

# CNG Compression, Storage, Dispensing

**Disclaimer:** This checklist is not intended to be a definitive or exhaustive listing of all statutes, safety rules, regulations or codes that may be applicable. It is intended as a general guideline for assisting licensees and stakeholders in complying with state statutes, the Commission's safety rules and adopted national and federal codes that are specific to a CNG COMPRESSION, STORAGE, DISPENSING installation. The officially published statute, rule or code shall prevail in the event of a conflict with those referenced in the checklist. The checklist may be used to verify compliance prior to placing a facility in service or for routine maintenance audits to ensure continued compliance with applicable safety requirements.

<input type="checkbox"/>	Compression, Storage, Dispensing, Outdoors	13.94(a)
<input type="checkbox"/>	Cylinders charged and stored, located outdoors, fenced, and protected	13.94(c)
<input type="checkbox"/>	Electrical Transmission lines—6 feet	13.94(d)
<b>FENCING</b>		
<input type="checkbox"/>	Chain link type, minimum 12½ AWG	13.93(1)(A)
<input type="checkbox"/>	6 feet in height, or 5 feet with 3 strands of barbed wire	13.93(1)(B)
<input type="checkbox"/>	Uprights, braces, posts, noncombustible, if within 10 feet of ignition source or combustible material.	13.93(1)(C)
<input type="checkbox"/>	At least one gate suitable for ingress and egress. Locked when unattended.	13.93(1)(D)
<input type="checkbox"/>	2 feet between fence compression equipment, cascade, containers, dispensing equipment	13.93(1)(E)
<input type="checkbox"/>	More than 25 feet from dispenser—designated as perimeter fencing—may need guardrails	13.93(1)(F)
<input type="checkbox"/>	Completely enclosed by fencing	13.93(1)(G)
<b>AUTOMATIC DISPENSER</b>		
<input type="checkbox"/>	Secured to concrete anchor	13.93(a)(3)
<input type="checkbox"/>	6" above normal grade	13.93(a)(3)
<input type="checkbox"/>	2" above grade of other dispensers	13.93(a)(3)
<input type="checkbox"/>	Protected against vehicular damage	13.93(a)(3)
<b>INSTALLATION OF CYLINDERS</b>		
<input type="checkbox"/>	Aboveground, stable, non-combustible. Horizontal cylinders—no more than 2 points of support longitudinally. Anchored for flooding	13.95(a)
<input type="checkbox"/>	Protected against corrosion Horizontally installed, no contact with each other	13.95(b)
<input type="checkbox"/>	All external steel surfaces in sunlight painted white	13.95(c)
<input type="checkbox"/>	Means to prevent accumulation of combustible material, i.e. grading, pads, diversion curbs	13.95(d)
<input type="checkbox"/>	Canopy	13.94(b)
<input type="checkbox"/>	Minimum distances for CNG installations	13.94(d) Table
<b>GUARDRAILS</b>		
<input type="checkbox"/>	Unauthorized withdrawal of CNG prevented	13.93(a)(2)(A)
<input type="checkbox"/>	Vertical supports—minimum of 3-inch schedule 40. Capped on top, minimum of 18" in concrete, 30" high, not more than 4 feet apart	13.93(a)(2)(B)
<input type="checkbox"/>	Top of horizontal rails-30" above ground, minimum 3 inch schedule 40, welded or bolted to vertical support	13.93(a)(2)(C)
<input type="checkbox"/>	No opening greater than 36"	13.93(a)(2)(D)
<input type="checkbox"/>	Minimum of 24" between rail and equipment	13.93(a)(2)(E)
<input type="checkbox"/>	Protected from vehicular traffic	13.93(a)(3)(F)

# CNG Compression, Storage, Dispensing *(continued)*

<input type="checkbox"/>	Control devices installed so internal or external ice will not cause malfunction	13.93(b)
<b>FIRE PROTECTION</b>		
<input type="checkbox"/>	20 lb B-C	13.105
<b>MAINTENANCE</b>		
<input type="checkbox"/>	Cylinders, appurtenances, piping, equipment, controls, hoses, devices	13.106(a)
<input type="checkbox"/>	Fueling hose, cargo vehicle	13.106(b)
<input type="checkbox"/>	Pressure relief valves	13.106(c)
<input type="checkbox"/>	Handling of cylinders / PRV's and relief channels	13.106(d)
<b>PIPING AND HOSES</b>		
<input type="checkbox"/>	Piping and hoses installed adequately	13.99(a)
<input type="checkbox"/>	Underground piping—minimum 18" with exceptions	13.99(b)
<input type="checkbox"/>	Sufficient clearance from any other underground structure	13.99(b)(1)
<input type="checkbox"/>	Underground piping protected from corrosion	13.99(b)(2)
<input type="checkbox"/>	Uncoated threaded, or socket welded joints not in contact with soil	13.99(b)(3)
<input type="checkbox"/>	Use of hose is limited to vehicle fueling	13.99(c)(1)
<input type="checkbox"/>	Metallic reinforced hose (not to exceed 36") protected from mechanical damage, available for inspection	13.99(c)(2)
<b>CYLINDER APPURTENANCES</b>		
<input type="checkbox"/>	PRV's relieve to safe area	13.96(a)
<input type="checkbox"/>	PRV in transfer system	13.96(b)
<input type="checkbox"/>	Pressure regulators not affected by elements	13.97
<input type="checkbox"/>	Pressure gauges installed for compression discharge, storage pressure, fuel supply cylinder fill pressure	13.98
<b>OPERATIONS</b>		
<input type="checkbox"/>	Cylinders charged to correct pressure	13.104(a)
<input type="checkbox"/>	Settled pressure at or below working pressure	13.104(b)
<input type="checkbox"/>	CNG dispensing systems automatically stop fuel flow when fill pressure reached	13.104(c)
<input type="checkbox"/>	Engine stopped on motor vehicle during transfer to or from vehicle	13.104(d)
<input type="checkbox"/>	Transport—chock blocks	13.104(e)
<input type="checkbox"/>	Bleed connections to depressurize fuel line, bleed lines lead to safe point of discharge	13.104(f)
<input type="checkbox"/>	Device or equipment designed for CNG	13.104(g)
<input type="checkbox"/>	Sources of ignition 10 feet away during transfer operation	13.104(h)
<input type="checkbox"/>	Dispensers operated by properly trained individuals	13.104(i)
<input type="checkbox"/>	Consumer at automatic dispenser—written instructions	13.104(i)(1)
<input type="checkbox"/>	Step by step instructions posted at automatic dispenser, readily visible	13.104(i)(2)
<input type="checkbox"/>	Each person who operates dispenser (excluding automatic) has written instructions from licensee	3.104(i)(3)

# CNG Compression, Storage, Dispensing *(continued)*

<b>DISPENSER</b>		
<input type="checkbox"/>	Dispenser complies with TX Department of Agriculture requirements	13.107
<input type="checkbox"/>	Fueling connection—reliable and secure	13.34(a)
<input type="checkbox"/>	Fueling connection prevents gas from escaping if connector not properly engaged or becomes separated	13.34(c)
<b>AUTOMATIC DISPENSER</b>		
<input type="checkbox"/>	Key, card or code system	13.93(d)(1)
<input type="checkbox"/>	All piping schedule 80, suitable for CNG	13.93(d)(3)
<input type="checkbox"/>	Cutoff valve—ensures valve is closed when dispenser is deactivated	13.93(d)(4)
<input type="checkbox"/>	Displacement of dispenser—displaces piping downstream side of device	13.93(d)(5)
<input type="checkbox"/>	Hose equipped with pullaway device	13.93(d)(6)
<input type="checkbox"/>	Electrical of dispenser and beneath complies with NEC Class 1, Group D, Division 2	13.93(d)(7)
<input type="checkbox"/>	Remote vapor discharge	13.93(8)(A)
<input type="checkbox"/>	Manual shut off	13.93(8)(B)
<input type="checkbox"/>	Uncoated threaded, or socket welded joints not in contact with soil	13.99(b)(3)
<input type="checkbox"/>	Use of hose is limited to vehicle fueling	13.99(c)(1)
<b>EMERGENCY SHUTDOWN EQUIPMENT</b>		
<input type="checkbox"/>	Manually operated cylinder valve on each cylinder	13.101(a)
<input type="checkbox"/>	Manually operated shutoff valve at manifold	13.101(b)
<input type="checkbox"/>	If excess flow check valve used-the closing flow is less than flow rating of the piping system	13.101(c)
<input type="checkbox"/>	Backflow check valve on fill line on storage cylinders	13.101(d)
<input type="checkbox"/>	Emergency shut down device(s) for compression and dispensing area. Located remotely, visible from dispensing area	13.101(e)
<input type="checkbox"/>	Emergency gas shutdown(s) distinctly marked	13.101(f)
<input type="checkbox"/>	Breakaway protection	13.101(g)
<b>ELECTRICAL</b>		
<input type="checkbox"/>	NEC for Class 1, Group D, Hazardous Locations, Division 2 area	13.102(a) T13.102(a)
<input type="checkbox"/>	Electrical equipment installed on internal combustion engines, for stationary installations	13.102(b)
<b>STRAY-IMPRESSED CURRENTS-BONDING</b>		
<input type="checkbox"/>	Stray or impressed currents used	13.103(a)
<input type="checkbox"/>	Static protection not needed if halves of metal coupling are in contact	13.103(c)