



REPUBLIC OF TRINIDAD AND TOBAGO

The Ministry of Energy and Energy Affairs

Guidance Document for Completing the Application Form for Storage Approval of Liquefied Petroleum Gas (LPG) at 'End-User' Facilities

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1. Scope

The document provides guidance for completing the application form for storage approval of Liquefied Petroleum Gas (LPG) at 'End-User' facilities (*Doc No.: MEEA-HSEM-A002*). It does not outline the requirements for design and construction of the storage system. The references listed herein may be consulted for more information on the same.

2. Applicability

All applications for the approval of LPG storage systems made after July 31, 2012 must be done so by use of the application form (*Doc No.: MEEA-HSEM-A002*).

This application form should only be used if the storage capacity of LPG exceeds a cumulative capacity of 100 Imperial Gallons on the premises where it is to be stored. . If tanks/cylinders are not part of the same storage system then a separate application form must be completed and submitted.

The application form **should not be used for:**

- terminals and other energy based facilities for which the LPG systems are considered part of the entire facility and for which the facility is approved by the Ministry of Energy and Energy Affairs.
- marine storage systems, e.g. barges, boats, vessels, etc..
- other refined petroleum products (e.g. diesel, kerosene, jet Ai, gasoline) storage systems. See Document No. MEEA-HSEM-A001
- the road transportation of LPG.
- LPG storages at Service Stations.
- the re-approval of LPG storage systems.
- expansion of LPG storage systems that are currently approved by the MEEA.

3. General Rules on Completing the Application Form

The following are general rules for completing the application form:

- 1) The content of the form must not be altered in any way.
- 2) Information must ONLY be entered in the check boxes and the gray shaded areas.
- 3) Avoid the use of correction fluid on the completed application form.
- 4) Supplemental information that can aid in the processing of your application may be attached.

- 5) The application form must be completed as thoroughly as possible. Incomplete applications will not be processed. Following completion, the signed form (and attachments) must be forwarded in hard copy by the owner of the facility, the installation contractor or anyone appointed on behalf of the former to the following address:

Chief Mechanical Engineer
 Ministry of Energy and Energy Affairs
 Maska Building
 South Trunk Road
 LA ROMAINE

- 6) Installations that are not approved within one (1) year of the application date will require resubmission of an application form.
- 7) There are no fees associated with processing of the application.
- 8) Forwarding an application to the Ministry does not guarantee that approval will be granted for the storage system.

4. Step by Step Procedure for Completion of the Application Form

The following tabulated information gives a step by step guide to completing the application. The letter-number references (e.g. A1, B2, etc.) outlined herein is consistent with the application form.

Ref.	Guidance notes									
Cover Page										
	<p>Insert the applicant's file reference number, if any.</p> <p>Insert the applicant's title, name and position. <i>Applicant refers to the person filling out the application form. The applicant must ensure that the information is true and correct and that he/she is authorised by the installation owner/s to act on his/their behalf. Incorrect information will render the application being deemed incomplete.</i></p> <p>Insert the date of the application form.</p>									
Section A – Installation Owner Information										
A1/A2/ A3	Specify the (i) name, (ii) mailing address and, (iii) contact information of the company which owns or to which the storage system is leased.									
Section B – Installer Information										
B1/B2/ B3	Specify the (i) name, (ii) mailing and, (iii) contact information of the company that will be installing the storage system. <i>All personnel involved in the installation of LPG systems must be suitably trained and qualified. The MEEA may request copies of the training and qualification records, if so desired.</i>									
Section C – Storage Information										
C1	<p>Specify the total volume of LPG to be stored on the premises. <i>Approval is only required if the cumulative capacity of the LPG exceeds 100 Imperial Gallons. The information should be inserted in the table by specifying the number of each type of tank/cylinder and choosing the measurement unit. For example if the system comprises two 500 Imperial Gallons tanks and four 100 lbs cylinders insert the information as follows:</i></p> <table border="1" data-bbox="293 1373 1406 1444"> <thead> <tr> <th>Number of tanks/cylinders, e.g. 2</th> <th>Volume of tank/cylinder e.g. 100</th> <th>Measurement Unit e.g. Imperial Gallons</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>500</td> <td>Imperial Gallons</td> </tr> <tr> <td>4</td> <td>100</td> <td>lbs</td> </tr> </tbody> </table>	Number of tanks/cylinders, e.g. 2	Volume of tank/cylinder e.g. 100	Measurement Unit e.g. Imperial Gallons	2	500	Imperial Gallons	4	100	lbs
Number of tanks/cylinders, e.g. 2	Volume of tank/cylinder e.g. 100	Measurement Unit e.g. Imperial Gallons								
2	500	Imperial Gallons								
4	100	lbs								
C2	Specify the physical address of the installation. <i>If the address is the same as in section A, tick the (same as in A2) box and do not re-enter the information</i>									
C3	Give a brief description of the purpose or use of the storage system at the intended location. <i>Intricate details of the process utilizing the product to be stored are not necessary.</i>									
C4	<p>Specify the operational status of the storage system <i>This includes one of the following for the tank:</i></p> <ul style="list-style-type: none"> • Currently in use. • Installed but not in use. • Partly in use • Temporarily out of use. • To be installed. <p><i>Storage systems that are in use will be given a sixty (60) days' time period following a Ministry's inspection to have them approved. Systems that do not meet the minimal requirements of the Ministry may require relocation or retrofit works before approval can be granted.</i></p>									
C5	Specify the date by which the installation is expected to be completed, or if already installed specify the date the storage system was installed. <i>An exact date is not necessary.</i>									

Ref.	Guidance notes
C6	Specify the type of buildings on the same premises. <i>If the type of building is not listed, choose 'Other' and specify the same in the box provided. More than one box may be ticked. Examples of Public Assemblage are schools, churches, shopping malls, etc.</i>
C7	Choose the type of facility where the storage system is to be installed. <i>If your facility is not listed, enter it in the blank box provided. Examples of facilities are: Church, School, Hotel, Airport, Auto Repair Garage, etc.</i>
C8	Specify if this application to the Ministry is the first for the storage system. <i>Note that this will not affect approval of the storage system. If no, provide the date of the last application, if possible.</i>
C9	Choose the type of terrain in the vicinity of each tank. <i>This may be:</i> <ul style="list-style-type: none"> • Flat • Hilly • Sloping • Undulating
C10	Specify the location of each tank. <i>More than one box may be ticked. If the intended location is not listed, specify the other type in the box provided.</i>
C11	Specify if the tanks/ cylinders are new or used. <i>Used tanks that are greater than ten (10) years old must be pressure tested before being allowed to return to useful service.</i>
C12	Specify if the installation is permanent or temporary. <i>A storage system is considered temporary if approval is sought for a maximum period of one (1) year. A temporary storage system may not necessarily be exempted from all the necessary requirements for a permanent system.</i>
C13	Specify if any of the tanks/cylinders will be readily available to the public. <i>Tanks/cylinders that are readily accessible will require protection against public tampering and manipulation of valves.</i>
C14	Specify if the area where the tanks/cylinders are located is prone to flooding.
C15	Specify if the tanks/cylinders are in the same location, where more than one tank/cylinder is to be installed. <i>Tanks/cylinders are considered to be in the same location, if they are adjacent, installed in the same bund or interconnected.</i>
C16	Specify the number of LPG end users connected to the storage system. <i>This is applicable to LPG systems that are shared between tenants on the same premises.</i>
C17	Specify the type of auxiliary equipment to be installed with the tanks/cylinders. <i>All equipment must be designed for the intended service. Manufacturer specifications sheets for each piece of equipment installed in the system may be requested following review of the application. If the intended auxiliary equipment is not listed, specify the other type in the box provided.</i>
C18	Specify if an enclosure is provided around the tanks/cylinders. If yes, specify if the tanks/cylinders are open to the surroundings for less than or greater than 50%. <i>If an enclosure consists of two solid concrete walls, the opening to the surrounding is considered to be 50%.</i> Also, give details of the enclosure. That is specify the material of construction of the enclosure, e.g. solid concrete, plastered clay bricks, chain link fence, steel bars, etc.
C19	Specify if a leak detection sensor is installed (or to be installed) near the tanks/ cylinders.
C20	Specify the material of construction of the foundation on which the tanks/cylinders are mounted. <i>More than one box may be ticked. Any material that is not listed may be specified in the 'other' section.</i>
C21	Specify if any of the listed products are on the same premises and are not part of the application.
C22	Specify if the area City/Regional/ Borough Corporation has been advised of the installation.
C23	Specify if the following are located near the area earmarked for the installation: <ul style="list-style-type: none"> a) Potential ignition sources within 10 feet. <i>These are sources that can potentially ignite a flammable LPG gas-air mixture. Examples of potential ignition sources are electrical switches, damaged electrical wiring, hot surfaces, grinding/welding equipment, engines, generators, etc.</i> b) important building on the same property within 25 feet. <i>Examples of important buildings are churches, stores, malls, homes, apartments, hotels, and prisons. Storage occupancies, garages and warehouses may not be considered "important" if the building is frequented briefly.</i> c) line of adjoining property that can be built upon within 25 feet. <i>"Line of adjoining property which may be built upon" refers to the property boundaries of the plot adjacent to the one upon which the tank is located. If the adjacent plot is opposite a roadway, then the roadway is considered as setback distance as well.</i> d) Public roadway within 10 feet.

Ref.	Guidance notes
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- e) electrical power lines (greater than 600 Volts) within 6 feet.
The distance is measured from the external shell of the storage tank to the vertical plane of the electrical power line.
- f) building openings within 10 feet.
Examples of buildings openings are windows, ventilation bricks and doors.
- g) storage tanks (greater than 660 United States Gallons capacity) containing liquids (e.g. diesel, kerosene, Jet A1, etc.) with a flash point less than 200°F within 20 feet.
- h) compressed gasses storages within 25 feet.
Examples of compressed gas storages are air, oxygen, hydrogen, acetylene, CNG, etc.
- i) direct vent and mechanical air intake devices within 10 feet.
Direct vent appliances draw air in for combustion, e.g. gas fired heaters and dryers. Examples of meachanical air intake devices are fans and air conditioning units.
- j) drains at a lower elevation within 10 feet.
- k) building exit stairways within 15 feet.

Section D – Piping Information

- D1 Specify if the hydrocarbon piping is:
- *Underground or aboveground.*
 - *Indoor or outdoor*
- D2 Specify the schedule and material of construction of the following:
- LPG underground and aboveground piping sections.
 - LPG vent piping sections indoor and outdoor
 - Firewater piping:
- The information should be specified as, for example, Schedule 40 Black Steel.*
- D3 Specify the phase of the LPG fluid in the piping sections, i.e. whether liquid, gas or a combination of both.
- D4 Specify the type of piping joints, i.e. the method used to join two adjacent sections of piping.
Where the type of joint is not listed, specify the same.
- D5 Specify the minimum depth of LPG underground piping, if applicable.
- D6 Specify the type of corrosion protection for LPG underground piping, if applicable.
- D7 Specify if the underground piping is double-walled.
If yes, specify the material of construction of the outer wall.

Section E – Appliances, Equipment and Accessories Details

- E1 Appliance, Equipment or Accessories to be connected to the system.
This may be specified as follows:

Appliance/ Equipment/ Accessory	Number e.g. 3
Gas Fired Heater	1
6 Burner Stove	3
Deep Fryer	1
Refrigerator	1

Section F – Attachments

Specify if the following are attached to the application.
The submission of the documents marked with asterisks is not necessary at the application stage, but will be required before final approval can be granted for the storage system.

- F1 Plot Plan of the storage system and surrounding infrastructure
This must show all the items specified in Section E10. Applications that are not accompanied with a Plot Plan drawing may be rendered incomplete until the submission of the same.
- F2 Isometric drawing of the tanks and piping.
The drawing must show the LPG tanks/cylinders, piping diameter, valves, piping schedule and material of .construction, regulators, vent piping, firewater piping and any other items of interest. Applications that are not accompanied with an isometric drawing may be rendered incomplete until the submission of the same.

Ref.	Guidance notes
F3	*Fire equipment / evacuation route drawing. <i>This is a plot plan of the premises of which the storage system is located and shows the fire equipment, evacuation routes, muster point and other items of interest in relation to the LPG tanks/cylinders.</i>
F4	*LPG Piping Pressure Test Certificate.
F5	*Standard Operating Procedures
F6	*Emergency Response Plan
F7	*Fire Service Division report/ approval
F8	Manufacturer's Specification Sheets for LPG tanks/ cylinders.
F9	Manufacturer's Specification Sheets for Auxiliary Equipment
F10	*City/Borough/Regional Corporation letter of approval.
F11	Proof of Deed of Ownership of the land earmarked for the construction/ installation of the storage system or Letter of Permission from the Owner of the land to construct/install the storage system.
F12	Certificate of Environmental Clearance. <i>Storages that have a cumulative capacity in excess of 500 barrels (17,500 IG) will require a certificate of environmental clearance (CEC) from the Environmental Management Agency (EMA).</i>
	Any other attachments may be specified in the blank boxes provided.
Section G – Other Information	
Insert any information that may be useful in the processing of the application.	

5. Frequently Asked Questions (FAQs)

The following is a list of FAQs and the corresponding response of the MEEA.

- **Is there any fee associated with the processing of my application?**
No, there are no fees associated with the processing of the application form.
- **What will render my storage system not being approved?**
Any of the following may render the storage system not being approved:
 - a) *The system not meeting the minimum requirements of the Petroleum Act, Chapter 62:01, NFPA 30 – Flammable and Combustible Liquids Code, NFPA 58 – Liquefied Petroleum Gas Code, NFPA 54 – National Fuel Gas Code, and other applicable internationally recognized standards.*
 - b) *The system not being approved by the other regulatory agencies having legal jurisdiction.*
 - c) *Failure of the Operator/ Owner of the facility to implement the requirements of the MEEA.*
 - d) *The Operator's inability to reasonably justify the purpose/use of the storage system.*
- **How long will the approval process take?**
Following submission of an application, the MEEA will conduct a site inspection within two (2) weeks of receipt of the same. If the intended site and the design of the tank are acceptable, clearance will be given to commence construction within one (1) week of the site assessment. Following completion of construction, the MEEA must be notified to conduct a close-out inspection. If all the necessary requirements are met, a certificate of approval will be granted within one (1) week of the inspection.
- **Can I apply for approval of my storage system if it is already in operation?**
Yes. Storage systems that were never approved will be allowed ninety (90) days to correct all deficiencies identified by the Ministry of Energy and Energy Affairs. Failure to comply will result in having to remove the storage system from useful service.
- **How long is approval valid for?**
Approval is valid for a maximum period of five (5) after which re-approval for the storage system must be sought. The approval period for temporary storage systems may vary, but in no case exceed one (1) year.

6. List of Acronyms:

- API – American Petroleum Institute
- AS – Australian Standard
- ASME – American Society of Mechanical Engineers

- CEC – Certificate of Environmental Clearance
- CNG – Compressed Natural Gas
- DOT – Department of Transportation
- EMA – Environmental Management Agency
- FAQ – Frequently Asked Questions
- ft. – feet
- gal – gallon
- in. – inches
- kPa – kilo Pascal (pressure rating)
- LPG – Liquefied Petroleum Gas
- MEEA – Ministry of Energy and Energy Affairs
- m. – metre
- mm – millimeter
- NA – Not Applicable
- NFPA – National Fire Protection Association
- OSHA – Occupational Safety and Health Agency
- psi – pound per square inch (pressure rating)
- scf – standard cubic feet (volume)
- TCPD – Town and Country Planning Division
- UL – Underwriters Laboratory

7. References:

- ASME B31.3, *Process Piping*, 2004 edition.
- ASME *Boiler and Pressure Vessel Code*, 2004 edition
- NFPA 30, *Flammable and Combustible Liquids Code*, 2008 edition.
- NFPA 54, *National Fuel Gas Code*, 2009 edition.
- NFPA 58, *Liquefied Petroleum Code*, 2011 edition.
- NFPA 70, *National Electrical Code*, 2008 edition.
- *Ministry of Energy and Energy Affairs Liquefied Petroleum Gas Installation Inspection Checklist (Doc No.: MEEA-HSEM-C003), Rev. 0 - June 2011.*

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