

Operational Instruction

20.25

# Energy Management for Electrical Assets



**Government of South Australia**

Department of Planning,  
Transport and Infrastructure



# TRAFFIC MANAGEMENT Operational Instructions

## Energy Management for Electrical Assets - 20.25

### AMENDMENT RECORD

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Manager, Traffic and Access Standards Section  
18 / 12 / 2013

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## 1. Scope

This document has been prepared to assist the Department of Planning, Transport and Infrastructure (DPTI) employees who are working on Electrical Assets, to apply for service points and energy correctly.

## 2. Background

Some of the Traffic Signal and Intelligent Transport Systems (ITS) assets are installed without their own service points. Their energy supplies are taken from existing traffic signal controllers and road lighting switch boards. The energy consumption for these and other standalone electrical infrastructure is not always correctly reflected in the Register of Intelligent Transport Systems (RITS) database for billing each month. This has resulted in incorrect consumption of energy being recorded.

This may be due to:

- Attachment of additional electrical assets such as red light cameras, point to point cameras, variable message signs, pan tilt zoom cameras etc.
- Unauthorised connections to traffic signal and road lighting facilities (assets).
- Not updating electrical load tables in RITS to reflect actual usage rates.

DPTI send a load table to SA Power Networks (SAPN) on a monthly basis that should reflect actual agreed consumption.

## 3. Service Connections

The following service connections generally apply.

### 3.1 Traffic Signals

Traffic signals shall have an unmetered supply and be recorded on the RITS load table ready for billing.

### 3.2 Road Lighting

Road Lighting will be an unmetered supply, registered through a tariff letter to SAPN and recorded on the Electrical Assets Road Lighting System (EARLS) database for load recording as agreed in a tariff letter to SAPN.

This may not apply where new technology has been used and a tariff does not exist on the Australian Energy Market Operator (AEMO) energy load table. In this case, an energy only tariff may be decided on, but formal agreement must come from SAPN.

### 3.3 Intelligent Transport Systems

ITS will be metered unless otherwise agreed by a departmental representative.

### 3.4 Other Equipment

Any equipment to be attached to unmetered supplies should be on the AEMO load table. Consultation should be carried out with SAPN to see if they are going to put it on their Network Tariff and Negotiated Service load table. If they decide they will not allow an unmetered supply, then a metered supply is the second option.

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## 4. Completing an Application Form for a Basic Metered Supply Point

An example of a correct application form for a Service Point/Power Supply is shown in Appendix A.

### Section 1: Installation Details

Location details of where the New Electricity Supply is to be installed.

### Section 2: Customer Details

Departmental details including DPTI contact person details.

### Section 3: Electrician

Normally, the electrician should fill in the application for a 'New Service Point'. Electrician details, including and most importantly, their license number go here.

### Section 4: Load Details

### Section 5: Service

The 'New or Upgraded Service' should be entered into Section 5, with the number of phases required. This information is obtained from the road lighting plan drawings under 'Circuit Details'.

The 'Service Type' has to be indicated in Section 5. This may be an over to under (stobie pole mounted fuse box), a fused or an unfused SAPN pit. This will be indicated on the plan drawing at service point XXX.

### Section 6: Metering

Section 6 shows the 'Types of Metering'. In the case of a Basic Metered Supply Point, it should be reflect the following:

- Type of Metering: Basic (Type 6)
- Meter Sub Types: 2 Rate or 2R

This needs to be accurately completed as it affects the off peak charge rate. By filling this incorrectly, DPTI incurs additional charges.

In the case of a Basic Metered Supply Point, the meter required is dependent on the number of phases shown on the drawing circuit detail. The last section of Section 6 is straight forward.

## 5. Filling an Application Form for an Unmetered Supply Point (New)

An example of a correct application form for an Unmetered Supply Point (New) is shown in Appendix B.

Most of the form is similar to the above, however:

### Section 6: Metering

Section 6 shows the 'Types of Metering'. In the case of an Unmetered Supply Point (New), it should be reflect the following:

- Type of Metering: Un Metered (Type 7)
- Meter Sub Types: Blank

If in doubt contact the Unit Manager Electrical Assets Section (EAS).

## 6. Tariffs and Tariff Letters

With a 'Type 7 Unmetered Supply Point' for road lighting, tariff letters are required as per the service connections above. Refer to Appendix C, D and E.

The first sample of the tariff is the request from DPTI (Appendix C). The second is the answer from SAPN with the tariff and customer charges if applicable (Appendix D) and the third is the acceptance for the costs from DPTI (Appendix E).

Tariffs for luminaries are paid for the whole of life of the luminaire by the EAS monthly, not paid for upfront. Brackets that hold the luminaire and other customer charges are paid for up front as part of the project. Refer to SAPN 'Network Tariff and Negotiated Services' website released on 1 July each year.

[http://www.sapowernetworks.com.au/centric/industry/our\\_network/network\\_tariffs.jsp](http://www.sapowernetworks.com.au/centric/industry/our_network/network_tariffs.jsp)

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# Appendix A Service Point/Power Supply Application Form

## Form A: Please send this form to your retailer

NOTE: SA Power Networks fees may apply for connection work requested  
Visit the Negotiating Framework page at [www.sapowernetworks.com.au](http://www.sapowernetworks.com.au)



20.25

New Electricity Supply ☒ Alteration of Service / Meter ☐  
PV Metering Installation ☐ Abolishment of Electricity Supply ☐ Public/CLER Lighting (Connect Only) ☐

Section 1 Installation Details	Installation Type: Rural <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Domestic <input type="checkbox"/> Temp Supply <input type="checkbox"/>					
	Unit	Lot	St. No.	Street Name Beach Road	Suburb / Town Noarlunga Centre	Postcode 5 1 6 8
	If installation is in a fringe or rural area, please also describe location by →			Transformer No.	Feeder No.	Section Number Hundred of
	Nominated Retailer AGL		Meter Number (if existing installation)		National Market Identifier (NMI Number if known)	

Section 2 Customer Details	Surname			Given Name		
	Business Name Department of Planning, Transport, and Infrastructure			ABN No. 92 366 288 135		
	Postal address for customer correspondence (if different to installation address in Section 1 above)					
	Unit	St. No.	Street Name / P.O. Box GPO BOX 1533	Suburb / Town Adelaide	Postcode 5 0 0 1	
	Business Hours Telephone (08) 8226 8224		Email Address carol.marston@sa.gov.au		Mobile Telephone	
Date of application 29 / 11 / 2012			Customer signature: By signing this application, you agree to be bound by the Connection and Supply Contract, as last published in the South Australian Gazette (subject to alteration).			

↓ The following sections must be completed for New Electricity Supply and Alteration of Service/Meter applications ↓

Section 3 Electrician	Electrical Contractors Licence Number PGE 245805	Contact Name Michael Wiles	Electrician's Business Name Maitland Contracting Electrical Services
	Business Hours Telephone (08) 8260 7007	Mobile Telephone 0409 088 444	Email Address michael@maitlandcontracting.com.au
	Note: A mobile telephone number and/or email address must be provided.		

Section 4 Load Details	Please list fixed appliances of 2.5kW or greater (e.g. motors, air conditioners, EV chargers)		=	kWs
	Please do not make commitments for electrical equipment until ETSA Utilities confirms the phases and voltage are available.			
	Off Peak Loads:	Off Peak HWS <input type="checkbox"/>	Space heating <input type="checkbox"/>	Underfloor heating <input type="checkbox"/>
Maximum Demand of installation in accordance with Australian Standard AS/NZS 3000				= 32 AMPS Per Phase

Section 5 Service	New or Upgraded Service? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Part of a Community/Strata installation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Service Phasing 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/>
	Service Type: Overhead <input type="checkbox"/> Over/Under <input type="checkbox"/> Fused Pit <input type="checkbox"/> Unfused Pit <input checked="" type="checkbox"/> Pole Top Transformer <input type="checkbox"/> Ground Level Transformer <input type="checkbox"/>		

Section 6 Metering	New or Upgraded Meter(s)? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> →	Use Existing Meter(s) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Meter Phasing 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/>
	Type of Metering: Basic (Type 6) <input checked="" type="checkbox"/> Interval (Type 5) <input type="checkbox"/> Interval (Type 1-4) <input type="checkbox"/> Un Metered (Type 7) <input type="checkbox"/>		
	Meter Sub Type(s): Import/Export <input type="checkbox"/> 2 Rate <input checked="" type="checkbox"/> Off Peak <input type="checkbox"/> Current Transformer <input type="checkbox"/>		PV SEG Approval Reference No. .....
	Is SA Power Networks the meter provider? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> → Name of meter provider: .....		
	Is the meter position to be altered? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Are consumer mains being replaced? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

If SA Power Networks has done prior work to supply a connection point, please provide job number:	.....
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Comments  
This is the application for the metered supply for the ITS on Beach Road as part of the Duplication of the Southern Expressway Project

SA Power Networks, ABN 13 332 330 749, a partnership of Spark Infrastructure SA (No. 1) Pty Ltd ABN 54 091 142 380, Spark Infrastructure SA (No. 2) Pty Ltd ABN 19 091 143 038, Spark Infrastructure SA (No. 3) Pty Ltd ABN 50 091 142 362, each incorporated in Australia, CKI Utilities Development Ltd ABN 65 090 718 880, PAI Utilities Development Ltd ABN 82 090 718 951, each incorporated in the Bahamas  
Form Effective 1/11/2012 Version 15



## Appendix B Unmetered Supply Point Application Form

### Form A: Please send this form to your retailer

NOTE: SA Power Networks fees may apply for connection work requested  
Visit the Negotiating Framework page at [www.sapowernetworks.com.au](http://www.sapowernetworks.com.au)


**20.25**

New Electricity Supply ☐ Alteration of Service / Meter ☐  
PV Metering Installation ☐ Abolishment of Electricity Supply ☐ Public/CLER Lighting (Connect Only) ☒

Section 1 Installation Details	Installation Type: Rural <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Domestic <input type="checkbox"/> Temp Supply <input type="checkbox"/>					
	Unit	Lot	St. No.	Street Name <b>Beach Road</b>		Suburb / Town <b>Noarlunga Centre</b>
	Postcode <b>5 1 6 8</b>					
	If installation is in a fringe or rural area, please also describe location by →			Transformer No.	Feeder No.	Section Number
Nominated Retailer <b>AGL</b>			Meter Number (if existing installation)		National Market Identifier (NMI Number if known)	

Section 2 Customer Details	Surname		Given Name	
	Business Name <b>Department of Planning, Transport, and Infrastructure</b>		ABN No. <b>92 366 288 135</b>	
	Postal address for customer correspondence (if different to installation address in Section 1 above)			
	Unit	St. No.	Street Name / P.O. Box <b>GPO BOX 1533</b>	Suburb / Town <b>Adelaide</b>
	Postcode <b>5 0 0 1</b>			
Business Hours Telephone <b>(08) 8226 8224</b>		Email Address <b>carol.marston@sa.gov.au</b>		Mobile Telephone
Date of application <b>29 / 11 / 2012</b>		Customer signature: By signing this application, you agree to be bound by the Connection and Supply Contract, as last published in the South Australian Gazette (subject to alteration).		

↓ The following sections must be completed for New Electricity Supply and Alteration of Service/Meter applications ↓

Section 3 Electrician	Electrical Contractors Licence Number <b>PGE 245805</b>	Contact Name <b>Michael Wiles</b>	Electrician's Business Name <b>Maitland Contracting Electrical Services</b>
	Business Hours Telephone <b>(08) 8260 7007</b>	Mobile Telephone <b>0409 088 444</b>	Email Address <b>michael@maitlandcontracting.com.au</b>
	Note: A mobile telephone number and/or email address must be provided.		

Section 4 Load Details	Please list fixed appliances of 2.5kW or greater (e.g. motors, air conditioners, EV chargers)		=	kWs
	Please do not make commitments for electrical equipment until ETSA Utilities confirms the phases and voltage are available.			
	Off Peak Loads:	Off Peak HWS <input type="checkbox"/>	Space heating <input type="checkbox"/>	Underfloor heating <input type="checkbox"/>
Maximum Demand of installation in accordance with Australian Standard AS/NZS 3000				= <b>32</b> AMPS Per Phase

Section 5 Service	New or Upgraded Service? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Part of a Community/Strata installation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Service Phasing 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/>
	Service Type: Overhead <input type="checkbox"/> Over/Under <input type="checkbox"/> Fused Pit <input type="checkbox"/> Unfused Pit <input checked="" type="checkbox"/> Pole Top Transformer <input type="checkbox"/> Ground Level Transformer <input type="checkbox"/>		

Section 6 Metering	New or Upgraded Meter(s)? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Use Existing Meter(s) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Meter Phasing 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/>
	Type of Metering: Basic (Type 6) <input type="checkbox"/> Interval (Type 5) <input type="checkbox"/> Interval (Type 1-4) <input type="checkbox"/> Un Metered (Type 7) <input checked="" type="checkbox"/>		
	Meter Sub Type(s): Import/Export <input type="checkbox"/> 2 Rate <input type="checkbox"/> Off Peak <input type="checkbox"/> Current Transformer <input type="checkbox"/>		PV SEG Approval Reference No.
	Is SA Power Networks the meter provider? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Name of meter provider: .....		
	Is the meter position to be altered? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Are consumer mains being replaced? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

If SA Power Networks has done prior work to supply a connection point, please provide job number:	
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#### Comments

This is the application for the unmetered supply for the Street Lighting and Traffic Signals on Beach Road as part of the Duplication of the Southern Expressway Project. This is to be done in conjunction with the new supply connection for the ITS switchboard in the same location.

SA Power Networks, ABN 13 332 330 749, a partnership of Spark Infrastructure SA (No. 1) Pty Ltd ABN 54 091 142 380, Spark Infrastructure SA (No. 2) Pty Ltd ABN 19 091 143 038, Spark Infrastructure SA (No. 3) Pty Ltd ABN 50 091 142 362, each incorporated in Australia, CKI Utilities Development Ltd ABN 65 090 718 880, PAI Utilities Development Ltd ABN 82 090 718 951, each incorporated in the Bahamas  
Form Effective 1/11/2012 Version 15



## Appendix C Example Request Tariff Letter

20.25



Government of South Australia  
Department of Planning,  
Transport and Infrastructure

In reply please quote  
Enquiries to Rick Burt  
Telephone 8226 8249

2008/06963/02

**COPY**

Mr Ron Ritzau  
SA Power Networks  
CAMS  
Public Lighting  
GPO Box 77  
ADELAIDE SA 5001

TRANSPORT SERVICES  
DIVISION - ELECTRICAL  
ASSET SECTION

37 - 41 The Parade  
Norwood SA 5067

GPO Box 1533  
Adelaide SA 5001  
Telephone: 08 8226 8222  
Facsimile: 08 8226 8330

ABN 92 366 288 135

Dear Mr Ritzau,

**PUBLIC LIGHTING – DUKES HIGHWAY KEITH**

The Department of Planning, Transport & Infrastructure (DPTI) advises that new lighting for the above project is to be installed shortly.

Please provide tariffs as per drawing no 5104 sheet 53 for approval by the department and inclusion into your Public Lighting billing database.

Any customer charges to include all installation and trenching costs.

We are looking at having the lighting installed by May 2013.

Should you require any further information, please contact Mr Rick Burt direct on telephone 8226 8249.

Yours sincerely,

Barry Speck  
Manager, Electrical Assets

4 March 2013

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\_DUKES\_HIGHWAY\_KEITH\_TARIFF\_REQUEST\_TO\_SAPN.DOC

1

## Appendix D Example Response Tariff Letter

20.25

20<sup>th</sup> March 2013

The Department of Planning Transport and Infrastructure  
 Attn: Mr Barry Speck  
 GPO Box 1533  
 ADELAIDE SA 5001

7457765

Dear Mr Axon

**PUBLIC LIGHTING**  
 Dukes Highway Keith  
 Reference No 100681332  
 Tariffs Only

I refer to the correspondence dated 4<sup>th</sup> March 2013, regarding the public lighting works at the above-mentioned location.

We are pleased to make this offer to The Department of Planning Transport and Infrastructure (Customer) to supply certain public lighting work on and subject to this letter.

- Install 1 x 250W High Pressure Sodium Luminaire <sup>CLER</sup>

### TARIFF AGREEMENT

This proposal will result in an overall **Increase** to The Department of Planning Transport and Infrastructure's SLUoS (Street Light Use of System) tariff of **\$27.10** per annum (excluding GST) with an increase of one light, as shown on the following table:

Lamp Type	Tariff	No.	Charge pa	Total pa
250W HPS	CLER	1	\$27.10	\$27.10
TOTAL		1		\$27.10
		Increase		Increase

For details of the energy component of your lighting tariff, please contact your retailer.

The CLER tariff indicated above applies where the Public Lighting system is installed and owned by the customer, or where the customer uses luminaries and lighting columns other than standard SA Power Networks equipment. SA Power Networks will provide only the service point, distribution of electric energy and lamp replacements. All other maintenance is the responsibility of the customer, including lamp replacements for any luminaries, which are inaccessible to SA Power Networks vehicles. Where non-standard lamps are selected, replacements must be provided by the customer.

Our proposal is based on drawing 5104 Sheet 53.

SA Power Networks ABN 13 332 330 749 a partnership of: Spark Infrastructure SA (No.1) Pty Ltd ABN 54 091 142 380, Spark Infrastructure SA (No.2) Pty Ltd ABN 19 091 143 030, Spark Infrastructure SA (No.3) Pty Ltd ABN 50 091 142 362, each incorporated in Australia. CIO Utilities Development Limited ABN 65 090 718 880, PAI Utilities Development Limited ABN 62 090 718 951, each incorporated in The Bahamas.

Highly Confidential

## Appendix E Example Acceptance Tariff Letter

**E-MAILED**  
21-3-13



Government of South Australia  
Department of Planning,  
Transport and Infrastructure

20.25

In reply please quote 2008/06963/02  
Enquiries to Rick Burt  
Telephone 8226 8249

Mr Ron Ritzau  
Team Leader – Public Lighting  
SA Power Networks  
GPO Box 77  
ADELAIDE SA 5001

TRANSPORT SERVICES  
DIVISION – ELECTRICAL  
ASSET SECTION  
37 - 41 The Parade  
Norwood SA 5067

GPO BOX 1533  
ADELAIDE SA 5001

Telephone: 08 8226 8222  
Facsimile: 08 8226 8330

ABN 92 366 200 135

Dear Mr Ritzau

PUBLIC LIGHTING: DUKES HIGHWAY KEITH  
REFERENCE NO: 100681332

I refer to your correspondence dated 20 March 2013 in relation to the lighting upgrade at the above location as per drawing 5104 sheet 53.

The Department of Planning, Transport & Infrastructure (DPTI) is pleased to accept your proposal and the tariff increase of (\$27.10 per annum) to our Public Lighting Account.

Please advise Mr Rick Burt of the expected installation date of this project.

Yours sincerely,

Barry Speck  
Manager, Electrical Assets

21 March 2013

DOCS\_AND\_FILES-#7456981-v1-PUBLIC\_LIGHTING\_  
\_DUKES\_HIGHWAY\_KEITH\_TARIFF\_ACCEPTANCE\_LETTER\_TO\_SAPN.DOC

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