NCLL for private 5G in Canada

Lumetis Resource Draft

Draft summary

Canada's Non-Competitive Local Licensing (NCLL) framework gives businesses and smaller operators a practical path to access local spectrum for private wireless use cases, including industrial sites, campuses, utilities, remote operations, and specialized enterprise networks. For organizations evaluating private LTE or private 5G, NCLL can reduce the barriers associated with traditional spectrum access by using a simpler application model, customized licence areas, and a first-come, first-served process.

Lumetis helps organizations move from interest to execution by translating technical, operational, and regulatory requirements into an application-ready deployment plan. Our consultation services support customers through spectrum strategy, use-case definition, radio design inputs, application preparation, and deployment planning.

Understanding NCLL

NCLL stands for **Non-Competitive Local Licensing**, a framework established by Innovation, Science and Economic Development Canada (ISED) to provide a simpler path for local access to spectrum for 5G and related wireless services. Rather than requiring a traditional competitive auction model, NCLL is designed to give smaller operators, enterprises, and non-traditional users easier access to localized spectrum where it is available.

The framework is especially relevant for organizations that need reliable, site-specific wireless performance and stronger control over coverage, interference, security, and operational design. Common examples include manufacturing plants, logistics yards, mining sites, ports, utilities, smart campuses, and remote or hard-to-serve locations.

Why NCLL matters for private wireless

For many enterprises, the question is not whether wireless connectivity is important, but whether public networks alone can satisfy business-critical operational requirements. Private wireless often becomes attractive when an organization needs one or more of the following:

- predictable on-site coverage and capacity
- stronger control over network design and service quality
- support for industrial automation, mobile assets, sensors, video, or edge workloads
- improved resiliency in remote or challenging environments

- clearer operational separation for business-critical traffic

NCLL gives organizations a licensing path aligned with these requirements. It enables licence areas to be defined around the actual operational footprint rather than forcing a one-size-fits-all model. That flexibility is important for enterprises that need a network shaped around a plant, a warehouse campus, a municipal area, or another clearly bounded operating zone.

Key NCLL characteristics

At a high level, the NCLL framework offers several features that make it practical for enterprise and local operator use:

- **First-come, first-served processing** for completed applications
- **Customized licence areas** defined by the applicant
- **Renewable licence options**
- **Managed spectrum coexistence**, with ISED performing technical analyses to support coexistence with other users
- **Access to the 3900-3980 MHz band**, with rules and technical requirements that depend on licence type and deployment conditions

The framework also distinguishes between low-power and medium-power licence models, with different area-size and deployment conditions. In addition, the framework includes spectrum holding limits in a given geographic area, while allowing increased bandwidth in certain cases where ISED criteria are satisfied.

Where applicants often need help

Although NCLL is intended to be simpler than traditional spectrum access models, the application still benefits from disciplined preparation. Many organizations underestimate the amount of coordination needed between spectrum planning, use-case definition, coverage objectives, site constraints, and equipment strategy.

Typical problem areas include:

- defining the right licence boundary for the operational use case
- selecting an appropriate coverage model for indoor, outdoor, or mixed environments
- matching bandwidth needs to actual applications
- accounting for coexistence and interference considerations
- aligning equipment and deployment assumptions with technical requirements

- preparing the right supporting information for a clean application process

An application can look straightforward on paper while still leaving major deployment risks unresolved. That is why many organizations benefit from a front-end consultation phase before they submit.

How Lumetis can help

Lumetis offers consultation services to help organizations evaluate, prepare, and advance an NCLL application with greater confidence. Our role is not limited to paperwork. We focus on connecting the licence strategy to the real network and business outcome the customer wants to achieve.

Our consultation support can include:

1. Use-case and spectrum strategy assessment

We work with the customer to understand the operational goals behind the network. That may include mobility requirements, automation initiatives, video or AI workloads, safety systems, sensor networks, or general enterprise connectivity. From there, we help determine whether NCLL is an appropriate path and how the spectrum strategy should be framed.

2. Licence area planning

NCLL allows the licence area to be defined around the applicant's needs. That flexibility is valuable, but it also means the boundary should be planned carefully. Lumetis helps customers define practical licence areas that reflect the real deployment footprint and anticipated expansion path.

3. Technical planning inputs

Before submitting, customers often need to establish a working view of coverage assumptions, topology, indoor and outdoor requirements, antenna considerations, device mix, and integration needs. Lumetis helps build that early technical baseline so the licence application is grounded in a realistic deployment plan.

4. Application readiness support

We help customers organize the information needed to move from concept to a submission-ready state. That includes clarifying terminology, aligning technical details, and reducing ambiguity that can delay an application or create downstream redesign work.

5. Deployment roadmap

Licensing is only one step. We help customers think ahead to implementation, including network architecture, site readiness, operations, expansion planning, and integration with broader enterprise connectivity and edge strategies.

Why this matters now

Private wireless is moving from experimentation to operational deployment. As more organizations evaluate private LTE and private 5G, access to local spectrum becomes a strategic enabler. NCLL gives

Canadian enterprises a meaningful mechanism to pursue private wireless in a localized and structured way.

Organizations that prepare early will be better positioned to define the right licence area, align the network design to business outcomes, and avoid delays caused by incomplete technical planning.

Next step

If your organization is evaluating a private wireless network and wants to understand whether NCLL is the right licensing path, Lumetis can help you assess the opportunity and prepare for the application process.

Our consultation service is designed to reduce uncertainty, connect the regulatory and technical pieces, and accelerate the move from planning to deployment.

Contact Lumetis to discuss your use case, site requirements, and NCLL application strategy.