

12 March 2014

Andrew Macgee
Senior Development Planner
Campbelltown City Council

Dear Andrew,

Development: 2325/2013/DA-1

Property: Lot 238 DP260481, 15 Huntsmore Road, Minto

Development: Fitout and use of an industrial building for network support

I am writing to provide the additional information requested in your letter of 26 February 2014.

Compliance with the POEO (Clean Air) Regulation 2010

Attachment 1 sets out a letter from Energy Power Systems Australia (EPSA) who would be responsible for the design and construction of NovaPower's site at Minto. The letter and its attachment confirms that the specification for the proposed engines and other equipment used at the site will comply with the POEO (Clean Air) Regulation 2010 emission standards, including all 8 limits.

Financial Viability of Post Combustion Controls

NovaPower's budgets for fixed O&M – with and without selective catalytic reduction (SRC) - were provided by EPSA. We attach a letter from EPSA confirming these estimates in Attachment 2.

Attachment 3 also includes the Schedules A to E from our maintenance agreement with William Adams who provide maintenance services for our 10 MW network support operation in Traralgon, Victoria. Please treat these schedules as confidential. There is no SRC treatment employed at our 10 MW site in Traralgon.

The William Adams agreement confirms we are paying fixed O&M of \$641.59 per engine per month and a variable O&M fee of \$5.23 MWh. Please note that, as set out in the schedules, the fixed O&M fee does not cover all costs associated with maintaining the plant, and that NovaPower incurs additional fixed and variable charges accordingly.

The impacts of our fixed and variable O&M assumptions on the results of the financial analysis are negligible – the primary driver of returns is the up-front capital cost associated with Nox treatment. To demonstrate this, Attachment 4 presents the NPV analysis using the assumptions in the earlier SKM report referenced in your correspondence. In summary, the NPV changes from 8.2% to 9.4% where there is no SCR treatment and from 3.2% to 6.0% where SCR treatment is employed – albeit using cost assumptions not consistent with those that NovaPower will incur.

Noise Impact Assessment Graphs

As requested, we have included the legends for the noise impact assessment graphs in Attachment 5.

We look forward to the Sydney West Joint Regional Planning Panel reviewing our DA at their earliest opportunity. Please don't hesitate to contact me if any further clarification is required.

Yours sincerely

A handwritten signature in dark ink, appearing to read 'Anthony Collins', written in a cursive style.

Anthony Collins
Managing Director, NovaPower

12th March 2014

Anthony Collins
NovaPower

Dear Anthony

We are writing to confirm that the specification for the proposed engines and other equipment used at the site (see attached engine specifications) will be implemented such that they will comply with the POEO (Clean Air) Regulation 2010 emission standards, including all 8 limits as set out below.

We also confirm that we will employ SKM to undertake air quality testing in the commissioning phase to confirm that the standards have been achieved.

concentration			
Air impurity	Activity or plant	Standard of concentration	
Solid particles (Total)	Any activity or plant (except as listed below)	Group 6	50 mg/m ³
Nitrogen dioxide (NO ₂) or Nitric oxide (NO) or both, as NO ₂ equivalent	Stationary reciprocating internal combustion engines	Group 6	Normally 450 mg/m ³ but 250 mg/m ³ in Syd
Sulfuric acid mist (H ₂ SO ₄) or sulfur trioxide (SO ₃) or both, as SO ₃ equivalent	Any activity or plant	Group 6	100 mg/m ³
Hydrogen sulfide (H ₂ S) (see also clause 42)	Any activity or plant	Group 6	5 mg/m ³
Fluorine (F ₂) and any compound containing fluorine, as total fluoride (HF equivalent)	Any activity or plant, other than the manufacture of aluminium from alumina	Group 6	50 mg/m ³
Chlorine (Cl ₂)	Any activity or plant	Group 6	200 mg/m ³
Hydrogen chloride (HCl)	Any activity, other than the manufacture of glazed terracotta roofing tiles	Group 6	100 mg/m ³
Type 1 substances and Type 2 substances (in aggregate)	Any activity or plant	Group 6	1 mg/m ³

Energy Power Systems Australia Pty Ltd ABN 80 055 274 514

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Cadmium (Cd) or mercury (Hg) individually	Any activity or plant	Group 6	0.2 mg/m ³
Volatile organic compounds (VOCs), as n-propane	Any stationary reciprocating internal combustion engine using a gaseous fuel	Group 6	40 mg/m ³ VOCs or 125 mg/m ³ CO
Smoke	An activity or plant in connection with which liquid or gaseous fuel is burnt	Group 6	Ringelmann 1 or 20% opacity

We hope that this of assistance to you and should you require anything further please do not hesitate to contact me.

Best Regards,

Michael Gardner



Project Manager

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PRELIMINARY

ENGINE SPEED:	1500	FUEL:	SITE SPECIFIC
COMPRESSION RATIO:	11.9:1	FUEL SYSTEM:	CAT LOW PRESSURE
AFTERCOOLER - STAGE 1 MAX. INLET (°C):	92		WITH AIR FUEL RATIO CONTROL
AFTERCOOLER - STAGE 2 MAX. INLET (°C):	54	FUEL PRESS. RANGE (KPa _g):	10.5 - 34.5
JACKET WATER - MAX. OUTLET (°C):	99	MIN. METHANE NUMBER:	81.6
ASPIRATION:	TA	RATED ALTITUDE (m):	150
COOLING SYSTEM:	JW+OC+1AC, 2AC	AT AIR TO TURBO. TEMP. (°C):	40
IGNITION SYSTEM:	ADEM3	NOx EMISSION LEVEL:	250.0 mg/Nm ³
EXHAUST MANIFOLD:	DRY	FUEL LHV (MJ/Nm ³):	36.8
COMBUSTION:	LOW EMISSION	APPLICATION:	50 Hz GENSET

RATING AND EFFICIENCY		NOTES	LOAD	100%
ENGINE POWER	(WITHOUT FAN)	(1)	KW	2100
GENERATOR POWER	(WITHOUT FAN)	(2)	EKW	2043
ENGINE EFFICIENCY	(ISO 3046/1)	(3)	%	41.4
ENGINE EFFICIENCY	(NOMINAL)	(3)	%	40.4
THERMAL EFFICIENCY	(NOMINAL)	(4)	%	47.5
TOTAL EFFICIENCY	(NOMINAL)	(5)	%	87.9

ENGINE DATA				
FUEL CONSUMPTION	(ISO 3046/1)	(6)	MJ/bkW-hr	8.7
FUEL CONSUMPTION	(NOMINAL)	(6)	MJ/bkW-hr	8.91
AIR FLOW (0 °C, 101.3 kPa)		(7)	Nm ³ /bkW-hr	4.18
AIR FLOW		(7)	kg/bkW-hr	5.4
COMPRESSOR OUT PRESSURE			kPa (abs)	447
COMPRESSOR OUT TEMPERATURE			°C	234
AFTERCOOLER AIR OUT TEMPERATURE			°C	59
INLET MAN. PRESSURE		(8)	KPa _a	410
INLET MAN. TEMPERATURE	(MEASURED IN PLENUM)	(9)	°C	60
TIMING		(10)	°BTDC	24
EXHAUST STACK TEMPERATURE		(11)	°C	432
EXHAUST GAS FLOW (0 °C, 101.3 kPa)		(12)	Nm ³ /bkW-hr	4.43
EXHAUST MASS FLOW		(12)	kg/bkW-hr	5.59

EMISSIONS DATA			
NOx (as NO ₂) (corr. 5% O ₂)	(13)	mg/Nm ³ (dry)	250
EXHAUST O ₂	(15)	% DRY	10.0
LAMBDA	(15)		1.76

HEAT BALANCE DATA			
LHV INPUT	(16)	KW	5199
HEAT REJECTION TO JACKET (JW)	(17) (23)	KW	598
HEAT REJECTION TO ATMOSPHERE	(18)	KW	148
HEAT REJECTION TO LUBE OIL (OC)	(19) (23)	KW	133
HEAT REJECTION TO EXHAUST (LHV to 25°C)	(20)	KW	1560
HEAT REJECTION TO EXHAUST (LHV to 120°C)	(20)	KW	1158
HEAT REJECTION TO STAGE 1 A/C (1AC)	(21) (23)	KW	400
HEAT REJECTION TO STAGE 2 A/C (2AC)	(22) (24)	KW	176

CONDITIONS AND DEFINITIONS

THE ENGINE TECHNICAL PERFORMANCE DATA LISTED ABOVE IS PRELIMINARY IN NATURE AND CAN CHANGE AS THE DEVELOPMENT PROGRAM FOR THIS NEW PRODUCT PROGRESSES. THIS DATA REPRESENTS CATERPILLAR'S BEST KNOWLEDGE TO DATE ON THE PRODUCT BUT CARRIES NO GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED. THIS DATA WILL BE SUPERSEDED BY THE FINAL PRODUCTION DATA WHEN THE PRODUCT COMPLETES THE DEVELOPMENT PROGRAM AND THE PRODUCTION DATA IS PUBLISHED IN TMI. THIS DATA SHOULD NOT BE USED FOR FINAL DESIGNS, SIZINGS, PURCHASE OF EQUIPMENT OR FINANCIAL CALCULATIONS AS IT IS SUBJECT TO CHANGE.

ENGINE RATING OBTAINED AND PRESENTED IN ACCORDANCE WITH ISO 3046/1 (STD. REF. CONDITIONS OF 25°C, 100 KPA BAROMETRIC PRESSURE, 152 m ALTITUDE). NO OVERLOAD PERMITTED AT RATING SHOWN. CONSULT ALTITUDE CHARTS FOR APPLICATIONS ABOVE MAXIMUM RATED ALTITUDE AND/OR TEMPERATURE.

EMISSION LEVELS ARE BASED ON THE ENGINE OPERATING AT STEADY STATE CONDITIONS AND ADJUSTED TO THE SPECIFIED NOx LEVEL AT 100% LOAD. EMISSION TOLERANCES SPECIFIED ARE DEPENDANT UPON FUEL QUALITY. METHANE NUMBER CANNOT VARY MORE THAN ± 3. PUBLISHED PART LOAD DATA IS WITH LAMBDA CONTROL.

ENGINE RATING IS WITHOUT ENGINE DRIVEN WATER PUMPS.

FOR NOTES INFORMATION CONSULT PAGE TWO.

PRELIMINARY**NOTES**

- 1 ENGINE RATING IS WITHOUT ENGINE DRIVEN WATER PUMPS. TOLERANCE IS $\pm 3\%$ OF FULL LOAD.
- 2 GENERATOR POWER DETERMINED WITH AN ASSUMED GENERATOR EFFICIENCY OF 97.3% AND POWER FACTOR OF 0.8. [GENERATOR POWER = ENGINE POWER x GENERATOR EFFICIENCY]
- 3 ISO 3046/1 ENGINE EFFICIENCY TOLERANCE IS (+)0, (-)5% OF FULL LOAD % EFFICIENCY VALUE. NOMINAL ENGINE EFFICIENCY TOLERANCE IS $\pm 2.5\%$ OF FULL LOAD % EFFICIENCY VALUE.
- 4 THERMAL EFFICIENCY: JACKET HEAT + LUBE OIL HEAT + STAGE 1 A/C HEAT + EXH. HEAT TO 120°C.
- 5 TOTAL EFFICIENCY = ENGINE EFF. + THERMAL EFF. TOLERANCE IS $\pm 10\%$ OF FULL LOAD DATA.
- 6 ISO 3046/1 FUEL CONSUMPTION TOLERANCE IS (+)5, (-)0% OF FULL LOAD DATA. NOMINAL FUEL CONSUMPTION TOLERANCE IS $\pm 2.5\%$ OF FULL LOAD DATA.
- 7 UNDRIED AIR. FLOW TOLERANCE IS $\pm 5\%$
- 8 INLET MANIFOLD PRESSURE TOLERANCE IS $\pm 5\%$
- 9 INLET MANIFOLD TEMPERATURE TOLERANCE IS $\pm 5^{\circ}\text{C}$.
- 10 TIMING INDICATED IS FOR USE WITH THE MINIMUM FUEL METHANE NUMBER SPECIFIED. CONSULT THE APPROPRIATE FUEL USAGE GUIDE FOR TIMING AT OTHER METHANE NUMBERS.
- 11 EXHAUST STACK TEMPERATURE TOLERANCE IS (+)35°C, (-)30°C.
- 12 WET EXHAUST. FLOW TOLERANCE IS $\pm 6\%$
- 13 NOX TOLERANCES ARE $\pm 18\%$ OF SPECIFIED VALUE.
- 14 CO, CO₂, THC, and NMHC VALUES ARE "NOT TO EXCEED".
- 15 O₂% TOLERANCE IS ± 0.5 ; LAMBDA TOLERANCE IS ± 0.05 . LAMBDA AND O₂ LEVEL ARE THE RESULT OF ADJUSTING THE ENGINE TO OPERATE AT THE SPECIFIED NOX LEVEL.
- 16 LHV INPUT TOLERANCE IS $\pm 2.5\%$.
- 17 HEAT REJECTION TO JACKET TOLERANCE IS $\pm 10\%$ OF FULL LOAD DATA, BASED ON TREATED WATER.
- 18 HEAT REJECTION TO ATMOSPHERE TOLERANCE IS $\pm 50\%$ OF FULL LOAD DATA, BASED ON TREATED WATER.
- 19 HEAT REJECTION OF LUBE OIL TOLERANCE IS $\pm 20\%$ OF FULL LOAD DATA, BASED ON TREATED WATER.
- 20 HEAT REJECTION TO EXHAUST TOLERANCE IS $\pm 10\%$ OF FULL LOAD DATA, BASED ON TREATED WATER.
- 21 HEAT REJECTION TO A/C STAGE 1 TOLERANCE IS $\pm 5\%$ OF FULL LOAD DATA, BASED ON TREATED WATER.
- 22 HEAT REJECTION TO STAGE 2 A/C TOLERANCE IS $\pm 5\%$ OF FULL LOAD DATA, BASED ON TREATED WATER.

SITE SPECIFIC COOLING SYSTEM SIZING EQUATIONS (WITH TOLERANCES)

- 23 TOTAL JACKET CIRCUIT (JW+OC+1AC) = (JW x 1.1) + (OC x 1.2) + (1AC x 1.05) + [0.90 x (1AC + 2AC) x (ACHRF-1) x 1.05].
- 24 TOTAL AFTERCOOLER CIRCUIT (2AC) = (2AC x 1.05) + [(1AC + 2AC) x 0.10 x (ACHRF - 1) x 1.05].

Mr. Anthony Collins
Managing Director
NovaPower PTY LTD

Reference: O&M Costs for Minto NSS 7th March 2014

Dear Mr Collins

Further to your request for confirmation on Operation and Maintenance costs on the Minto Network Support Project please find below detail.

Table 1) O&M Costs per Month

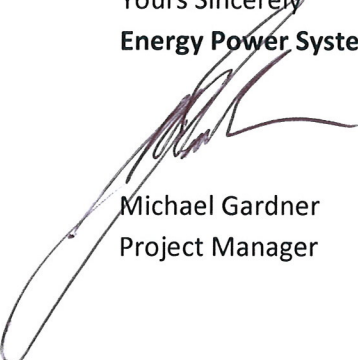
Operation and Maintenance Costs Minto NSS				
Genset Number	Installed MW	Total OPEX with SCR	Total OPEX without SCR	OPEX of SCR Alone
Set 1	2	20,216.00	11,760.00	8,456.00
Set 2	2	20,216.00	11,760.00	8,456.00
Set 3	2	20,216.00	11,760.00	8,456.00
Set 4	2	20,216.00	11,760.00	8,456.00
Total	8	\$80,864.00	\$47,040.00	\$33,824.00

The figures shown in table one have been based on maintaining SCR in a standby state due to the number of starts and stops per day as advised by NovaPower.

We hope this meets your requirements and look forward to any further clarifications you may need.

Yours Sincerely

Energy Power Systems Australia



Michael Gardner
Project Manager



MAINTENANCE AGREEMENT

Caterpillar Generator Set Model: G3520E+

Serial Number: GZE00157

GZE00158

GZE00159

GZE00160

GZE00161

For

NovaPower Pty Ltd

Prepared By

William Adams Pty Ltd

ABN 72 009 569 493

ACN 009 569 493

William Adams



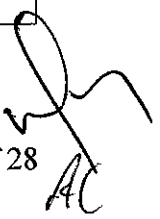
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SCHEDULE A – SUBSTATION AND ENGINES**Part 1. Components of Substation**

Substation Component	Quantity	Area Covered
Engine Acoustic Enclosure including floor, walls, acoustic barriers, ceiling and doors	5	Building
Engine - Caterpillar G3520E+	5	Engine
Generator – Caterpillar	5	Engine
Engine Oil Make-up Tank, 800 litre capacity	5	Engine
Coolant Head Tank – Jacket Water	5	Cooling circuit
Coolant Head Tank – Aftercooler	5	Cooling circuit
Radiator Assembly	5	Cooling circuit
Cooling Fans - (x10) Two-speed and fan controls	5	Cooling circuit
Coolant Pipes – in the Engine Enclosure	5	Cooling circuit
Coolant Pipes – outside the Engine Enclosure	5	Cooling circuit
Pump 1 – JW Circulating Water Pump	5	Cooling circuit
Pump 2 – AC Water Circulating Pump	5	Cooling circuit
Transformer – step up 11kV to 22kV	1	Electrical system
Transformer – step down 11kV to 415v	1	Electrical system
High Voltage Wiring – from generator output to step up transformer	5	Electrical system
High Voltage Wiring – from step up transformer to high voltage main switch board	1	Electrical system
Low Voltage Cabling - to existing factory low voltage switch board	1	Electrical system
Low Voltage Control Cabling – from switch board to high voltage switch board	1	Electrical system



Substation Component	Quantity	Area Covered
Low Voltage Earthing Cabling - below ground level	1	Electrical system
Switchboard - existing factory low voltage switchboard	1	Electrical system
Switchboard – Generator Mechanical Services	1	Electrical system
Switchboard – High Voltage Main Switchboard	1	Electrical system
Telephone system	1	Electrical system
Battery charger and batteries	5	Electrical system
PL1000E control communications group	5	Electrical system
Woodward engine controller	5	Electrical system
Exhaust silencer	5	Exhaust system
Exhaust stack	5	Exhaust system
Pipes – gas supply up stream of and including the isolation valve	1	Fuel system
Valve – gas supply isolation valve	1	Fuel system
Filter – gas supply fuel filtration downstream of the gas supply isolation valve	5	Fuel system
Regulator valve – engine gas supply pressure regulator valve	10	Fuel system
Control Valves – double block and bleed control	5	Fuel system
Regulator valve – gas supply regulator valve (mounted on the engine)	5	Fuel system
Pipes – gas supply down stream of the isolation valve	5	Fuel system
Fire detection system and alarm system	1	Electrical system
Gas leak detection and alarm system	1	Electrical system
Fans – ventilation fans with variable speed drive	5	Air handling
Lighting, power and water reticulation, communications systems within the network support substation	1	Building

Substation Component	Quantity	Area Covered
Network support substation enclosure services – security system, locks and fences	1	Building services

Part 2. Engines

Make	Model	Serial No.	Unit I.D.	Indicative Annual Utilisation	Delivery Date	Shift Type
Caterpillar	G3520E	GZE00157	TBA	2810 hours	December 2012	Day and Night Seven days/week.
Caterpillar	G3520E	GZE00158	TBA	2810 hours	December 2012	Day and Night Seven days/week.
Caterpillar	G3520E	GZE00159	TBA	2810 hours	December 2012	Day and Night Seven days/week.
Caterpillar	G3520E	GZE00160	TBA	2810 hours	December 2012	Day and Night Seven days/week.
Caterpillar	G3520E	GZE00161	TBA	2810 hours	December 2012	Day and Night Seven days/week.

Part 3. Application of Engines and Substation

The Engines will be supplying continuous electrical power during times of peak power requirements on the national electricity grid.

The Substation will provide peak shaving power to the national electricity grid during periods of high electricity demand, and network support for the local distribution network services provider. The Substation consists of the Engines, each being self-contained with remote cooling package including electric pumps. In addition there is a control room with adjacent HV switchgear. The 11kV to 22kV transformers are located near the control room. Site power is via an auxiliary transformer connected by the substation 22kV electrical connection.

SCHEDULE B –SERVICES

Part 1. Overview

1. The parties agree and acknowledge that William Adams is engaged under this Agreement to maintain, service and repair all components of the Substation. Broadly, this will comprise scheduled preventative maintenance and unscheduled maintenance and repairs.
2. Some of these services will be provided for the Monthly Fee. These are the Fixed Price Services described in Part 2 of this Schedule B below.
3. All other services will be provided on a “do and charge” basis for which the Extra Charges will be paid. These are the Charge Services described in Part 3 of this Schedule B below.

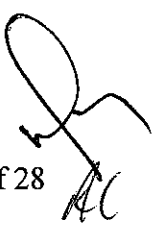
Part 2. Fixed Price Services

Scope of Fixed Price Services

1. The Fixed Price Services primarily comprise fixed interval preventative maintenance services.
2. William Adams will also indicate when Charge Services may be required as a result of failure, loss of function or when a certain condition is reached on a component set out in Part 1 of Schedule A.
3. William Adams will undertake the following specific fixed interval condition monitoring and preventative maintenance tasks. An indicative schedule of these tasks is contained in Annexure 1.

Engine and Generator

- Regular preventative maintenance of the Engines to change the engine oil and oil filters, as well as to perform inspection and adjustment tasks as required;
- Top-up of engine oil and coolant at each 250 hour or monthly service;
- Download of the ECM using a Cat Electronic Technician at each preventative maintenance service event;
- Regular preventative maintenance of governor and fuel system, thermostats, engine coolant, 24 volt electrical system, battery and starting system;
- Take SOS at every 250 hour service;
- Cutting and inspection of engine oil filters;
- Engine valve lash check and adjustment;
- Engine valve recession measurement;
- Provision of SOS reports;



- Replacement of spark plugs at every 3000 hour service;
- Take scheduled coolant samples of JW and AC circuits at every 12-month service;
- Regular preventative maintenance services of cooling system components, as well as to perform inspection and adjustment tasks as required by the OEM;
- Vibration analysis at every 2,000 hour service.

Switchgear / HV Infrastructure

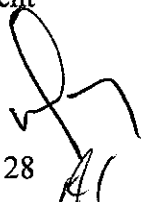
- Regular preventative maintenance services switchgear, transformers, control systems and conductors as well as to perform inspection and adjustment tasks as required by the OEM;
- Annual thermographic imaging of switchgear, and conductors, or as required;

Facility

- Regular preventative maintenance services of facility control room and systems as well as to perform inspection and adjustment tasks as required by the OEM;
- Regular preventative maintenance services of fuel gas train identified as owned by the Customer, downstream of the custody transfer meter as well as to perform inspection and adjustment tasks as required by the OEM;
- Regular preventative maintenance of enclosures and Site fencing;
- Inspection and maintenance of Site as agreed and included.

4. The Fixed Price Services will include:

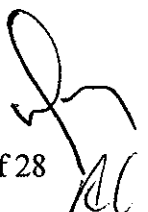
- Travel to and from the Site to perform the Fixed Price Services;
- Provision of lubricants, consumables and parts associated with the preventative maintenance activities;
- Removal from Site of waste oil and other consumables at the end of each service.

5. William Adams will undertake a visual inspection of the Engines and generator at each service of the Engines for build up of debris in and around various parts of the Engines. If as a result of such an inspection additional work is required to be performed on the Engines, William Adams will notify the Customer of the work required and where appropriate make arrangements for the work to be undertaken. This work will be performed as a Charge Service for which Extra Charges will apply.***When Fixed Price Service will be performed*****6. The Fixed Price Services will be provided at the relevant SMU, calendar interval or component condition determined appropriate by William Adams, in consultation with the Customer, taking into consideration OEM recommendations, the results of SOS, component wear measurement and good engineering practice.**

7. The Fixed Price Services will be performed during Business Hours where possible and after hours if called for in the agreed maintenance schedule.
8. The Fixed Price Services will be performed, wherever reasonably and practicably possible, during times identified as periods of low demand by the Customer (being the period each year advised by the Customer to William Adams).
9. William Adams agrees that no more than one Engine will be taken "off line" at any time, and that it must ensure that the relevant Engine is operational and "on line" after a service has been completed before leaving the Site.
10. William Adams acknowledges that the Customer may require a particular scheduled maintenance activity to be moved out past the nominated time or date. A limit of + 100 SMU or 28 days is applied, after which if the scheduled maintenance has not been completed, any failure attributable to this delay will not be recorded as William Adams Downtime for the purpose of determining Downtime. All repairs will be charged to the Customer as Extra Charges.
11. Where it is not possible to contain scheduled maintenance to the Customer's identified periods of low demand, then:
 - (a) activities requiring longer than 6 hours will be limited to one per calendar month per year; and
 - (b) activities requiring less than 4 hours are to be coordinated with the Customer with a view to minimising Downtime and delays in the Customer meeting its obligations to its customers.
12. Either party may request amendments to the scheduled maintenance program at any time and the other party shall not unreasonably object provided that:
 - (a) condition monitoring of the Engines subsequent to the agreement of the scheduled maintenance program indicates that additional scheduled maintenance is required; or
 - (b) there is a benefit to the requesting party; and
 - (c) there are no material additional costs to the other party.

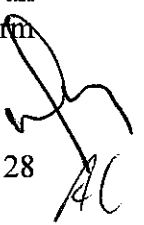
Part 3. Charge Services

1. The Charge Services comprise:
 - Noise measurement, monitoring and reporting if and when required;
 - All work associated with servicing and repairs required as a result of loss of performance, malfunction or failure;
 - Supply and installation of updates to current Engine specifications;
 - Water, ice or frost damage;

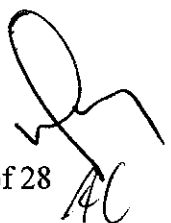


- Damage caused by voltage spikes and power surges from the electricity grid;
- Services, maintenance and repairs due to the effects of corrosion or condensation;
- Damage caused by attachments not included in this Agreement which include but are not limited to, fire detection system, communication system, steps, hand rails, ladder, walkway, guards, sheet metal and panels;
- The supply of a crane or forklift if required;
- Cleaning of the equipment;
- Travel charges to and from machine for service and repairs not included in the Fixed Price Services;
- Replacement oil if required more frequently than every 2,000 hour oil change interval.
- Replacement engine spark plugs if required more frequently than every 3,000 hour replacement interval;
- Engine air filter primary element if required to be cleaned and or replaced more frequently than every 2,000 hours;
- Engine air filter secondary element if required to be replaced more frequently than every 2,000 hours;
- Welding work;
- In-situ machining work;
- Transportation of the Engines or components to and from William Adams' facilities for off-Site repairs;
- Work as a result of build up of debris in and around various parts of the Engines;
- Overhaul or replacement of the following components:
 - **Engine** – replacement of major components including but not limited to muffler, exhaust heat shields, engine block, water pump(s), after-cooler core, engine mounts, crankshaft, camshaft, timing gears, engine sump, non genuine Caterpillar parts, pre lubrication oil pump, engine coolant heater (if fitted), front and rear covers, fan assembly and fan drive, radiator;
 - **Generator** – electrical power generator rotor, electrical power generator stator, main frame, radiator guard, fire detection system, fire suppression system, site specific radio communication system, steps, hand rails, ladders, walkways, guards, sheet metal and panels.

2. William Adams will provide a 24 hour 7 day per week service so as to provide an appropriate response for unscheduled maintenance to any abnormal condition, alarm condition or system shutdown in the Engines notified to William Adams.

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3. William Adams must ensure that any alarm condition or situation reported by the Customer that threatens or has caused an interruption to the Engines due to an unscheduled maintenance requirement, is initially responded to in the times set out below, from the time William Adams is notified of the event:
- (a) during Business Hours, within 2 hours;
 - (b) outside Business Hours within 4 hours, unless there are Exceptional Circumstances; and
 - (c) during Exceptional Circumstances within 12 hours, but William Adams will inform the Customer of when a response will commence within 4 hours.


AC

SCHEDULE C – MONTHLY FEE AND OUTSIDE HOURS FEE**Part 1. Monthly Fee**

1. The Monthly Fee *per Engine* comprises:

- (a) a fixed monthly amount of **\$641.59 + GST** (“**Fixed Component**”); and
- (b) a variable monthly amount (“**Utilisation Amount**”) calculated as follows:

Utilisation Amount = Utilised Hours x (Price Per Utilised Hour) plus GST,

Where

Price Per Utilised Hour = \$10.56.

2. For reference purposes only (and without in any way creating a minimum or maximum Monthly Fee), the Monthly Fee has been determined on the basis of an indicative *per Engine* total Fixed Price Services cost (based on 14,050 SMU) as follows:

Indicative Agreement Total	\$186,865.41
-----------------------------------	---------------------

Plus GST	\$18,686.54
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Indicative Agreement Total Including GST	\$205,551.95
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3. For the purposes of Monthly Fee variations in accordance with Schedule D, the following are the “Parts Percentage Value”, “Labour Percentage Value” and “Oil Percentage Value” in respect of the Fixed Component and the Utilisation Amount:

Fixed Component

Parts	40.5%
-------	-------

Oils	0.0%
------	------

Labour/Misc	59.5%
-------------	-------

Utilisation Amount

Parts	25.1%
-------	-------

Oils	43.5%
------	-------

Labour/Misc	31.4%
-------------	-------

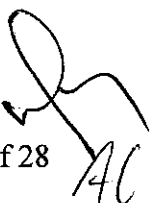
Part 2. Outside Hours Fee

Fixed Price Services that are provided outside of Business Hours in accordance with clause 3.3 will be charged at William Adams’ applicable “Overtime” and “Double Time” rates less the Ordinary Hours rate set out in Schedule E.

Part 3. Contract Determination

This Agreement has been developed based upon data supplied by EPSA, the Customer, Caterpillar and William Adams. This information has been used to determine the Monthly Fee. If deviations are identified between the supplied data and the installed product, layout and site conditions, then William Adams may at its sole discretion, request that the Monthly Fee be reviewed and altered to correctly reflect the actual conditions. This is to be completed prior to the commencement of delivery of Services under this Agreement. Any forecast life figures used in the cost estimate are centre line numbers and are unadjusted for other site severity factors such as:

- site conditions;
- operating practices;
- maintenance practices; and
- contamination control practices.

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SCHEDULE D – PRICE VARIATION**MONTHLY FEE PRICE VARIATION**

On 1st February and 1st August each year both the Fixed Component and the Price Per Utilised Hour will be reviewed in accordance with the following formula:

$$\text{New Rate} = (\text{Rate} \times P \times (1 + C1)) + (\text{Rate} \times L \times (1 + C2)) + (\text{Rate} \times O \times (1 + C3))$$

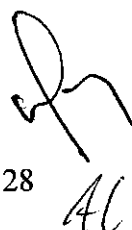
Where

- Rate = the Fixed Component or Price Per Utilised Hour (as applicable) for each Engine as is current at the date of review;
- P = the relevant Parts Percentage Value stated in Schedule C;
- L = the relevant Labour Percentage Value stated in Schedule C;
- O = the relevant Oil Percentage Value stated in Schedule C;
- C1 = the percentage change in parts which will be in accordance with the latest version of the weighted average change in Australian replacement parts price as issued by Caterpillar Asia Pacific;
- C2 = the percentage change in labour which is the percentage change in the William Adams' field service labour rate; and
- C3 = the percentage change in the oil price which will be calculated using the latest issued Caterpillar list price for oil and the Caterpillar list price for oil issued as at the previous variation or in the case of the first variation issued as at the Commencement Date. The oil price used is that recommended for the Engines and is issued by Caterpillar Asia Pacific.

If there is a suspension or discontinuance of any of the issued notifications referred to for this formula the parties will agree an alternative basis which reflects the fluctuations in the cost being calculated.

OUTSIDE HOURS FEE REVIEW

As at 1st September each year, William Adams will review its field service labour rates and the Outside Hours Fee will be varied accordingly.



SCHEDULE E – EXTRA CHARGES**PRICE STRUCTURE FOR CHARGE SERVICES**

All services provided by William Adams to NovaPower that are not part of the Fixed Prices Services will be charged for at the following agreed rates.

LABOUR**Monday to Friday**

Ordinary Hours	\$125.00 per hour
Overtime (first three hours)	\$144.00 per hour
Double Time (hours thereafter)	\$162.00 per hour

Saturday

Overtime (first three hours)	\$144.00 per hour
Double Time (hours thereafter)	\$162.00 per hour

Sunday and Public Holidays

Double Time (All hours worked)	\$162.00 per hour
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Afterhours Callout

Callout Fee	\$150.00
Minimum Four Hour charge	\$162.00 per hour

TRAVEL CHARGES

Travel Distance	\$1.50 per Kilometre
Travel Labour	\$110.00 per hour

PARTS AND MATERIALS**Caterpillar Parts**

Caterpillar parts will be charged as per William Adams' list price at time of supply.

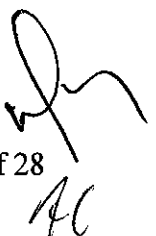
Outside purchases of Parts, Materials, Labour & Sundry items

All outside purchases will be charged as per below.

Supplier Invoice Price	Mark-up Percentage
\$1 - \$1,000	35%
\$1,001 - \$2,000	25%
\$2,001 - \$3,000	20%
\$3,001 - up	15%
Freight Charges	10%

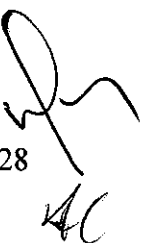
CHARGE SERVICES FEE REVIEW

As at 1st September each year, William Adams will review its field service labour rates and the labour components of the Extra Charges will be varied accordingly.

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ANNEXURE 1 – INDICATIVE MAINTENANCE SCHEDULE

Refer overpage.

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ENGINE PACKAGE

REST OF SITE

Period / Frequency	Description	Action	Description	Action
Weekly	Walk around Inspection (Not when Running)	Record		
	Engine Oil Make-up Tank Oil Level	Inspect / Record		
	Engine Air Cleaner Service Indicator	Inspect		
	Cooling System Coolant Level	Inspect / Record		
	Engine Operating Hours	Record		
	Fuel Filter Restriction	Inspect / Record		
	External Cooling System Leaks	Inspect / Record		
	External Gas Leaks	Inspect / Report		
	Internal Oil Leaks	Inspect / Record		
	Internal Coolant Leaks	Inspect / Record		
	Record / Clear Engine Faults	Inspect / Record		
	Battery Charger	Inspect		
	Generator Air Filters (if fitted)	Inspect / Clean		
Monthly	Enclosure Ventilation Proving Components	Inspect	Site Integrity Site Security (Fences and Buildings) Check Gas Composition (Vencorp) Monitoring / Control System	Inspect / Report Inspect / Report Review / Record Inspect / Report
3-Monthly	Inspect Cooling Package - Hoses / Joints - Radiator Caps Clean Radiator core with LOW pressure water Clean Fans and Fan Plenums	Inspect Clean Clean		
6-Monthly	Inspect / Clean out Radiator Package Lubricate Door Hinges and Locks Enclosure Ventilation Fans / screens Radiator Package Fans Batteries - SG Check Generator Leads, Fuses, Connections	Inspect / Clean Lubricate Inspect / Clean Inspect Inspect / Record Inspect	Lubricate Door Hinges and Locks	Lubricate

ENGINE PACKAGE

REST OF SITE

Period / Frequency	Description	Action	Description	Action
	Generator Air screens / Housings	Clean		
	Generator bearings	Grease		

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AC

ENGINE PACKAGE

REST OF SITE

Period / Frequency	Description	Action	Description	Action
12-Monthly	Replace Gas Fuel Filter	Replace	Thermographic Scan ALL HV Connections	Scan / report
	Enclosure Protection devices	Inspect / Calibrate	Inspect 11kV Switchgear	Inspect
	Calibrate Gas Detector Units	Calibrate	Inspect 22kV Switchgear	Inspect
	Obtain Engine Coolant Samples (JW & AC)	Obtain	Inspect Transformers	Inspect
	Generator Insulation test (Megger)	Test / Record	General site Condition	Inspect / Clean
	Generator Rotating Rectifier Gp	Test / Record	Control / Switchgear Room A/C unit	Inspect
	Engine Enclosure / Radiator Package	Inspect		
	Gas Fuel Train Components / Valves / Switches	Inspect / Test / Clean		
24-Monthly	Starting Batteries	Replace		
36-Monthly	Coolant NGEC	Replace		
250 Hrs	Obtain Engine Oil Sample	Obtain		
	Top up Engine Oil Make Up Tank	Top up / Record		
	Top up Engine Cooling Systems	Top up / Record		
	Generator Set Vibration (Initial 250 ONLY)	Test / Record		
	Coolant analysis	Test / Adjust		
	Fumes Disposal System	Drain Waste Oil		
	Valve Stem Projection (Initial 250 ONLY)	Measure / Record		
1000 Hrs	Aftercooler Condensation - Drain	Drain		
	Engine Crankcase Breather	Clean		
	Engine Vibration Damper	Inspect		
	Engine Speed / Timing Sensor	Inspect / Clean		
	Engine Valve Lash	Check / Adjust		
	Valve Stem Projection	Measure / Record		
	Gas Pressure Regulator Condensation	Drain		
	Hoses and Clamps	Inspect / Replace		
	Air Cleaner Elements	Inspect / Replace		

ENGINE PACKAGE

REST OF SITE

Period / Frequency	Description	Action	Description	Action
	Radiator Package	Clean		
	Cooling System Electric Pumps	Inspect		
2000 Hrs	Engine Oil	Change		
	Engine Oil Filters	Change		
	Generator Flexible Coupling	Inspect		
	Vibration analysis	Obtain / Report		
	Engine Air Cleaners	Replace		

REST OF SITE

ENGINE PACKAGE

Period / Frequency	Description	Action	Description	Action
3000 Hrs	Engine Spark Plugs	Replace		
4000 Hrs	Engine Crankcase Blowby Cylinder Pressures Engine Mounts Engine Protective Devices Starter Motor	Test / Record Test / Record Inspect Check / Test Inspect		
8000 Hrs	Crankcase Breather Element Turbocharger	Replace Inspect		

AC

Peaking Plant Investment Appraisal																						
Case:	Lean burn																					
Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	
Revenue (\$000)																						
Export electricity		715	751	788	828	869	912	958	1,006	1,056	1,109	1,164	1,223	1,284	1,348	1,415	1,486	1,560	1,638	1,720	1,806	
CAP contracts		315	420	441	463	486	511	536	563	591	621	652	684	718	754	792	832	873	917	963	1,011	
Network support		250	250	250	250	250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Revenue (\$000)																						
	1,280	1,421	1,479	1,541	1,605	1,623	1,494	1,569	1,647	1,729	1,816	1,907	2,002	2,102	2,207	2,318	2,434	2,555	2,683	2,817		
O&M Costs (\$000)																						
Natural gas	446	469	492	517	543	570	598	628	660	693	727	764	802	842	884	928	975	1,023	1,075	1,128		
Genset O&M fixed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
SCR O&M fixed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Network standing charge	15	15	16	16	17	17	17	18	18	19	19	20	20	21	21	22	22	23	23	24		
Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Insurance	54	56	57	59	60	62	63	65	66	68	70	71	73	75	77	79	81	83	85	87		
Rent and outgoings	100	103	105	108	110	113	116	119	122	125	128	131	134	138	141	145	148	152	156	160		
Residual value																						
																					-1,046	
Total O&M Costs (\$000)		616	642	670	699	730	761	795	830	866	904	944	986	1,030	1,075	1,123	1,173	1,226	1,281	1,339	353	
Earnings before interest, tax, deprec, amortisation (EBITDA)		-10,456	664	778	809	841	875	661	699	739	781	825	872	921	972	1,027	1,084	1,144	1,208	1,274	1,344	2,464
Project IRR		6.0% EBITDA																				
Project NPV over 20 year period		-\$1,585,913				before interest, tax, depreciation & amortisation																
Simple Payback		16.4		years																		

Peaking Plant Investment Appraisal

Case:Lean burn

FINANCIAL DATA

Capital cost of generator	7,496	\$000
Capital cost NOx control	2,960	\$000
IDC	418	\$000
Total capital cost	10,874	\$000
Discount Rate (nominal)	8.0%	pa
Depreciation Period, years	20	years
Depreciation rate	4.5%	
Salvage Value After 20 Years	1046	\$000

REVENUES

Export Electricity	tariff	0.0750	\$/kWh
	escalation	5.0%	
CAP contracts	2014	315	\$000 pa
	2015	420	\$000 pa
	escalation	5.0%	
Network support	payment	250	\$000 pa
	duration	5	years

NATURAL GAS TARIFFS

Natural Gas	4.50	\$/GJ HHV
Escalation	5.0%	pa

PLANT CONFIGURATION

Unit Capacity	1995	kW
Number of Units	4	
NOx Control	Lean burn	

GAS ENGINE PERFORMANCE

Gross Electrical Output	1,995	kWe
Gross Heat Rate (100%, HHV)	10,150	kJ/kWh
Energy input (HHV)	5,625	kW
Auxiliary losses	2.5%	
Fuel consumption (per unit)	20.2	GJ/h
(4 units)	99,218	GJ pa

OPERATION & MAINTENANCE

Genset O&M fixed	0	\$000 pa
variable		\$/MWh
SCR O&M fixed	0	\$000 pa
variable	4.00	\$/MWh
Network standing charge	15	\$000 pa
Water	0	\$000 pa
Insurance	0.5%	of capital
Rent and outgoings	100	\$000 pa
Escalation	2.50%	pa

OPERATING PROFILE

Starts per year	700
Hours per start	1.75
Hours per year	1225

OUTPUT

Gross Capacity	7,980	kW
Gross Generation (MCR)	9,775,500	kWh
Net Capacity	7,781	kW
Net Generation	9,531,113	kWh

GREENHOUSE EMISSIONS

Natural gas	51.3	kg CO2/GJ
Gensets (4 units)	5,090	t CO2 pa
Grid	0.88	tCO2/MWh
Grid offset (4 units)	8,387	t CO2 pa

NOx EMISSIONS

Genset NOx emissions	250	mg/Nm3 dry
Genset exhaust mass flow	9,158	Nm3/h wet
	7,940	Nm3/h dry
SCR NOx removal efficiency	90%	
SCR start time	5	minutes
Genset NOx	7.9	kg/h
Genset NOx	9.7	tonne pa
SCR NOx removal	0.0	tonne pa
NOx emissions to air	9.7	tonne pa

Project IRR versus Gas and Elec Price

Project IRR versus Gas Price and CAPEX

Project IRR versus Gas Price and OPEX

SINCLAR KNIGHT MERZ

7/63/2014

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Peaking Plant Investment Appraisal																					
Case:	Lean burn																				
Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Revenue (\$000)																					
Export electricity		715	751	788	828	869	912	958	1,006	1,056	1,109	1,164	1,223	1,284	1,348	1,415	1,486	1,560	1,638	1,720	1,806
CAP contracts		315	420	441	463	486	511	536	563	591	621	652	684	718	754	792	832	873	917	963	1,011
Network support		250	250	250	250	250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Revenue (\$000)																					
	1,280	1,421	1,479	1,541	1,605	1,623	1,494	1,569	1,647	1,729	1,816	1,907	2,002	2,102	2,207	2,318	2,434	2,555	2,683	2,817	
O&M Costs (\$000)																					
Natural gas	446	469	492	517	543	570	598	628	660	693	727	764	802	842	884	928	975	1,023	1,075	1,128	
Genset O&M fixed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
variable	39	40	41	42	43	44	45	46	48	49	50	51	53	54	55	57	58	59	61	63	
SCR O&M fixed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
variable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Network standing charge	15	15	16	16	17	17	17	18	18	19	19	20	20	21	21	22	22	23	23	24	
Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Insurance	39	40	41	42	43	44	45	46	47	49	50	51	52	54	55	56	58	59	61	62	
Rent and outgoings	100	103	105	108	110	113	116	119	122	125	128	131	134	138	141	145	148	152	156	160	
Residual value																					
																				-750	
Total O&M Costs (\$000)																					
	640	667	695	725	756	788	822	858	895	934	974	1,017	1,061	1,108	1,157	1,208	1,261	1,317	1,376	687	
Earnings before interest, tax, deprec, amortisation (EBITDA)	-7,496	640	754	784	816	849	635	672	711	752	796	842	890	941	994	1,050	1,110	1,172	1,238	1,307	2,130
Project IRR	9.4% EBITDA																				
Project NPV over 20 year period	\$ 837,197 before interest, tax, depreciation & amortisation																				
Simple Payback	12.2 years																				

Peaking Plant Investment Appraisal

Case:Lean burn

FINANCIAL DATA

Capital cost of generator	7,496	\$000
Capital cost NOx control		\$000
IDC	300	\$000
Total capital cost	7,796	\$000
Discount Rate (nominal)	8.0%	pa
Depreciation Period, years	20	years
Depreciation rate	4.5%	
Salvage Value After 20 Years	750	\$000

REVENUES

Export Electricity	tariff	0.0750	\$/kWh
	escalation	5.0%	
CAP contracts	2014	315	\$000 pa
	2015	420	\$000 pa
	escalation	5.0%	
Network support	payment	250	\$000 pa
	duration	5	years

NATURAL GAS TARIFFS

Natural Gas	4.50	\$/GJ HHV
Escalation	5.0%	pa

PLANT CONFIGURATION

Unit Capacity	1995	kW
Number of Units	4	
NOx Control	Lean burn	

GAS ENGINE PERFORMANCE

Gross Electrical Output	1,995	kWe
Gross Heat Rate (100%, HHV)	10,150	kJ/kWh
Energy input (HHV)	5,625	kW
Auxiliary losses	2.5%	
Fuel consumption (per unit)	20.2	GJ/h
(4 units)	99,218	GJ pa

OPERATION & MAINTENANCE

Genset O&M fixed	0	\$000 pa
variable	4.00	\$/MWh
SCR O&M fixed	0	\$000 pa
variable	0.00	\$/MWh
Network standing charge	15	\$000 pa
Water	0	\$000 pa
Insurance	0.5%	of capital
Rent and outgoings	100	\$000 pa
Escalation	2.50%	pa

OPERATING PROFILE

Starts per year	700	
Hours per start	1.75	
Hours per year	1225	

OUTPUT

Gross Capacity	7,980	kW
Gross Generation (MCR)	9,775,500	kWh
Net Capacity	7,781	kW
Net Generation	9,531,113	kWh

GREENHOUSE EMISSIONS

Natural gas	51.3	kg CO2/GJ
Gensets (4 units)	5,090	t CO2 pa
Grid	0.88	tCO2/MWh
Grid offset (4 units)	8,387	t CO2 pa

NOx EMISSIONS

Genset NOx emissions	250	mg/Nm3 dry
Genset exhaust mass flow	9,158	Nm3/h wet
	7,940	Nm3/h dry
SCR NOx removal efficiency	90%	
SCR start time	5	minutes
Genset NOx	7.9	kg/h
Genset NOx	9.7	tonne pa
SCR NOx removal	0.0	tonne pa
NOx emissions to air	9.7	tonne pa

Project IRR versus Gas and Elec Price

Project IRR versus Gas Price and CAPEX

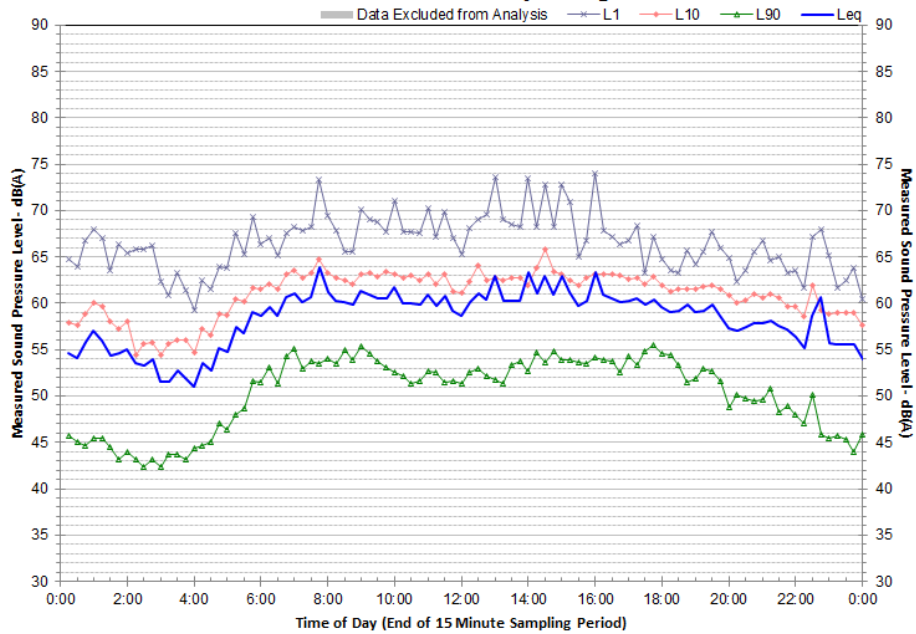
Project IRR versus Gas Price and OPEX

SINCLAR KNIGHT MERZ

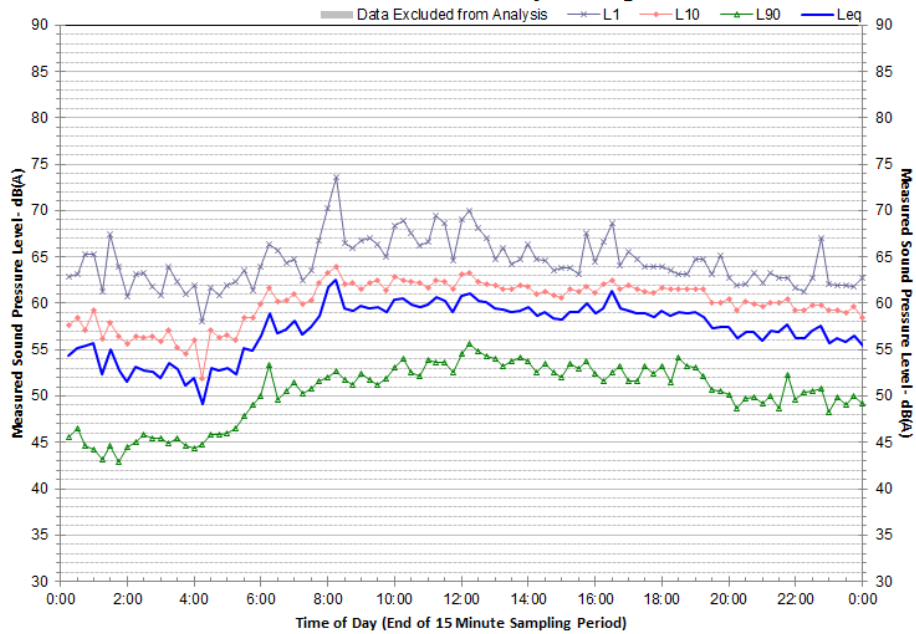
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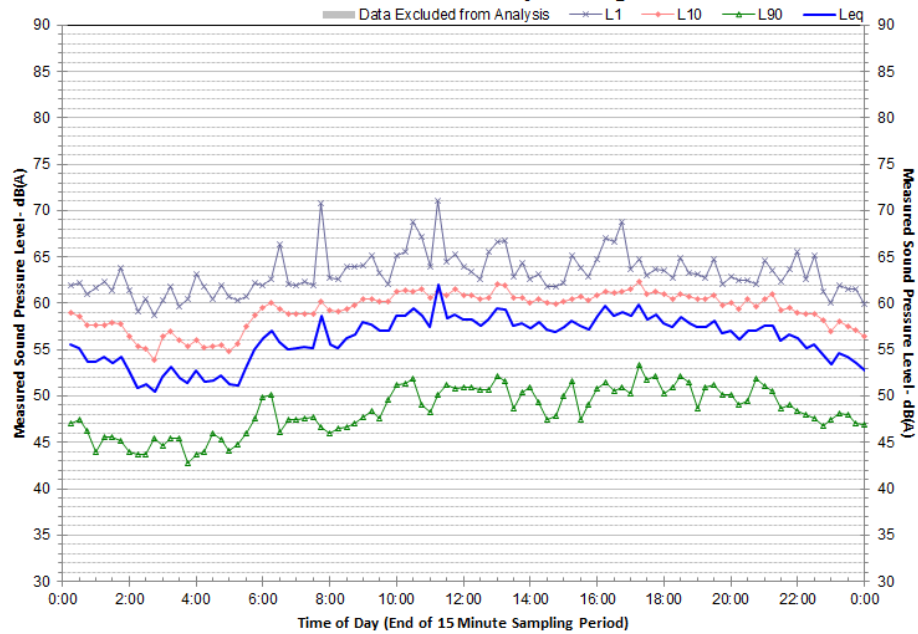
Profile of Noise Environment - Noise Monitoring Location Minto Friday 9 August 2013



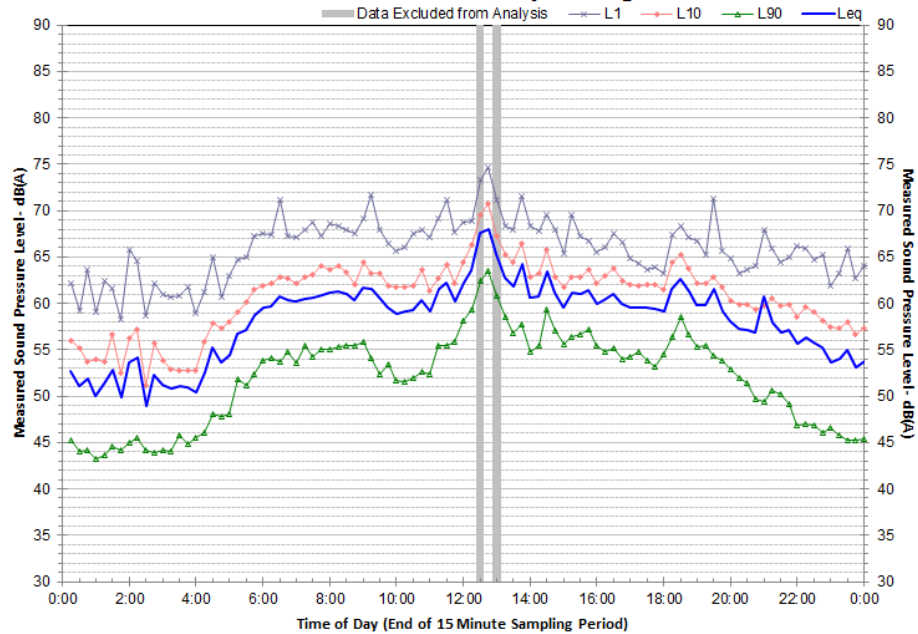
Profile of Noise Environment - Noise Monitoring Location Minto Saturday 10 August 2013



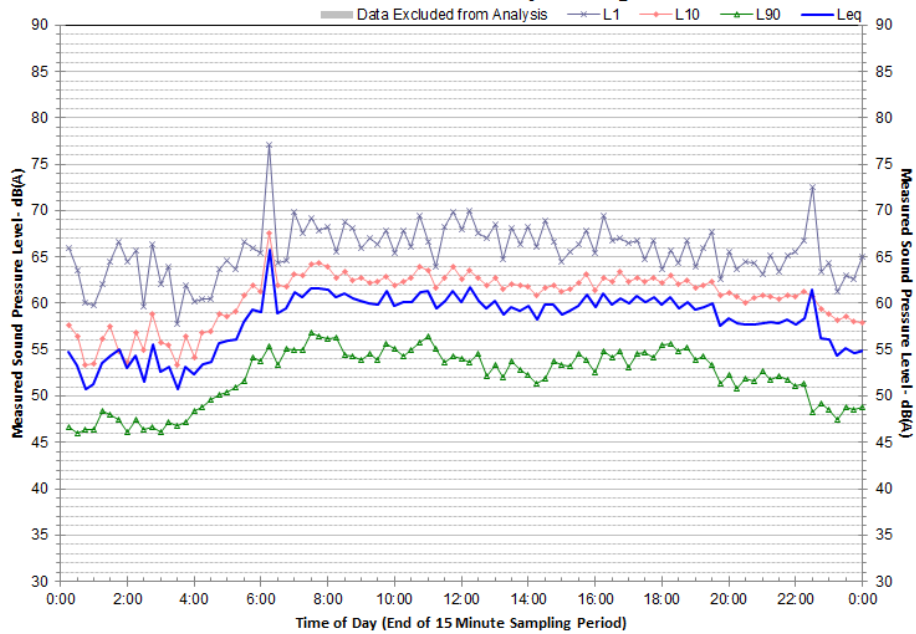
Profile of Noise Environment - Noise Monitoring Location Minto Sunday 11 August 2013



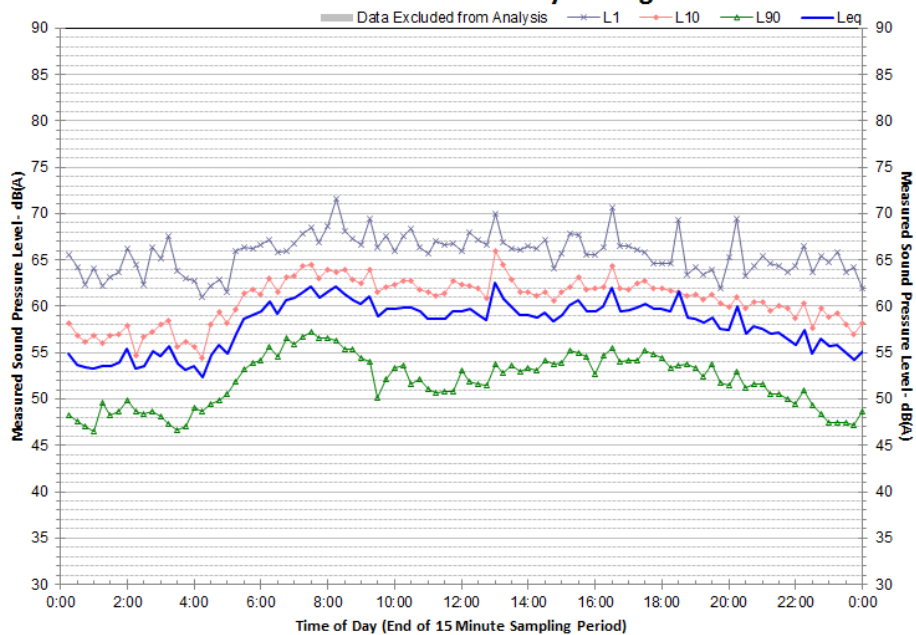
Profile of Noise Environment - Noise Monitoring Location Minto Monday 12 August 2013



Profile of Noise Environment - Noise Monitoring Location Minto Tuesday 13 August 2013



Profile of Noise Environment - Noise Monitoring Location Minto Wednesday 14 August 2013



Profile of Noise Environment - Noise Monitoring Location Minto
Thursday 15 August 2013

