

# RiskCon Engineering

State Environmental Planning Policy No. 33  
228-230 Blands Land, Wyalong

## State Environmental Planning Policy No. 33

228-230 Blands Land, Wyalong

Lightsource Development Services Australia

Prepared by

**RiskCon Engineering Pty Ltd**  
Unit 19/5 Pyrmont Bridge Road  
Camperdown, NSW 2050  
[www.riskcon-eng.com](http://www.riskcon-eng.com)  
ABN 74 626 753 820

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## Quality Management

Rev	Date	Remarks	Prepared By	Reviewed By
A	23 October 2018	Issued draft for comment	Renton Parker	Steve Sylvester
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## Executive Summary

### Introduction

Lightsource Development Services Australia (Lightsource) has proposed to develop a solar farm to be located at 228-230 Blands Land, Wyalong, NSW. As the development is classified as a State Significant Development (SSD) the Department of Planning and Environment (DPE) has provided Secretary's Environmental Assessment Requirements (SEARs) which requires a preliminary risk screening of the site and operations in accordance with State Environmental Planning Policy No. 33 (SEPP 33, Ref. [1]).

Urbis on behalf of Lightsource has engaged RiskCon Engineering (RiskCon) to prepare the SEPP 33 assessment for the solar farm to be located at Wyalong.

### Conclusions

A review of the quantities of DGs stored at the proposed solar farm and the associated vehicle movements was conducted and compared to the threshold quantities outlined in Applying SEPP 33. The results of this analysis indicates the threshold quantities for the DGs to be stored and transported are not exceeded; hence, SEPP 33 does not apply to the project.

As the facility is not classified as potentially hazardous, it is not necessary to prepare a Preliminary Hazard Analysis for the facility as SEPP 33 does not apply.

### Recommendations

No recommendations have been made for the site

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## 1.0 Introduction

### 1.1 Background

Lightsource Development Services Australia (Lightsource) has proposed to develop a solar farm to be located at 228-230 Blands Land, Wyalong, NSW. As the development is classified as a State Significant Development (SSD) the Department of Planning and Environment (DPE) has provided Secretary's Environmental Assessment Requirements (SEARs) which requires a preliminary risk screening of the site and operations in accordance with State Environmental Planning Policy No. 33 (SEPP 33, Ref. [1]).

Urbis on behalf of Lightsource has engaged RiskCon Engineering (RiskCon) to prepare the SEPP 33 assessment for the solar farm to be located at Wyalong.

### 1.2 Scope of Work

The scope of work is to prepare the SEPP 33 assessment for the Lightsource solar farm located at 228-230 Blands Land, Wyalong. Should any additional studies be required (i.e. PHA) these are not included within the scope of works. No other sites are included within the scope of works.

## 2.0 Methodology

### 2.1 General Methodology

The methodology used in this assessment is as follows:

- Review the types and proposed quantities of DGs to be stored at the site.
- Compare the quantities of DGs the threshold quantities listed in “Applying SEPP 33 – Hazardous and Offensive Development” (Ref. [1]) to identify whether the storage location or quantity triggers SEPP 33.
- Review the likely vehicular movements involving DGs and compare against the applicable thresholds detailed in Applying SEPP 33 (Ref. [1]).
- Report on the findings of the SEPP 33 assessment.

### 2.2 Data taken from “Applying SEPP 33”

**Figure 2-1**, extracted from “Applying SEPP 33” provides details on the application of Figures or Tables from the same document to determine the applied screening Threshold.

Class	Method to Use/Minimum Quantity
1.1	Use graph at Figure 5 if greater than 100 kg
1.2-1.3	Table 3
2.1 — pressurised (excluding LPG)	Figure 6 graph if greater than 100 kg
2.1 — liquefied (pressure) (excluding LPG)	Figure 7 graph if greater than 500 kg
LPG (above ground)	table 3
LPG (underground)	table 3
2.3	table 3
3PGI	Figure 8 graph if greater than 2 tonne
3PGII	Figure 9 graph if greater than 5 tonne
3PGIII	Figure 9 graph if greater than 5 tonne
4	table 3
5	table 3
6	table 3
7	table 3
8	table 3

**Figure 2-1: Screening Method to be Used**

Table 3 from “Applying SEPP 33” has been extracted and is shown in **Figure 2-2**.

Class	Screening Threshold	Description
1.2	5 tonne	or are located within 100 m of a residential area
1.3	10 tonne	or are located within 100 m of a residential area
2.1	(LPG only — not including automotive retail outlets')	
	10 tonne or 16 m <sup>3</sup>	if stored above ground
	40 tonne or 64 m <sup>3</sup>	if stored underground or mounded
2.3	5 tonne	anhydrous ammonia, kept in the same manner as for liquefied flammable gases and not kept for sale
	1 tonne	chlorine and sulfur dioxide stored as liquefied gas in containers <100 kg
	2.5 tonne	chlorine and sulphur dioxide stored as liquefied gas in containers >100 kg
	100 kg	liquefied gas kept in or on premises
	100 kg	other poisonous gases
4.1	5 tonne	
4.2	1 tonne	
4.3	1 tonne	
5.1	25 tonne	ammonium nitrate — high density fertiliser grade, kept on land zoned rural where rural industry is carried out, if the depot is at least 50 metres from the site boundary
	5 tonne	ammonium nitrate — elsewhere
	2.5 tonne	dry pool chlorine — if at a dedicated pool supply shop, in containers <30 kg
	1 tonne	dry pool chlorine — if at a dedicated pool supply shop, in containers >30 kg
	5 tonne	any other class 5.1
5.2	10 tonne	
6.1	0.5 tonne	packing group I
	2.5 tonne	packing groups II and III
6.2	0.5 tonne	includes clinical waste
7	all	should demonstrate compliance with Australian codes
8	5 tonne	packing group I
	25 tonne	packing group II
	50 tonne	packing group III

**Note:** The classes used are those referred to in the Australian Dangerous Goods Code and are explained in Appendix 7.

**Figure 2-2: General Screening Threshold Quantities**

Transportation screen thresholds have been provided in **Figure 2-3**.



Class	Vehicle Movements		Minimum quantity*	
	Cumulative	Peak	per load (tonne)	
	Annual	or Weekly	Bulk	Packages
1	see note	see note	see note	
2.1	>500	>30	2	5
2.3	>100	>6	1	2
3PGI	>500	>30	1	1
3PGII	>750	>45	3	10
3PGIII	>1000	>60	10	no limit
4.1	>200	>12	1	2
4.2	>100	>3	2	5
4.3	>200	>12	5	10
5	>500	>30	2	5
6.1	all	all	1	3
6.2	see note	see note	see note	
7	see note	see note	see note	
8	>500	>30	2	5
9	>1000	>60	no limit	

**Figure 2-3: Transportation Screening Thresholds**

## 3.0 SEPP 33 Review

### 3.1 Proposed Storage Details

Provided in **Table 3-1** is a summary of the DGs and materials proposed to be stored at the facility as part of the site operations.

**Table 3-1: DG Classes or Materials Stored and Maximum Quantities**

Class	Description	PG	Quantity (kg)
2.2	Sulphur Hexafluoride (SF6)	n/a	8 kgs/switch gear = <100 kg
9	Lithium Batteries (lithium equivalent)	III	10,602*
C1	Transformer oils	n/a	1,500 L/transformer = <10,000 L

\*1 cell: 18.56g lithium equivalent content  
 1 module = 28 cells  
 1 rack = 17 modules  
 1 MWh = 24 racks  
 X 50 MW = 10,602 kg lithium equivalent content

#### 3.1.1 Classification of Stored Products

The Australian Dangerous Goods Code (ADG, Ref. [2]) provides a list of materials which are classified as DGs under the requirements of the code. The goods to be stored are classified as DGs by the ADG. Therefore, the materials classified as DGs are subject to the assessment requirements of SEPP 33. Combustible liquids not subject to SEPP 33; hence, the C1 and C2 products have been eliminated from further assessment.

### 3.2 Application of State Environmental Planning Policy No.33 – Hazardous and Offensive Developments

State Environmental Planning Policy No. 33 – Hazardous and Offensive Developments (SEPP 33) has been developed under the Planning and Assessment Act 1979 to control potentially hazardous and offensive developments and to ensure appropriate safety features are installed at a facility to ensure the risks to surrounding land uses is minimised.

The policy includes a guideline that assists government and industry alike in determining whether SEPP 33 applies to a specific development. The guideline, “Applying SEPP 33 - Hazardous and Offensive Developments” (Ref. [1]) provides a list of threshold levels, for the storage of DGs, above which the regulator considers the DG storage to be potentially hazardous. In the event the threshold levels are exceeded, SEPP 33 applies and a Preliminary Hazard Analysis (PHA) is required, followed by a series of hazard analysis studies stipulated by the Department of Planning and Environment in the conditions of consent.

#### 3.2.1 Storage

Threshold limits for the application of SEPP 33 are presented in **Table 3-2** along with maximum DG quantities that will be stored. The results summarised in the table indicates the SEPP 33 criteria is not exceeded; hence, no further assessment would be required.

**Table 3-2: Quantities Stored and SEPP 33 Threshold**

Class	Description	PG	Quantity (kg)	SEPP 33 Threshold (kg)	Does SEPP 33 Apply?
2.2	SF6	n/a	100	n/a*	No
9	Lithium Batteries	III	10,60	n/a*	No
C1	Transformer Oil	n/a	10,000	n/a*	No

\*Note: Class 2.2, 9 & C1 materials are not subject to SEPP 33; hence, do not have a threshold.

### 3.2.2 Transport

The products stored at the site are not subject to SEPP 33; hence, not further assessment has been prepared for transport.

## 4.0 Conclusion and Recommendations

### 4.1 Conclusions

A review of the quantities of DGs stored at the proposed solar farm and the associated vehicle movements was conducted and compared to the threshold quantities outlined in Applying SEPP 33. The results of this analysis indicates the threshold quantities for the DGs to be stored and transported are not exceeded; hence, SEPP 33 does not apply to the project.

As the facility is not classified as potentially hazardous, it is not necessary to prepare a Preliminary Hazard Analysis for the facility as SEPP 33 does not apply.

### 4.2 Recommendations

No recommendations have been made for the site

## 5.0 References

- [1] Department of Planning, "Applying SEPP 33," Department of Planning, Sydney, 2011.
- [2] National Transport Commission (NTC), "Australian Code for the Transport of Dangerous Goods by Road & Rail, 7th Edition," 2011.