



*Smart Energy, Sustainable Future*

## **REGULATORY FRAMEWORK FOR REPORTING OF NEAR MISSES**

Closing date for submission of representations:

5<sup>th</sup> May 2017, 5 p.m.

4 <sup>TH</sup> APR 2017	ENERGY MARKET AUTHORITY
	991G Alexandra Road
	#01-29 Singapore 119975
	<a href="http://www.ema.gov.sg">www.ema.gov.sg</a>

Please direct any enquiries by e-mail to: [EMA\\_ES@ema.gov.sg](mailto:EMA_ES@ema.gov.sg)

**Disclaimer:**

The information in this Consultation Paper is not to be treated by any person as any kind of advice. The Energy Market Authority shall not be liable for any damage or loss suffered as a result of the use of or reliance on the information given in this Consultation Paper.

## **1 Background**

- 1.1. A near miss is an incident that did not result in, but could have resulted in failure or mal-operation of equipment, plants, facilities or electrical cables/gas pipelines, power failure or voltage dip, a decrease in available generation capacity, disruption in gas supply, or that could have given rise to vulnerability in the electricity system or gas supply system.
- 1.2. Reporting of near misses is essential in preventing future incidents from taking place, by sharing learning points among licensees to enhance condition monitoring, operation and maintenance practices, electrical cable/gas pipeline damage prevention measures, and for gathering key information for data analytics to identify root causes and weaknesses in the system.
- 1.3. In view of the above, EMA intends to develop a framework for relevant electricity and gas licensees to report near misses to EMA. This paper seeks industry's views on the proposed framework for reporting of near misses.

## **2 Proposed framework for reporting of near misses**

- 2.1. Under the proposed framework, electricity licensees (namely the Transmission Licensee and Generation Licensees) and gas licensees (namely the Onshore Receiving Facility Operator Licensee, the LNG Terminal Operator Licensee, the Town Gas Producer Licensee and the Gas Transporter Licensee) (collectively "licensees") will be required to report incidents of near misses to EMA. This will be effected through changes to the Transmission Code and the Gas Supply Code respectively (collectively the "Codes"). Licensees will also be required to collate reports of near misses encountered by their contractors while working on the licensees' cable/pipeline/equipment/plant/facility, and submit these reports to the EMA. The proposed modifications to the Codes are set out in [Appendix 1](#).
- 2.2. The format of the report to EMA is set out in [Appendix 2](#). The reporting template essentially requires the licensees to provide a brief description of the near miss incident, the causes, as well as the mitigating measures to prevent recurrence of the incident.
- 2.3. In the spirit of enhancing the power and gas systems' reliability, we will also require licensees to share the learning points of the near miss incident with other licensees through a sharing platform such as the Electricity and Gas Forum.
- 2.4. This framework is not intended to determine/apportion blame or liability, but is for the industry to share and learn from the incidents and make necessary improvements so as to enhance the reliability of their equipment and plants/facilities.

### **3 Invitation to submit representations**

- 3.1. EMA invites written representations on the proposed framework for reporting of near misses including the proposed modifications to the Transmission Code and Gas Supply Code, pursuant to section 1.6 of the Transmission Code and section 19.5 of the Gas Supply Code respectively.
- 3.2. Please send your written representations by e-mail to:

**[EMA\\_ES@ema.gov.sg](mailto:EMA_ES@ema.gov.sg)**

Alternatively, you may send your written representations by post/fax to the following address:

*Industry Regulation Division*

*Energy Market Authority*

*991G Alexandra Road, #01-29*

*Singapore 119975.*

*Fax: (65) 6 835 8020*

Please use the form set out in Appendix 3 for your representations.

- 3.3. Anonymous representations will not be considered.
- 3.4. All representations must be in writing and must reach EMA by 5 pm on 5<sup>th</sup> May 2017.
- 3.5. EMA will acknowledge receipt of all submitted representations electronically. Please contact Mr Alvin Toh at 6376 7544 or Mr Samuel Har at 6376 7556 if you have not received an acknowledgement of your submitted representation within two business days.
- 3.6. EMA reserves the right to make public all or any part of any representation and/or to disclose the identity of the party who made the representation. Where a respondent considers any part of his representation to be confidential, he shall clearly mark and place such part of his representation as an annex.
- 3.7. This Consultation Paper shall constitute notice of the proposed modifications to the Transmission Code and the Gas Supply Code set out in Appendix 1, for the purpose of Section 1.6 of the Transmission Code and Section 19.5 of the Gas Supply Code.

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**Table 1: Proposed Modifications to the Transmission Code**

Modification Ref. No.	Clause	Proposed Modification	Reasons
TC/2017/1	Modification to clause 1.3.1	<p>To modify clause 1.3.1 by inserting, immediately after the definition of “master-metered installation” and immediately before the definition of “network”, the following definition:</p> <p>““Near miss” means an incident that did not result in but could have resulted in failure or mal-operation of equipment, plants, facilities, or electrical cables, power failure or voltage dip, decrease in available generation capacity, or that could have given rise to vulnerability in the electricity system.”</p>	Inclusion of definition of “near miss”.

Modification Ref. No.	Clause	Proposed Modification	Reasons
TC/2017/2	New clause 6.1.4	<p>To insert, immediately after clause 6.1.3, the following new clause 6.1.4:</p> <p>“The Transmission Licensee and Generation Licensees shall:</p> <ul style="list-style-type: none"> <li>(a) report any <i>near miss</i> to the Authority; and</li> <li>(b) collate reports of <i>near misses</i> encountered by their contractors while working on the licensees’ cable/equipment/plant/facility, and submit these reports to the Authority.</li> </ul> <p>The Authority may, where it considers necessary, require a licensee to share the learning points of the <i>near miss</i> with other licensees.</p>	<p>To include provision for reporting of near misses by licensees, for the purposes of preventing future incidents from taking place, for sharing of learning points among licensees to enhance condition monitoring and maintenance practices, and for gathering key information for data analytics to identify root causes and weaknesses in the system that resulted in the circumstances that led to the near misses.</p> <p>Sharing of learning points of near misses among licensees will help in enhancing the reliability of the power system.</p>

**Table 2: Proposed Modifications to the Gas Supply Code**

Modification Ref. No.	Clause	Modified Text	Reasons
GSC/2017/1	New clause 19.5	<p>To insert, immediately after clause 19.4, the following new clause 19.5:</p> <p>“The Licensee (namely the Onshore Receiving Facility Operator Licensee, the LNG Terminal Operator Licensee, the Town Gas Producer Licensee and the Gas Transporter Licensee) shall:</p> <ul style="list-style-type: none"> <li>(a) report any near miss to the Authority; and</li> <li>(b) collate reports of near misses encountered by their contractors while working on the licensees’ pipeline/equipment/plant/facility, and submit these reports to the Authority.</li> </ul> <p>The Authority may, where it considers necessary, require the Licensee to share the learning points of the near miss with other key stakeholders in the gas industry.</p> <p>For the purposes of this clause, “near miss” means an incident that did not result in but could have resulted in failure or mal-operation of equipment, plants, facilities or gas pipelines, disruption in gas supply, or that could have given rise to vulnerability in the gas supply system.</p>	<p>To include provision for the reporting of near misses for the purposes of preventing future incidents from taking place, for sharing of learning points among licensees to enhance condition monitoring and maintenance practices, and for gathering key information for data analytics to identify root causes and weaknesses in the system that resulted in the circumstances that led to the near misses.</p> <p>Sharing of learning points of near miss among licensees will help in enhancing the reliability of the gas supply system.</p>

**REPORT OF A NEAR MISS**

A near miss is an incident that did not result in but could have resulted in failure or mal-operation of equipment, plants, facilities or electrical cables/gas pipelines, power failure or voltage dip, decrease in available generation capacity, disruption in gas supply, or that could have given rise to vulnerability in the electricity system or gas supply system.

This report is not intended to determine/apportion blame or liability, but to assist in improving the power and gas systems' reliability.

<b>Section I – Particulars of Company</b>	
Name of company	
Type of company	Generation Licensee / Transmission Licensee / Onshore Receiving Facility Operator Licensee / LNG Terminal Operator Licensee / Town Gas Producer Licensee / Gas Transporter Licensee

<b>Section II – Details of Near Miss</b>	
Date / Time of Incident:	Location of Incident:
Description of the near miss:	

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**Section III – Corrective measures**

Description of corrective measure(s) and timeline to implement the measure(s)

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Submitted by: \_\_\_\_\_

Designation: \_\_\_\_\_

Date: \_\_\_\_\_

## Appendix 3

### Representations on the Proposed Modifications to the Transmission Code and Gas Supply Code

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Company: \_\_\_\_\_

Email: \_\_\_\_\_

Role: Transmission Licensee / Generation Licensee / Onshore Receiving Facility Operator Licensee /  
LNG Terminal Operator Licensee / Town Gas Producer Licensee / Gas Transporter Licensee

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Submission Date: \_\_\_\_\_ (dd/mm/yy)

<b>Modification Ref. No.</b>	<b>Section*</b>	<b>Comments</b>

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\* Reference to the section of the Transmission Code/Gas Supply Code where change has been made in the version dated on May 2016/Jan 2017 as published on the EMA website.