

Revised Regulations for Unvented Heaters in Livestock and Poultry Barns (Summary)

Livestock ventilation systems with propane and natural gas appliances have to meet the Natural Gas and Propane Installation Code CSA-B149.1.

The Technical Standards and Safety Authority (TSSA) - a private company is delegated by the province of Ontario to enforce this Code.

The most recent amendment to the Gaseous Fuels Code Adoption Document became effective July 1, 2017).

This regulation has been revised as of July 2017 and producers must ensure that their barns have the required verification posted. **Producers who have had their barns and ventilation systems verified by a professional engineer previous to this revision are in compliance** - this revised Code addresses two changes.

1. A site visit to verify the calculations is no longer required and is at the discretion of the engineer.
2. A two stage phase-in period is in effect.

In general, these requirements mandate that unvented heaters are interlocked with the ventilation system or if not interlocked, proper ventilation is confirmed by calculations prominently displayed in the entrance area to each building housing livestock or poultry.

These calculations must be verified by a professional engineer licenced by the Professional Engineers of Ontario

Please note: **A site visit to perform this work is at discretion of the individual PEO licence holder.**

The professional engineer must verify the following two calculations:

1) Minimum ventilation rate of the barn (mechanical or natural ventilation) when the heaters are operating is not less than 300 CFM / 100,000 BTUH (0.003 CFM/BTUH) of heaters input [clause 7.37.2(c)].

2) Maximum input of the heating appliances does not exceed 20 BTUH/FT³ of the space in which the appliance is located [clause 7.37.2(d)].

Once verified, evidence of the two calculations (stamped and signed by the professional engineer) must be prominently displayed in the entrance area of each barn.

For the entire Gaseous Fuels Code Adoption Document please find the supplemental information at the bottom of this document.

Questions and Answers:

Q When must farmers be in compliance?

(a) By July 1, 2019 - when total building area housing livestock or poultry on the premise is over 25,000 square feet;

(b) By July 1, 2021 - when total building area housing livestock or poultry on the premise is up to and including 25,000 square feet;

Q. How do I comply with the new regulations?

A. Contact a Professional Engineer to verify calculations for your facility.

Q. Is there a list of Professional Engineers to contact?

A. Below is a list of engineering firms that can provide the certification (this may not be a complete list).

| | | |
|---|---|---|
| Armco Solutions 20 Highland Rd. Fergus, ON N1M 2C4 Mark Armstrong (226) 979-8928 Cell: (226) 979-8928 Phone: (519) 625-8000 Toll: (800) 960-4002 | Beatty Petroleum Consulting Inc. Alex Beatty P.O. Box 894 182 George St, Arthur, ON N0G 1A0 (519) 848-5800 alexb@beattyconsult.com | Callidus Engineering 1385 North Routledge Park Unit 9 London, ON N6H 5N5 (519) 472-7640 Fax: 519 471 9239 erica@callidus.ca Ext 228 derek@callidus.ca Ext 230 www.callidus.ca |
| Stonecrest Engineering Inc. P.O. Box 279 Shakespeare, ON Canada, NOB 2P0 2079, Line 34, R.R.#1 Shakespeare, ON Phone: (519) 625-8000 Toll: (800) 960-4002 steve@stonecrestengineering.com | Harry Huffman, P. Eng. Agricultural Engineer 86 Southfield Cres. London, ON. N6K 2B7 Office Tel (519)474-4958 Mobile (519) 902-4958 harryhuffman@rogers.com | R.J. Burnside & Associates Limited Orangeville, Collingwood 15 Townline Orangeville, ON L9W 3R4 Phone: (519) 941-5331 jill.landry@rjburnside.com www.rjburnside.com |
| Stoctec Harold House, M.Sc., P.Eng. 36575 Dunlop Dr., RR4 Goderich, ON, N7A 3Y1 Phone: (519) 524-8087 Cell: (519) 440-6017 harold.house@ymail.com | Virtual Engineers - VE Collective Inc. 3760 14th Avenue Markham, ON L3R 3T7 Phone: (905) 707-0704 Fax: 1 (905) 475-1605 rawarner@virtual-engineers.com | |

Q. Can I just vent my heater?

A. Yes, however, not all heating appliances can be vented so please check with your ventilation designer to determine if your appliance can be vented.

Q. What is the cost of hiring a Professional Engineer to certify the unvented gas heater?

A. It depends on the size of facility (i.e. # of heaters, # of rooms etc), location of facility, and the fee schedule for the engineering firm. When contacting an engineer be sure to ask for their fee schedule.

You may be able to reduce costs by gathering the information that the engineer will require to perform their calculations. Please also note that: **A site visit to perform this work is at discretion of the individual PEO licence holder.**

Q. Who can I contact for more information?

For more information, please refer to the attached Fuels Safety Program Advisory, or contact the TSSA Fuels Safety Program Technical Services at 1-877-682-8772 or email fuels_technical_services@tssa.org.

You may use the fillable 'Ventilation Calculation Worksheet' on the following page to provide information to the verifier.

Technical Standards & Safety Authority Fuels Safety Program Advisory FS-214-14 R2
April 10, 2017

VENTILATION CALCULATIONS - CLAUSE 7.37.2

(FORM)

A) Barn address: _____

B) Barn ID: _____

C) Barn description: _____

D) Barn dimensions: _____ ft x _____ ft x _____ ft (high)

E) Barn volume: _____ ft³

F) Description of heaters: _____

G) Total heaters input in barn: _____ BTUH

H) Description of ventilation equipment:

I) Minimum ventilation rate: _____ CFM

J) Ratio of minimum ventilation rate to heaters input (I/G) [min. 0.003 CFM/BTUH]:

K) Ratio of heaters input to barn volume (G/E) [max. 20 BTUH/ft³]:

L) Ventilation system verified by PEO licence holder (first/last name, PEO licence number, company name):

M) Date of verification: _____

Included will be a copy of the complete Advisory.