

HOW TO GET A CNG REFUELLING STATION APPROVED

Saskatchewan

What You Need to Know

So you are interested in switching your fleet to compressed natural gas (CNG)? As you start down this road, you will need to consider the process for approval early on. Whether you decide to work with an experienced engineering firm or you enter into a contract for a turnkey station, there are steps to be aware of in order to get a CNG station approved. At the beginning of the planning process, start by contacting your local natural gas utility to confirm natural gas supply and available pressure.



The CNG Station Approval Checklist on the next page outlines the steps involved in getting a station approved in Saskatchewan. The Reference Table on the last two pages provides extra detail on process, review, inspection, and other requirements.



CNG station installation in Saskatchewan is regulated by SaskPower, the Technical Safety Authority of Saskatchewan (TSASK), and by local municipalities. SaskPower oversees fuel safety, TSASK is responsible for pressure vessels, and municipalities check for compliance with local by-laws. No federal approval is required, unless you want to allow the general public to refuel at your station. If this is the case, Measurement Canada will need to be involved.



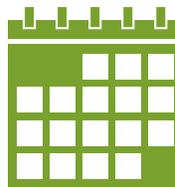
The primary code that applies is CSA 108 – Natural Gas Fueling Stations Installation. This Code applies to public and private CNG stations that offer fast fill capabilities, time fill capabilities, or both.



Public stations can refuel to a settled pressure of 3000 psig. Private stations can refuel to a settled pressure of 3600 psig. Work is underway to allow all Canadian stations to refuel to a settled pressure of 3600 psig.



Knowledgeable design firms, installation firms, and equipment suppliers can help with station options, approvals, and permits.



The total timeline to build a new CNG station will vary, but it is recommended that you plan for a minimum six to nine months based on equipment lead time as well as time for review and approval.

CNG STATION APPROVAL CHECKLIST

1. Provide notice and review process.

Gas Utility Level

- Contact your local natural gas utility to confirm natural gas supply and available pressure.

Municipal Level

- Meet with local municipal officials to inform them of the proposed project and to review the approval and permitting process.

Provincial Level

- Contact SaskPower at their Regina headquarters to inform them of the proposed project and to review the approval and permitting process.
- Depending on the size of your station and whether or not its design will require the use of pressure vessels on site, it might also be necessary to contact TSASK to review their approval and permitting process, and to discuss their submission requirements

2. Submit supporting documentation and obtain approvals and permits for construction.

Municipal Level

- Refer to the Reference Table on the following page for a comprehensive list of municipal Authorities Having Jurisdiction (AHJ) that may be involved in approving your project.
- Obtain a letter of compliance from the appropriate municipal authority.
- The topics of interest to the local municipality will include some or all of the following:
 - Legal
 - Land use
 - Site services
 - Environmental
 - Other

Provincial Level

- It is recommended that this step be completed in parallel with Step 1, as the tasks listed are codependent.
- Refer to the Reference Table on the following page for a comprehensive list of provincial AHJs that may be involved in approving your project.

NOTE: The following describes the process required by SaskPower. Similar processes may be required by the other AHJs listed in the Reference Table.

- Prepare site plan drawings that identify suppliers, equipment, and details of equipment interconnections. These drawings should include:
 - Site P&ID with all pipe sizes and pressure ratings shown; and
 - Detailed Bills of Materials indicating all component specifications, pressure ratings, and temperature ratings (every component must be certified to the temperature and pressure to which it will be subjected). CRNs are only required for CNG storage vessels at this time.
- Contact equipment manufacturers (e.g., CNG dryer, CNG compressor package, CNG dispensing equipment, and other pressure retaining equipment) for supporting information, such as:
 - Equipment P&IDs with all pipe sizes and pressure ratings shown; and
 - Detailed Bills of Materials indicating all component specifications, pressure ratings, and temperature ratings. CRNs are only required for CNG storage vessels at this time.
- SaskPower would prefer that you include the following information in your request to take out a permit:
 - Site plans indicating setbacks and separations consistent with CSA B108 and any additional provincial regulations;
 - Narrative describing station sizing, equipment, and operating conditions;
 - Site and equipment P&IDs with all pipe sizes and pressure and temperature ratings shown;
 - Detailed Bills of Materials indicating all component specifications and ratings, provincial CRNs as necessary, material specifications, and any third-party certification for the equipment;
 - Hazardous locations diagrams;
 - Obtain electrical approval from the appropriate AHJ by submitting the following documentation:
 - Single line electrical schematics;
 - Site inspection report; and
 - Contact TSASK to determine their requirements for approval of any CNG storage vessels.

Federal Level

- If you will be offering refuelling capabilities to the general public, you will need to have your dispenser certified by Measurement Canada.

3. Construct station and develop a plan for inspections.

- Begin site construction once the station design has been approved.
- Once construction is substantially complete, obtain approval from the necessary AHJs to energize the equipment and introduce gas to the station. You may be required to provide proof of electrical approval and pressure vessel CRNs at this stage.
- Conduct commissioning and invite the appropriate AHJs to attend.
- Once all equipment has been commissioned and tested, contact the inspector assigned to your project (and any other necessary AHJs identified throughout this process) to schedule a final site inspection and to identify any hold and inspection points. For example, they may require the pressure testing of underground pipe with the trenches open.

4. Obtain operating permit and develop a plan for re-certification.

- You will be notified of any defect found downstream of the meter during your final inspection. If it is not corrected in 30 days, SaskPower will notify SaskEnergy and you will be disconnected from your service.
- Upon successful completion of the final inspection, the inspector assigned to your project will clear your permit, at which point it effectively serves as a permit to operate the station.

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CNG STATION APPROVAL REFERENCE TABLE

How to Use this Reference Table

The information given in this Reference Table is intended to provide extra detail to supplement the checklist on the previous page. Each step on the previous page is further broken down into gas utility, municipal, provincial, and federal level tasks. The relevant Authority Having Jurisdiction (AHJ), guiding document, required documentation, nature of approval, and the documents one receives upon obtaining approval is then provided for each task. Additional approvals beyond those outlined below may be required, depending on the circumstances.

Item	Authority	Guiding Document	Documents to Submit	Nature of Approval	Approval Documents	
Step 1: Provide notice and review process.						
Natural Gas Utility						
101	Contact your local natural gas utility to confirm natural gas supply and available pressure.	Local natural gas utility	N/A	Verbal/e-mail request.	N/A	Confirmation of receipt.
Municipal Level						
111	Inform the AHJ of the proposed project and review the approval and permitting process.	Local municipal officials	N/A	Letter	N/A	Confirmation of receipt.
Provincial Level						
121	Inform the AHJ of the proposed project and review the approval and permitting process.	SaskPower	N/A	Letter	N/A	Confirmation of receipt.
Federal Level						
131	N/A					
Step 2: Submit supporting documentation and obtain approvals and permits for construction.						
Municipal Level						
211	Obtain a letter of compliance from the appropriate AHJ for submission to SaskPower.	Local municipal officials	Documents pertaining to the following topics: legal and land use.	As required by the SaskPower.	By-law review.	Letter signed by the Chief Building Official or designate.

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	Item	Authority	Guiding Document	Documents to Submit	Nature of Approval	Approval Documents
212	Compile legal information, which may include none to all of the following: surveys, easements, and rights of way.	Local municipal officials	Any pertinent legal documents.	As required by the municipality.	By-law review.	Building permits and others, as required by the municipality.
213	Compile land use information, which may include none to all of the following: official plan, zoning by-laws (i.e., re-zoning or minor variance applications), site plan control, building permits, and sign permits.	Local municipal officials	Any pertinent land use documents.	As required by the municipality.	By-law review.	Building permits and others, as required by the municipality.
214	Compile site services information, which may include none to all of the following: water, storm water, sanitary sewer, and electrical services.	Local municipal officials	Any pertinent site services documents.	As required by the municipality.	By-law review.	Building permits and others, as required by the municipality.
215	Compile environmental information, which may include none to all of the following: conservation authority, natural environment designation, site assessment (Phase I, Phase II), and agricultural MDS.	Local municipal officials	Any pertinent environmental documents.	As required by the municipality.	By-law review.	Building permits and others, as required by the municipality.
216	Compile any other necessary information, which may include none to all of the following: Ontario Heritage	Local municipal officials	Any pertinent documents.	As required by the municipality.	By-law review.	Building permits and others, as required by the municipality.

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	Item	Authority	Guiding Document	Documents to Submit	Nature of Approval	Approval Documents
	designation, local cultural designation, archaeological site designation, railway rights of way, First Nations consultation, and mining claims.					
Provincial Level						
221	Prepare site plan drawings that identify suppliers, equipment, and details of equipment interconnections.	SaskPower	Applicable codes include: CSA B108, CSA B51, and CSA B149.	P&IDs and detailed Bills of Materials for the overall site that have been stamped by a P. Eng. (including pressure and temperature ratings, and material specifications), site plan drawings indicating setbacks, a narrative describing station sizing, equipment selection, and operating conditions, and hazardous locations diagrams. This package must be submitted along with the required fee to take out a permit with SaskPower – refer to their fee schedule for this information.	Document review by SaskPower.	Letter of design approval.
222	Acquire detailed drawings for major	SaskPower	Applicable codes include: CSA B108,	P&IDs and detailed Bills of Materials for each major piece of	Part of item 221 above.	Part of item 221 above.

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Item		Authority	Guiding Document	Documents to Submit	Nature of Approval	Approval Documents
	pieces of equipment from manufacturers.		CSA B51, and CSA B149.	equipment (including pressure and temperature ratings, and material specifications for individual components). These must be submitted as part of the overall site approval, per the above.		
223	As per SaskPower's requirements, obtain electrical approval of the proposed design.	SaskPower	Applicable codes include: Canadian Electrical Code (CSA C22.1).	Single line schematics and a site inspection report.	Document review.	Letter of compliance.
Federal Level						
231	Dispenser must be certified if fuel retailing will be offered.	Measurement Canada	C.R.C., c.1605.	None at this time. However, a dispenser capable of meeting Measurement Canada requirements must be specified.	N/A	N/A
Step 3: Construct station and develop plan for inspections.						
Municipal Level						
311	Arrange for any interim and final building and site inspections that might be required.	Local municipal officials/utilities	As required by the municipality.	As required by the municipality.	Field inspection.	Interim and final inspection reports/ approvals.
Provincial Level						
321	Conduct interim inspections as necessary and obtain approval to energize equipment and to introduce gas to the system.	SaskPower	Approval letter obtained in Step 2.	Field test report(s).	Field inspection.	Verbal approval.

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	Item	Authority	Guiding Document	Documents to Submit	Nature of Approval	Approval Documents
323	Obtain electrical approval of the facility.	SaskPower	Applicable codes include: Canadian Electrical Code (CSA C22.1).	N/A	Field inspection.	Certification sticker/letter.
324	Conduct final inspection.	SaskPower	Applicable codes include: CSA B108, CSA B51, and CSA B149.	N/A	Field inspection.	Confirmation that permit has been cleared.
Federal Level						
331	Have dispenser certified if fuel retailing will be offered.	Measurement Canada	C.R.C., c.1605.	Verbal/e-mail request.	Field inspection.	Certification sticker applied to dispenser.
Step 4: Obtain and maintain operating permits and licences.						
Municipal Level						
411	Final approval if building permit was required.	Local municipal officials	Building permit.	As required by building permit.	Field inspection.	Occupancy permit.
Provincial Level						
421	Obtain a Licence to Operate the facility.	SaskPower	Applicable codes include: CSA B108, CSA B51, and CSA B149.	N/A	See item 324 above.	See item 324 above – SaskPower permit serves as permission to operate the station.
Federal Level						
431	N/A					

NOTES:

1. Depending on the type of business, additional licences may be required.
2. Additional approvals and assessments may also be required. For example, these might include a Noise Screening Assessment and/or a Pre-Start Health and Safety Review (PSR). It is recommended that you identify these additional requirements during your initial conversation with SaskPower and your local municipal officials.