact the local Industry Canada office for guidance.

Responding to reasonable and relevant concerns may include contacting a party by telephone, engaging in a community meeting or having an informal, personal discussion. Between steps 1 and 2 above, the proponent is expected to engage the public in a manner it deems most appropriate. Therefore, the letter at step 2 above may be a record of how the proponent and the other party addressed the concern at hand.

Public Reply Comments

As indicated in step 3 above, the proponent must clearly indicate that the party has ***21 days*** from the date of the correspondence to reply to the response. The proponent must also keep a record of all correspondence/discussions that occurred within the ***21-day*** public reply comment period. This includes records of any agreements that may have been reached and/or any concerns that remain outstanding.

The factors that will determine whether a concern is reasonable or relevant according to this process will vary but will generally be considered if they relate to the requirements of this document and to the particular amenities or important characteristics of the area surrounding the proposed antenna system. Examples of concerns that proponents are to address may include:

- Why is the use of an existing antenna system or structure not possible?
- Why is an alternate site not possible?
- What is the proponent doing to ensure that the antenna system is not accessible to the general public?
- How is the proponent trying to integrate the antenna into the local surroundings?
- What options are available to satisfy aeronautical obstruction marking requirements at this site?
- What are the steps the proponent took to ensure compliance with the general requirements of this document including the *Canadian Environmental Assessment Act* (CEAA), Safety Code 6, etc.?

Concerns that are not relevant include:

- disputes with members of the public relating to the proponent's service, but unrelated to antenna installations;
- potential effects that a proposed antenna system will have on property values or municipal taxes;
- questions whether the *Radiocommunication Act*, this document, Safety Code 6, locally established by-laws, other legislation, procedures or processes are valid or should be reformed in some manner.

4.3 Concluding Consultation

The proponent may only commence installation/modification of an antenna system after the consultation process has been completed by the land-use authority, or Industry Canada confirms concurrence with the consultation portion of this process, and after all other requirements under this process have been met. Consultation responsibilities will normally be considered complete when the proponent has:

1. concluded consultation requirements (Section 4.1) with the land-use authority;

2. carried out public consultation either through the process established by the land-use authority or Industry Canada's Default Public Consultation Process where required; and

3. addressed all reasonable and relevant concerns.

Concluding Land-use Authority Consultation

Industry Canada expects that land-use consultation will be completed within ***120 days*** from the proponent's initial formal contact with the local land-use authority. Where unavoidable delays may be encountered, the land-use authority is expected to indicate when the proponent can expect a response to the proposal. If the authority is not responsive, the proponent may contact Industry Canada. Depending on individual circumstances, Industry Canada may support additional time or consider the land-use authority consultation process concluded.

Depending on the land-use authority's own process, conclusion of local consultation may include such steps as obtaining final concurrence for the proposal via the relevant committee, a letter or report acknowledging that the relevant municipal process or other requirements have been satisfied, or other valid indication, such as the minutes of a town council meeting indicating LUA approval. Compliance with informal city staff procedures, or grants of approval strictly related to zoning, construction, etc. will not normally be sufficient.

Industry Canada recognizes that approvals for construction (e.g. building permits) are used by some land-use authorities as evidence of consultation being concluded. Proponents should note that Industry Canada does not consider the fact a permit was issued as confirmation of concurrence, as different land-use authorities have different approaches. As such, Industry Canada will only consider such approvals as valid when the proponent can demonstrate that the LUA's process was followed and that the LUA's preferred method of concluding LUA consultation is through such an approval.

Concluding Industry Canada's Default Public Consultation Process

Industry Canada's Default Public Consultation Process will be considered concluded when the proponent has either:

- received no written questions, comments or concerns to the formal notification within the ***30-day*** public comment period; or

- if written questions, comments or concerns were received, the proponent has addressed and resolved all reasonable and relevant concerns and the public has not provided further comment within the ***21-day*** reply comment period.

In the case where the public responds within the ***21-day*** reply comment period, the proponent has the option of making further attempts to address the concern on its own, or can request Industry Canada engagement. If a request for engagement is made at this stage, Industry Canada will review the relevant material, request any further information it deems pertinent from any party and may then decide that:

- the proponent has met the consultation requirements of this process and that Industry Canada concurs that installation or modification may proceed; or

- the parties should participate in further attempts to mitigate or resolve any outstanding concern.

4.4 Post-Consultation

Whether the proponent followed a land-use authority's consultation process or Industry Canada's default public consultation process, construction of an antenna system must be completed within three years of the conclusion of consultation. After three years, consultations will no longer be deemed valid except in the case where a proponent secures the agreement of the relevant Land-Use Authority to an extension for a specified time period in writing. A copy of the agreement must be provided to the local Industry Canada office.

5. Dispute Resolution Process

The dispute resolution process is a formal process intended to bring about the timely resolution where the parties have reached an impasse.

Upon receipt of a written request from a stakeholder other than the general public, asking for Departmental intervention concerning a reasonable and relevant concern, the Department may request that all involved parties provide and share all relevant information. The Department may also gather or obtain other relevant information and request that parties provide any further submissions if applicable. The Department will, based on the information provided, either:

- make a final decision on the issue(s) in question, and advise the parties of its decision; or

- suggest the parties enter into an alternate dispute resolution process in order to come to a final decision. Should the parties be unable to reach a mutually agreeable solution, either party may request that the Department make a final decision.

Upon resolution of the issue under dispute, the proponent is to continue with the process contained within this document as required.

6. Exclusions

All proponents must satisfy the General Requirements outlined in Section 7 regardless of whether an exclusion applies to their proposal. All proponents must also consult the land-use authority and the public unless a proposal is specifically excluded. Individual circumstances vary with each antenna system installation and modification, and the exclusion criteria below should be applied in consideration of local circumstances. Consequently, it may be prudent for the proponent to consult even though the proposal meets an exclusion noted below. Therefore, when applying the criteria for exclusion, proponents should consider such things as:

- the antenna system's physical dimensions, including the antenna, mast, and tower, compared to the local surroundings;

- the location of the proposed antenna system on the property and its proximity to neighbouring residents;
- the likelihood of an area being a community-sensitive location; and
- Transport Canada's marking and lighting requirements for the proposed structure.

The following proposals are excluded from land-use authority and public consultation requirements:

- **New Antenna Systems**: where the height is less than 15 metres above ground level. This exclusion does not apply to antenna systems proposed by telecommunications carriers, broadcasting undertakings or third party tower owners;

- **Existing Antenna Systems**: where modifications are made, antennas added or the tower replaced[10], including to facilitate sharing, provided that the total cumulative height increase is no greater than 25% of the height of the initial antenna system installation[11]. No increase in height may occur within one year of completion of the initial construction. This exclusion does not apply to antenna systems using purpose built antenna supporting structures with a height of less than 15 metres above ground level operated by telecommunications carriers, broadcasting undertakings or third party tower owners;

- **Non-Tower Structure**: antennas on buildings, water towers, lamp posts, etc. may be excluded from consultation provided that the height above ground of the non-tower structure, exclusive of appurtenances, is not increased by more than 25%;[12] and

- **Temporary Antenna Systems**: used for special events or emergency operations and must be removed within three months after the start of the emergency or special event.

No consultation is required prior to performing maintenance on an existing antenna system.

Proponents who are not certain if their proposals are excluded, or whether consultation may still be prudent, are advised to contact the land-use authority and/or Industry Canada for guidance.

Height is measured from the lowest ground level at the base, including the foundation, to the tallest point of the antenna system. Depending on the particular installation, the tallest point may be an antenna, lightning rod, aviation obstruction lighting or some other appurtenance. Any attempt to artificially reduce the height (addition of soil, aggregate, etc.) will not be included in the calculation or measurement of the height of the antenna system.

7. General Requirements

In addition to roles and responsibilities for site sharing, land-use consultation and public consultation, proponents must also fulfill other important obligations including: compliance with Health Canada's

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10 The exclusion for the replacement of existing antenna systems applies to replacements that are similar to the original design and location.

11 Initial antenna system installation refers to the system as it was first consulted on, or installed.

12 Telecommunication carriers, operators of broadcasting undertakings and third party tower owners may benefit from local knowledge by contacting the land-use authority when planning an antenna system that meets this exclusion criteria.

Safety Code 6 guideline for the protection of the general public; compliance with radio frequency immunity criteria; notification of nearby broadcasting stations; environmental considerations; and Transport Canada/NAV CANADA aeronautical safety responsibilities.

7.1 Radio Frequency Exposure Limits

Health Canada has established safety guidelines for exposure to radio frequency fields, in its Safety Code 6 publication, entitled: *Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz.*[13] While the responsibility for developing Safety Code 6 rests with Health Canada, Industry Canada has adopted this guideline for the purpose of protecting the general public. Current biomedical studies in Canada and other countries indicate that there is no scientific or medical evidence that a person will experience adverse health effects from exposure to radio frequency fields, provided that the installation complies with Safety Code 6.

It is the responsibility of proponents and operators of installations to ensure that all radiocommunication and broadcasting installations comply with Safety Code 6 at all times, including the consideration of combined effects of nearby installations within the local radio environment.

Telecommunications common carriers and operators of broadcasting undertakings are to carry out an exposure evaluation on all new installations and following any increases in radiated power. Either measurement surveys or mathematical or numerical computations can be used for this evaluation. Where the radio frequency emission of any installation, whether telecommunications carrier or broadcasting operator, is greater than, or is equal to, 50%, of the Safety Code 6 limits for uncontrolled environments at locations accessible to the general public (i.e. not solely available for access by workers), the operator(s) of radio frequency emitters must notify Industry Canada and demonstrate compliance with Safety Code 6. This determination of 50% of Safety Code 6 must be in consideration of the local radio environment.

For all proponents following Industry Canada's Default Public Consultation Process, the proponent's notification package must provide a written attestation that there will be compliance with Safety Code 6 for the protection of the general public, including consideration of nearby radiocommunication systems. The notification package must also indicate any Safety Code 6 related signage and access control mechanisms that may be used.
Compliance with Safety Code 6 is an ongoing obligation. At any time, antenna system operators may be required, as directed by Industry Canada, to demonstrate compliance with Safety Code 6 by (i) providing detailed calculations, and/or (ii) conducting site surveys and, where necessary, by implementing corrective measures.[14] At the request of Industry Canada, telecommunications carriers and operators of broadcasting undertakings must provide detailed compliance information for individual installations within five days of the request. Proponents and operators of existing antenna systems must retain copies of all information related to Safety Code 6 compliance such as analyses and measurements.

[13] To obtain an electronic copy of Safety Code 6, contact: publications@hc-sc.gc.ca.

[14] See Client Procedures Circular CPC-2-0-20, *Radio Frequency (RF) Fields – Signs and Access Control.*

7.2 Radio Frequency Immunity

All radiocommunication and broadcasting proponents and existing spectrum users are to ensure that their installations are designed and operated in accordance with Industry Canada's immunity criteria as outlined in EMCAB-2[15] in order to minimize the malfunctioning of electronic equipment in the local surroundings. Broadcasting proponents and existing undertakings should refer to Broadcasting Procedures and Rules - Part 1, *General Rules* (BPR-1) for additional information and requirements[16] on this matter.

Proponents are advised to consider the potential effect that their proposal may have on nearby electronic equipment. In this way, they will be better prepared to respond to any questions that may arise during the public and land-use consultation processes, or after the system has been installed.

Land-use authorities should be prepared to advise proponents and owners of broadcasting undertakings of plans for the expansion or development of nearby residential and/or industrial areas. Such expansion or development generally results in the introduction of more electronic equipment in the area and therefore an increased potential for electronic equipment to malfunction. By keeping broadcasters aware of planned developments and changes to adjacent land-use, they will be better able to work with the community. Equally, land-use authorities have a responsibility to ensure that those moving into these areas, whether prospective residents or industry, are aware of the potential for their electronic equipment to malfunction when located in proximity to an existing broadcasting installation. For example, the LUA could ensure that clear notification be provided to future prospective purchasers.

7.3 Proximity of Proposed Structure to Broadcasting Undertakings

Where the proposal would result in a structure that exceeds 30 metres above ground level, the proponent is to notify operators of AM, FM and TV undertakings within 2 kilometres, due to the potential impact the physical structure may have on these broadcasting undertakings. Metallic structures close to an AM directional antenna array may change the antenna pattern of the AM broadcasting undertaking. These proposed structures can also reflect nearby FM and TV signals, causing "ghosting" interference to FM/TV receivers used by the general public.

7.4 Canadian Environmental Assessment Act

Industry Canada requires that the installation and modification of antenna systems be done in a manner that complies with appropriate environmental legislation. This includes the *Canadian Environmental Assessment Act, 2012* (CEAA 2012), where the antenna system is incidental to a physical activity or project designated under CEAA 2012, or is located on federal lands.

An antenna system may not proceed where it is incidental to a designated project (as described in the *Regulations Designating Physical Activities*), or is otherwise expressly designated by the Minister of the

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15 For more information see EMCAB-2, entitled: *Criteria for Resolution of Immunity Complaints Involving Fundamental Emissions of Radiocommunications Transmitters* available at: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01005.html.

16 BPR-1 - Part I: General Rules can be found on the Spectrum Management and Telecommunications website at: http://strategis.ic.gc.ca/epic/internet/insmt-gst.nsf/en/sf01326e.html.

Environment without satisfying certain requirements applicable to designated projects. Therefore, a proponent of this type of project must contact Industry Canada for direction on how to proceed.

Any proposed antenna system on federal land may not proceed without a determination of environmental effects by Industry Canada. In order to assist the Department in making such a determination, proponents must submit a project description to Industry Canada, considering and addressing those elements of the environment described in CEAA 2012, as well as any determination of environmental effects that may have been made by the authority responsible for managing the federal land. Industry Canada may also require further information before it can complete its assessment. Industry Canada will inform the proponent of the results of its determination and may impose conditions related to mitigating any adverse effects after making its determination and/or may need to refer the matter to the Governor-in-Council under CEAA 2012.

In addition, notices under Industry Canada's default public consultation process require written confirmation of the project's status under CEAA 2012 (e.g., whether it is incidental to a designated project or, if not, whether it is on federal lands).

In addition to CEAA requirements, proponents are responsible to ensure that antenna systems are installed and operated in a manner that respects the local environment and that complies with other statutory requirements, such as those under the *Canadian Environmental Protection Act, 1999,* the *Migratory Birds Convention Act, 1994*, and the *Species at Risk Act*, as applicable.

For projects north of the 60th parallel, environmental assessment requirements may arise from federal statutes other than the aforementioned Acts or from Comprehensive Land Claim Agreements. Industry Canada requires that installation or modification of antennas or antenna supporting structures be done in accordance with these requirements, as appropriate.

7.5 Aeronautical Safety

Proponents must ensure their proposals for any antenna system are first reviewed by Transport Canada and NAV CANADA.

Transport Canada will perform an assessment of the proposal with respect to the potential hazard to air navigation and will notify proponents of any painting and/or lighting requirements for the antenna system. NAV CANADA will comment on whether the proposal has an impact on the provision of their national air navigation system, facilities and other services located off-airport.

As required, the proponent must:

1. submit an Aeronautical Obstruction Clearance form to Transport Canada;

2. submit a Land-use Proposal Submission form to NAV CANADA;

3. include Transport Canada marking requirements in the public notification package;

4. install and maintain the antenna system in a manner that is not a hazard to aeronautical safety; and

5. retain all correspondence.

For those antenna systems subject to Industry Canada's Default Public Consultation Process, the proponent will inform the community of any marking requirements. Where options are possible, proponents are expected to work with the local community and Transport Canada to implement the best and safest marking options. Proponents should be aware that Transport Canada does not advise Industry Canada of marking requirements for proposed structures. Proponents are reminded that the addition of, or modification to, obstruction markings may result in community concern and so any change is to be done in consultation with the local public, land-use authority and/or Transport Canada, as appropriate.

References and Details

Aeronautical Obstruction Clearance forms are available from any Transport Canada Aviation Group Office. Both the Aeronautical Obstruction Clearance form (#26-0427) and a list of Transport Canada Aviation Group regional offices are available on the Transport Canada website.[17] Completed forms are to be submitted directly to the nearest Transport Canada Aviation Group office. (Refer to Canadian Aviation Regulations, Standard 621.19, Standards Obstruction Markings).

Land-use Proposal Submission forms are available from NAV CANADA[18] and completed forms are to be sent to the appropriate NAV CANADA General Manager Airport Operations (GMAO) office, East or West.

[17] The Transport Canada website can be found at: http://www.tc.gc.ca.

[18] Search keywords "Land-use Proposal" on the NAV CANADA website at: http://www.navcanada.ca.

Appendix 1 – Industry Canada's Default Public Consultation Process - Public Notification Package

The proponent must ensure that at least ***30 days*** are provided for public comment. Notification must provide all information on how to submit comments to the proponent in writing. Notices must be clearly marked, making reference to the proposed antenna system, so that it is not misinterpreted as junk mail. The notice must be sent by mail or be hand delivered. The face of the package must clearly indicate that the recipient is within the prescribed notification radius of the proposed antenna system. The proponent must also provide a copy of the notification package to the land-use authority and the local Industry Canada office at the same time as the package is provided to the public.

Notification must include, but need not be limited to:

1) the proposed antenna system's purpose, the reasons why existing antenna systems or other infrastructure cannot be used, a list of other structures that were considered unsuitable and future sharing possibilities for the proposal;

2) the proposed location within the community, the geographic coordinates and the specific property or rooftop;

3) an attestation[19] that the general public will be protected in compliance with Health Canada's Safety Code 6 including combined effects within the local radio environment at all times;

4) identification of areas accessible to the general public and the access/demarcation measures to control public access;

5) information on the environmental status of the project, including any requirements under the *Canadian Environmental Assessment Act, 2012*;

6) a description of the proposed antenna system including its height and dimensions, a description of any antenna that may be mounted on the supporting structure and simulated images of the proposal;

7) Transport Canada's aeronautical obstruction marking requirements (whether painting, lighting or both) if available; if not available, the proponent's expectation of Transport Canada's requirements together with an undertaking to provide Transport Canada's requirements once they become available;

8) an attestation that the installation will respect good engineering practices including structural adequacy;

9) reference to any applicable local land-use requirements such as local processes, protocols, etc.;

[19] Example: I, (*name of individual or representative of company*) attest that the radio installation described in this notification package will be installed and operated on an ongoing basis so as to comply with Health Canada's Safety Code 6, as may be amended from time to time, for the protection of the general public, including any combined effects of nearby installations within the local radio environment.

10) notice that general information relating to antenna systems is available on Industry Canada's Spectrum Management and Telecommunications website (http://www.ic.gc.ca/towers);

11) contact information for the proponent, land-use authorities and the local Industry Canada office; and

12) closing date for submission of written public comments (not less than ***30 days*** from receipt of notification).