

# *IPPC Permit Application for Phase III – Delimara Power Station*

## **IPPC Report**

PROJECT NO.: PRJ-ENV198  
FIFTH DRAFT

01 April 2015



AIS Environment Limited,  
AIS House, 18, St. John Street,  
Fgura FGR 1447 Malta

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E: [info@ais.com.mt](mailto:info@ais.com.mt) W: [www.aisenvironment.com](http://www.aisenvironment.com)

**Form IPPC Part A – application for a permit, variation, transfer or surrender  
For Malta Environment & Planning Authority Use Only**

Data received

Fee received: Yes No

Amount received

Name assigned to installation

☐ ☐

**Application for a permit, variation, transfer or  
surrender**

**Integrated Pollution Prevention and Control (IPPC)**

Industrial Emissions (IPPC) Regulations 2013

**Introduction to Part A**

**When to use this form**

Use this form if you are sending an application to the MEPA under the Industrial Emissions (IPPC) Regulations, 2013.

The form is to be used for applications made in respect of both 'installations' and 'mobile plant' (and in the rest of the form, the term 'installation' also covers 'mobile plant' where appropriate).

**Before you start to fill in this form**

There may be two or more operators in a single installation. Each operator will need a permit, each obtained by a separate application. Your applications will principally relate to the part of the installation under your control, but will also need to include some information on the rest of the installation. This will help us to assess the operation of the whole installation. The term "installation", when used in this application form (and elsewhere) may refer to either the whole or part of the installation, depending on the nature of the information we are seeking to obtain.

**Which parts of the form to fill in**

The form is in five parts but we usually only send you the parts you need to fill in. Everyone has to fill in Part A, and prepare and sign a covering letter at the end of their application.

The other parts you need to fill in depends on the type of application you are making:

- To apply for a new permit – fill in Parts A and B;
- To vary an existing permit – fill in Parts A and C;
- To transfer all or part of an existing permit to

someone else – fill in Parts A and D. This should be a joint application by the transferor and the transferee;

- To surrender all or part of an existing permit – fill in Parts A and E.

**Other documents we need to see**

There are a number of other documents you will need to send us with your application. Each time a request for documents is made in the application form you will need to record a document reference number for the document or documents that you are submitting in the box provided on the form for this purpose.

Please also mark the document(s) clearly with this reference number and either the application reference number if you know it or your existing permit number. If you do not have either of these, please use the name of the installation.

If you know your Application Reference Number, please enter it into the box below:

**Using continuation sheets**

In the case of questions required to be answered on the application form itself, please use a continuation sheet if you need extra space; but please indicate clearly on the form that you have done so by stating a document reference number for that continuation sheet. Please also mark the continuation sheet itself clearly with the information referred to above.

**Copies**

Please submit 1 hard copy and 1 soft copy of the application form and all supporting information.

A soft copy of the application form must also be submitted to the consultees identified in Regulation 19(2) of Legal Notice 10 of 2013. A signed delivery note must be enclosed with the application to MEPA.

**If you need help and advice**

We have made the application form as straightforward as possible, but please get in touch with us on tel: 2290 7229 or 2290 7231 or email: [ippc@mepa.org.mt](mailto:ippc@mepa.org.mt) if you need any advice on how to set out the information we need.

## A1 About your application

### A1.1 What type of application are you making?

- ☐ new permit
- ☒ variation of an existing permit
- ☐ transfer of an existing permit
- ☐ surrender of an existing permit

### A1.2 Name of the installation

**DELIMARA POWER STATION**

Please tell us if this name is:

- ☒ already agreed with the MEPA; or
- ☐ one that you are proposing.

### A1.3 Please give the address of the site of the installation, and a map or plan showing the site of the installation and the location of the installation on the site

Street Address	Delimara Power Station	
	Triq il-Power Station	
Locality	Marsaxlokk	Post Code MXK 1320

### Site Plan enclosed as Appendix I

### A1.4 Give details of any existing permit(s) for the installation.

Please give details of any applicable waste management licences, planning permits, environmental permits or sewer discharge permits. Include permit number(s), type(s) and date(s) of issue, and submit copies.

#### Planning Permits:

**PA 2933/09**

**PA 4854/09**

**Current IP Permit: IP 0002/07/E**

**Greenhouse Gas Emissions Permit: MT-2**

**Copies are provided in Appendix II**

## A2 Authorised contacts

It will help us to have someone who we can contact directly with any questions about your application. The person you name should have the authority to act on your behalf.

### A2.1 Who can we contact about your application?

This could be an agent rather than the operator.

Name

**Ing. Mario Schembri/ Ruth DeBrincat Tabone**

Position

**Consultants**

Address

Street Address	AIS Environment	
	AIS House	
	18, St. John Street	
Locality	Fgura	Post Code FGR 1447

Phone Number **21803374/ 79841985**

Fax Number **21803434**

Email address [Mario.schembri@ais.com.mt](mailto:Mario.schembri@ais.com.mt)  
[Ruth.debrincat@ais.com.mt](mailto:Ruth.debrincat@ais.com.mt)

### A2.2 Operational contact

If different to the above, please identify the person we should contact to discuss operational matters on an ongoing basis.

Name

**Chen Zhichao**

Position

**General Manager – D3 Power Generation Ltd.**

Address

Street Address	Delimara 3	
	Delimara Power Station	
	Triq il-Power Station	
Locality	Marsaxlokk	Post Code MXK 1320

Phone Number **99771812**

Fax Number **N/A**

Email address [chenzc@shangaipower.com](mailto:chenzc@shangaipower.com)

### A3 About the operator

Please provide the information requested below about the 'operator', which means:

- for applications for a new permit – the person who it is proposed will have control over the installation in accordance with the permit (if granted),
- for applications for a variation, transfer or surrender – the person who currently has control over the installation in accordance with the permit.

If you are applying for a transfer, we will ask for more information relating to the proposed new operator (transferee) in Part D.

### Legal status of operator

#### A3.1 Is the operator an individual, a group of individuals, a partnership or a company/corporate body?

- ☐ Individual (sole trader) or group of individuals: go to question A3.2.
- ☐ Partnership: go to question A3.3.
- ☒ **Company or corporate body:** go to question A3.5.

### Individual applicants

#### A3.2 Please give us the following details.

Where more than one person is applying (other than as a partnership) we need details of each person.

Continue on separate sheets if necessary.

Full Name

ID Card/Passport No.

Trading/business name (if any)

Business address

Street Address		
Locality		Post Code

Phone Number

Fax Number

Email address

Now go to question A4, What to do next.

### Applications from partnerships

#### A3.3 Who is applying?

We can only issue permits to named individuals, not to a partnership name. We therefore need details of each person in the partnership.

Continue on separate sheets if necessary.

Person

Full Name

ID Card/Passport No.

Principal place of business

Street Address		
Locality		Post Code

Contact Numbers

Phone Number

Fax Number

Email address

Person

Full Name

ID Card/Passport No.

Principal place of business

Street Address		
Locality		Post Code



**Contact Numbers**

Phone Number

Fax Number

Email address

**Person**

Full Name

ID Card/Passport No.

**Principal place of business**

Street Address		
Locality		Post Code

**Contact Numbers**

Phone Number

Fax Number

Email address

**A3.4 Please give us the following details about the partnership.**

Name of partnership (if there is one)

--

**Principal place of business**

Street Address		
Locality		Post Code

**Contact Numbers**

Phone Number

Fax Number

Email address

Now go to question A4, What to do next.

**Companies or other corporate applicants****A3.5 Please give us the following details.**

Full name of company or corporate body.

**D3 POWER GENERATION LTD**

Trading/business name (if different)

**D3 POWER GENERATION LTD****Registered office address**

Street Address	<b>Enemalta Building</b>	
	<b>Triq Belt il-Hazna</b>	
Locality	<b>Marsa</b>	Post Code <b>MRS 1571</b>

**Company registration number****C 66510****Date of formation of company****29 August 2014**

- For applications from companies, please provide a copy of the certificate of incorporation or registration and any certificates of subsequent name changes.

**Document reference number****Appendix III**

- For applications from other corporate bodies, please provide evidence of status.

**Document reference number****N/A**

**A3.6 Is the operator a subsidiary of a holding company?**

No ☐

Yes ☒ Name of ultimate holding company

**SEP (MALTA) HOLDING Ltd**

**Registered office address**

Street Address	<b>120, St. Ursula Street</b>	
Locality	<b>Valletta</b>	Post Code <b>VLT 1236</b>

**Principal office address (if different)**

Street Address		
Locality		Post Code

**Company registration number**

**C 67784**

**A4 What to do next**

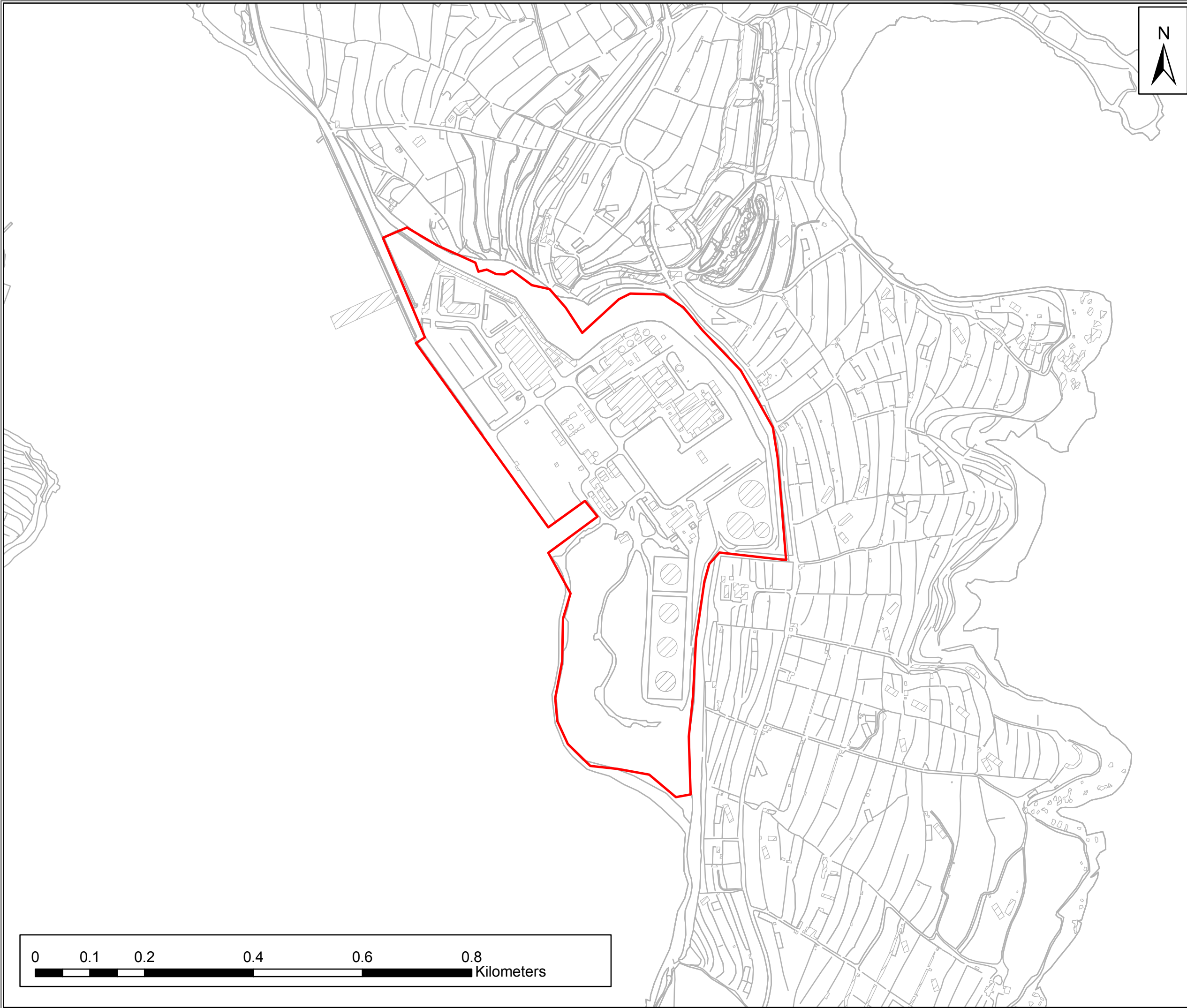
Now you need to fill in the other Parts of this form available online.

If you are applying for

- ☐ • A new permit – fill in Part B;
- ☒ • A variation – fill in Part C;
- ☐ • A transfer – fill in Part D;
- ☐ • A surrender – fill in Part E.

## **Appendix I**


**Map or plan showing the site of the installation  
and the location of the installation on the site as  
per section A1.3**



**Legend**

 Site boundary

0 0.1 0.2 0.4 0.6 0.8 Kilometers

Title: DPS Site Plan	
Drawing No: <b>DRG042a</b>	
Design by: <b>RD</b>	Scale: <b>1:6,500</b>
Drawn by: <b>KE</b>	Date: <b>Feb 2015</b>
	
Approved by: <b>RD</b>	Date: <b>Feb 2014</b>
Quote or Job No. <b>ENV-PRJ184</b>	Revision Date: <b>N/A</b>

## **Appendix II**

**Copies of applicable planning permits, and  
environmental permits as per section A1.4**

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To: Mr. Joseph Cutajar  
Enemalta Corp.  
Church Wharf  
Marsa

Date: 14 June, 2010  
Our Ref: PA 04854/09

Application Number: PA 04854/09  
Application Type: Full Development Permission / 01  
Date Received: 3 November, 2009  
Approved Documents : PA4854/09/1C/1D/1E/1F/1G/1H/1I/1J/1K/1L/1M/1N/1O/1P/1Q/  
1R/1S/1T/1U/1V/1W/1X/1Y/1Z/1AA/1AB/1AC/1AD/1AE/1AF/  
1AG/1AH/1AI/33/20/22

Location: Delimara Power Station, Triq il-Power Station, Marsaxlokk  
Proposal: To erect new electrical power generating station.

## Development Planning Act 1992 Section 33 Full Development Permission

The Malta Environment & Planning Authority hereby grants development permission in accordance with the application and plans described above, subject to the following conditions:

1 Monitoring During Construction Phase:

Monitoring Management:

a) At least one month prior to the commencement of works on site, the applicant shall nominate for approval by MEPA an Operational Management Consultant (OMC) who shall have the necessary expertise to ensure that the monitoring programme is fully implemented and that any specialist consultants identified for specialised monitoring are present on site when required by the Monitoring Programme.

b) The OMC and specialist monitors required by the monitoring programme shall be engaged at the expense of the applicant who shall provide a suitably equipped site office for their use.

c) The OMC shall ensure that the applicant carries out all works in accordance with all permit condition, drawings and other documents including the Construction Management Plan. The OMC shall notify MEPA immediately of any



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breach and shall consult MEPA and the applicant on any remedial measures to be taken.

### Specialist monitoring:

The applicant shall submit a monitoring programme for approval prior to the commencement of works on site. The monitoring programmes shall include the frequencies of monitoring and any baseline studies that may be required. The programme shall also identify the threshold limits beyond which works may be halted due to unacceptable environmental impacts. The specialised monitoring required, as identified by the Environment Impact Assessment are:

- a) A noise and vibration monitoring program to be implemented throughout the works so that any vibrations due not exceed the thresholds to be agreed to by MEPA.
- b) An air quality monitoring program to be implemented throughout the excavation and construction phase.

2 This development permission is being granted without prejudice to any operational permits that may be required by MEPA and/or other entities including the IPPC operational permit.

- a) The development hereby permitted shall not be operated until such time as the IPPC Permit is issued.
- b) Should the processing of the IPPC permit require infrastructural modifications to accommodate mitigation measures and or abatement technologies, the applicant is to apply for amendment of this permit or apply for further development permission.
- c) The waste management areas, and the marine discharge are being kept as reserved matters are to be determined following conclusions of the IPPC permit variation.

### 3 General conditions

- a) A fine mesh shall be installed at entry point to cooling water. Specifications of the mesh shall follow recommendation of the Environment Impact Assessment and shall be submitted to MEPA (Environment Protection Directorate) for approval prior to installation.
- b) All external lighting should be kept to a minimum and shall be appropriately shaded, and should consist exclusively of low-key full-cut-off down lighters of low wattage. All exterior lighting shall be of the full cut off type in order to reduce light pollution. Lighting of surrounding areas beyond the power station precincts is strictly prohibited. Globes and up lighters are not allowed, except through prior agreement with MEPA for overriding reasons. The applicant shall prior to the issuing of any compliance certificate submit certification and verification by an independent engineer that all lighting complies with this condition.
- c) A visible warning sign shall be installed at the effluent outlet at Il-Hofra ż-Żghira;

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- d) The choice of building materials and colours are to blend with the background and the existing structures on site.

### 4 Bank Guarantee

A refundable bank guarantee of €500,000 (five hundred thousand Euro) shall be submitted to MEPA prior to the issue of this development permission.

The guarantee shall be returned to the applicant upon the satisfactory completion of construction and satisfactory compliance with permit conditions, in particular submission of monitoring and other reports. The bank guarantee will be forfeited if the works are not carried according to the conditions and approved drawings/documents of the permit and monitoring programs/ reports are not submitted.

### 5 Landscaping:

In order to ensure the submission, implementation and maintenance of a landscaping scheme, the bank guarantee listed in condition four (4) shall also apply to the submission, implementation and maintenance of a landscaping scheme. The landscaping shall aim to mitigate both the visual and noise impact of the development and should be submitted within three (3) months of the issuing of IPPC permit together with a technical report explaining the scheme.

For the purposes of the Bank Guarantee the landscaping scheme shall constitute €50,000. The €50,000 shall be tied to the implementation of the approved landscaping scheme and its maintenance for a period of five (5) years after which it will be released in full.

In the event that the applicant fails to submit the landscaping scheme within the stipulated time limit, or fails to implement the scheme within the stipulated time limit, or fails to properly maintain the landscaping, then the outstanding bank guarantee shall be immediately forfeited.

Its forfeiture would not, however, preclude the applicant from adhering to all the conditions contained in this development permission.

### 6 Planning Contribution:

A planning contribution of €139,200 shall be submitted to MEPA to be used for the EIPP fund, prior to the issuing of this development permission.

### 7 Waste Management During Construction Phase:

- a) All operations concerning the management of waste are subject to the legal provisions of Legal Notice 337 Waste Management (Permit and Control) Regulations of 2001 and Legal Notice 106 Waste Management (Activity Registration) Regulations, 2007; and as specified in the IPPC permit.
- b) Uncontaminated rock material resulting from excavations or from demolition may be reused as fill material or shall be deposited at facilities permitted by MEPA and in accordance with the legal provisions

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laid down in LN 337 Waste Management (Permit and Control) Regulations of 2001 and LN 106 Waste Management (Activity Registration) Regulations, 2007.

- c) Contaminated material is to be treated as waste and disposed of or decontaminated in accordance with the legal provisions laid down in LN 337 Waste Management (Permit and Control) Regulations of 2001 and LN 106 Waste Management (Activity Registration) Regulations, 2007.
- d) All stockpiles of waste material and/or dredged material are to be positioned in such a way as to avoid contamination of air or water to through wind or runoff respectively.

### 8 Containment of Hazardous Material during construction phase:

- a) Runoff from stockpiling area shall be collected and/or intercepted so as to avoid contamination of the sea;
- b) Containers of chemicals/hazardous materials/ fuels to be utilised during the construction phase shall be stored in designated and secure storage areas. Storage areas shall be bunded or otherwise designed so that surface and ground waters cannot be contaminated by spillages;
- c) COMAH Competent Authority shall be consulted throughout the works.
- d) All bulk oil storage tanks shall be provided with an adequately designed bund system with an impermeable base and walls. The capacity of the bund shall be a minimum of 110% of the largest tank or 25% of the full capacity of all the tanks within the bund. Filling and off-take points shall be located within the bund.
- e) The construction of service tankfarm shall comply with relevant Malta Resources Authority standards.

9 The applicant shall comply with all requirement set out by the Occupational Health and Safety Authority (OHSA) as identified in approved document PA4854/09/22. Enforcement of these conditions is the responsibility of the OHSA.

10 The applicant shall comply with all requirement set out by the Civil Protection Department (CPD) as identified in approved document PA4854/09/20. Enforcement of these conditions is the responsibility of the CPD.

11 The following conditions are imposed by the Malta International Airport:

- a) The chimney stacks are each provided with obstruction lighting and information including the elevation (amsl) and WGS-84 co-ordinates of each stack are submitted to MIA plc.
- b) During the construction of the facility any crane works rising in excess of 70m (amsl) are to be coordinated with MIA plc prior to execution.

The applicant shall consult the Malta International Airport during the construction phase of the development hereby approved, to ensure that the development is

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carried out in conformity with the conditions imposed by the Malta International Airport.

12 Prior to construction works commence on site, a Construction Management Plan shall be submitted for the approval of MEPA.

13 The height of the chimneys is kept as a reserved matter.

14 a) This development permission is valid for a period of FIVE YEARS from the date of this notice but will cease to be valid if the development is not completed by the end of this five year period.

b) It should be noted that a third party may have the right of appeal against this permission. Any development which is carried out when such an appeal has been made, or until the time limit for the submission of such an appeal has expired, is undertaken at the risk that this permission may be revoked by the Planning Appeals Board or quashed by the Court of Appeal.

c) This development permission does not remove or replace the need to obtain the consent of the land/building owner to this development before it is carried out. Furthermore, it does not imply that consent will necessarily be forthcoming nor does it bind the land/building owner to agree to this development. Where the land/building is owned or administered by the Government of Malta a specific clearance and agreement must be obtained for this development from the Land and/or Estate Management Departments.

d) All works shall be carried out strictly in accordance with the approved plans and the conditions of this permission. Where a matter is not specified on the plans then the conditions of this permission and of Development Control Policy and Design Guidance shall take precedence and modify the plans accordingly.

e) All building works shall be erected in accordance with the official alignment and proposed/existing finished road levels as set out on site by the Malta Environment & Planning Authority's Land Surveyor. The Setting Out Request Notice must be returned to the Land Survey Unit of the Malta Environment & Planning Authority when the setting out of the alignment and levels is required.

f) Before any part of the development hereby permitted commences, the enclosed green copy of the Development Permit shall be displayed on the site. This must be mounted on a notice board, suitably protected from the weather and located not more than 2 metres above ground level at a point on the site boundary where it is clearly visible and can be easily read from the street. The copy of the permit must be maintained in a good condition and it shall remain displayed on the site until the works are complete.

g) The enclosed Commencement Notice shall be returned to the Malta Environment & Planning Authority so that it is received at least five days prior to the commencement of the development hereby permitted.

h) Copies of all approved plans and elevations shall be available for inspection on site by Malta Environment & Planning Authority staff at all reasonable times.

i) Where the street bordering the site is unopened, it shall be opened up prior to the commencement of the building operations hereby permitted.

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j) Any soil on the site shall not be built over but shall be collected for reuse. A permit from the Director of Agriculture is required to remove the soil from the site. All soil shall be deposited at the place indicated by the Director of Agriculture; and authorisation by the Environment Protection Directorate shall also be required prior to any deposition on open or undeveloped land unless located within officially approved development zones. Contaminated soils are to be managed/disposed of in accordance with the legal provisions laid down in Legal Notice 337 Waste Management (Permit and Control), Regulations, 2001 and L.N. 168 Waste Management (Landfill) Regulations, 2002 and its amendments.

k) The Enforcement Unit of the Malta Environment & Planning Authority shall be notified prior to the commencement of the following stages of the development : construction of the foundations; roofing over the last basement level; roofing over the first level above ground level.

l) The height of the buildings and structures shall not exceed those indicated in the approved drawings.

m) A water cistern with a volume in cubic metres of 60% of the total roof area (in square metres) of the building(s) shall be constructed to store rainwater run-off from the built-up area of the development. This cistern shall be completed and available for use prior to the development hereby permitted being first brought into use.

n) The development hereby permitted shall not be brought into use until an IPPC permit is issued and the Final Compliance (Completion) Certificate, certifying that the development has been carried out in full accordance with the plans approved by this permission and with the other conditions imposed in this permission, has been issued by the Malta Environment & Planning Authority.

o) The facade of the building shall be constructed in local stone, except where other materials, finishes and colours are indicated on the approved plans and drawings.

p) Where applicable hoarding should be erected in accordance with Schedule 2 of the Environmental Management Construction Site Regulations, LN 295 of 2007

q) Where applicable, the development, hereby permitted, shall be carried out in accordance with the provisions of the Environmental Management Construction Site Regulations, LN 295 of 2007.

r) This permission does not sanction any illegal development that may exist on the site.

Should the site fall within areas designated as HOS and property originating from the Housing Authority, this permit does not exonerate the applicant from obtaining the necessary clearances from the same Authority.

This permit is granted saving third party rights. The applicant is not excused from obtaining any other permission required by law. The applicant should contact the following regarding

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the location and provision of services prior to commencing development:- Enemalta, Water Services Corporation and Cable Network Operators.

A handwritten signature in blue ink, appearing to be 'Sylvana De Bono', written over a vertical line.

Sylvana De Bono  
Board Secretary  
MEPA



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To: Mr Joseph Cutajar  
Enemalta Corporation  
Church Wharf  
Marsa HMR 14

Date: 5 February, 2010  
Our Ref: PA 02933/09

*GN/DPS/7/09*  
*Pent. Lassar*

Application Number: PA 02933/09  
Application Type: Full Development Permission / 01  
Date Received: 2 July, 2009  
Approved  
Documents : PA 2933/09/1B

Location: Delimara Power Station, Delimara, Marsaxlokk  
Proposal: Soil investigation at Delimara Power Station Block 4 (through removal of a layer of material).

## Development Planning Act 1992 Section 33 Full Development Permission

The Malta Environment & Planning Authority hereby grants development permission in accordance with the application and plans described above, subject to the following conditions:

- 1
  - a) All works shall be carried out strictly in accordance with the approved plans and the conditions of this permission. Where a matter is not specified on the plans then the conditions of this permission and of Development Control Policy and Design Guidance shall take precedence and modify the plans accordingly.
  - b) This development permission does not remove or replace the need to obtain the consent of the land/building owner to this development before it is carried out. Furthermore, it does not imply that consent will necessarily be forthcoming nor does it bind the land/building owner to agree to this development. Where the land/building is owned or administered by the Government of Malta a specific clearance and agreement must be obtained for this development from the Land and/or Estate Management Departments.
  - c) Before any part of the development hereby permitted commences, the enclosed green copy of the Development Permit shall be displayed on the site. This must be mounted on a notice board, suitably protected from the weather and located not more than 2 metres above ground level at a point on the site boundary where it is clearly visible and can be easily read from the street. The copy of the permit must be maintained in a good condition and it shall remain displayed on the site until the works are complete.

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d) No building material, waste material, machinery or plant shall obstruct the pavement or the smooth flow of traffic on the road in the vicinity of the site. The deposit of materials or the placing of equipment in the street must be authorised.

e) Copies of all approved plans and elevations must be available for inspection on site by Malta Environment & Planning Authority staff at all reasonable times.

f) All building works shall be erected in accordance with the official alignment and proposed/existing finished road levels as set out on site by the Malta Environment & Planning Authority's Land Surveyor. The Setting Out Request Notice must be returned to the Land Survey Unit of the Malta Environment & Planning Authority when the setting out of the alignment and levels is required.

g) Where the street bordering the site is unopened or unformed, it shall be opened up and brought up to its proper and approved formation levels prior to the commencement of the building operations hereby permitted.

h) This development permission is valid for a period of FIVE YEARS from the date of this notice but will cease to be valid if the development is not completed by the end of this five year period.

i) The enclosed Commencement Notice shall be returned to the Malta Environment & Planning Authority so that it is received at least five days prior to the commencement of the development hereby permitted.

j) It should be noted that a third party may have the right of appeal against this permission. Any development which is carried out when such an appeal has been made, or until the time limit for the submission of such an appeal has expired, is undertaken at the risk that this permission may be revoked by the Planning Appeals Board or quashed by the Court of Appeal.

k) The permit is issued on condition that, where applicable, any excavation shall be subject to the requirements of the Civil Code regarding neighbouring tenements.

l) Where applicable, the development, hereby permitted, shall be carried out in accordance with the provisions of the Environmental Management Construction Site Regulations, LN 295 of 2007.

m) This permission relates only to the additions and alterations specifically indicated on the approved drawings. This permission does not sanction any illegal development that may exist on the site.

- 2 A CMP to the satisfaction of MEPA shall be submitted within 2 months from the issue of this development permission. No works shall commence on site prior to the approval of the CMP.
- 3 No works including the removal of loose material shall take place beyond 2 m from the approved perimeter.
- 4 The following conditions are to be implemented to the satisfaction and enforced by the Civil Protection Department :

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a) Physical protection should be given to the existing fire hydrant to ensure that this is not damaged.

b) Fire tender access around the whole project shall be ensured at all times.

c) Roll call is available at all times for all contractor employees.

The applicant shall consult the Civil Protection Department during the construction phase of the development hereby approved, to ensure that the development is carried out in conformity with the conditions imposed by the Civil Protection Department

- 5 Rock spoil, boulders and other waste materials resulting from excavations or from demolition on this site shall be deposited at an official waste disposal site or used as fill material. If waste materials from the development are not to be reused, they shall not be disposed of other than at an official waste disposal site.
- 6 Adequate and suitable provision, in the form of water sprays, shall be used to reduce dust nuisance during all demolition and/or construction works.
- 7 Any soil on the site shall not be built over but shall be collected for reuse. A permit from the Director of Agriculture is required to remove the soil from the site. All soil shall be deposited at the place indicated by the Director of Agriculture.
- 8 Adequate measures shall be taken to ensure that the vehicles leaving the site/engaged in the construction works do not deposit mud or other materials on the public highway.
- 9 Contaminated soils are to be managed/disposed of in accordance with the legal provisions laid down in Legal Notice 337 Waste Management (Permit and Control), Regulations 2001 and L.N. 168 Waste Management (Landfill) Regulations, 2002 and its amendments.
- 10 Contaminated material is to be treated as waste and disposed of or decontaminated in accordance with the legal provisions laid down in LN 337 Waste Management (Permit and Control) Regulations of 2001 and LN 106 Waste Management (Activity Registration) Regulations, 2007.
- 11 Dust suppression equipment needs to be installed in stockpiling area.
- 12 Applicant is to make provisions in order for dust or mud not to contaminate areas adjacent to the site, in particular the marine environment;
- 13 Runoff from stockpiling area needs to be collected and/or intercepted so as to avoid contamination of the sea;

Should the site fall within areas designated as HOS and property originating from the Housing Authority, this permit does not exonerate the applicant from obtaining the necessary clearances from the same Authority.

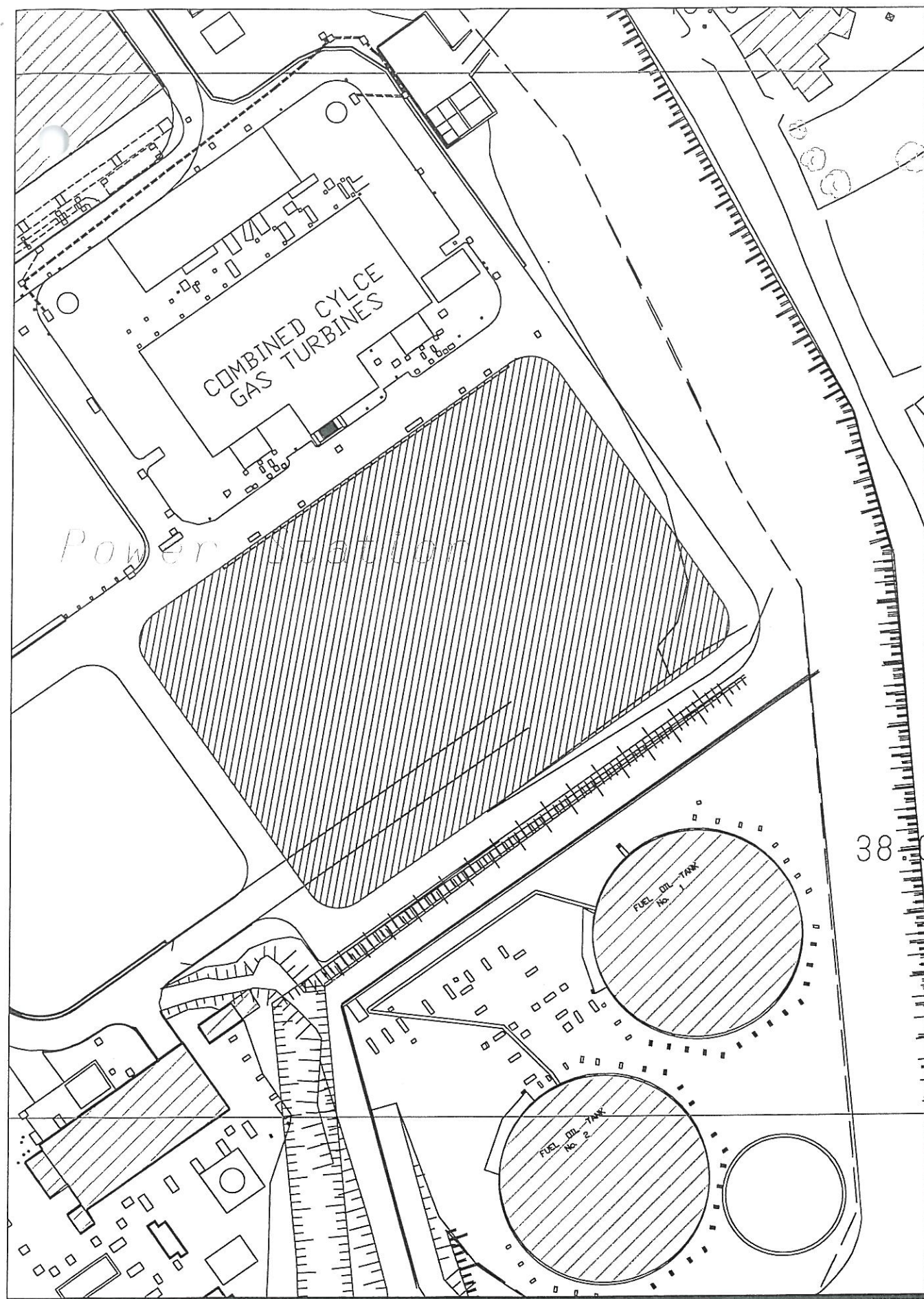
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This permit is granted saving third party rights. The applicant is not excused from obtaining any other permission required by law. The applicant should contact the following regarding the location and provision of services prior to commencing development:- Enemalta, Water Services Corporation, Maltacom, Drainage Department and Cable Network Operators.



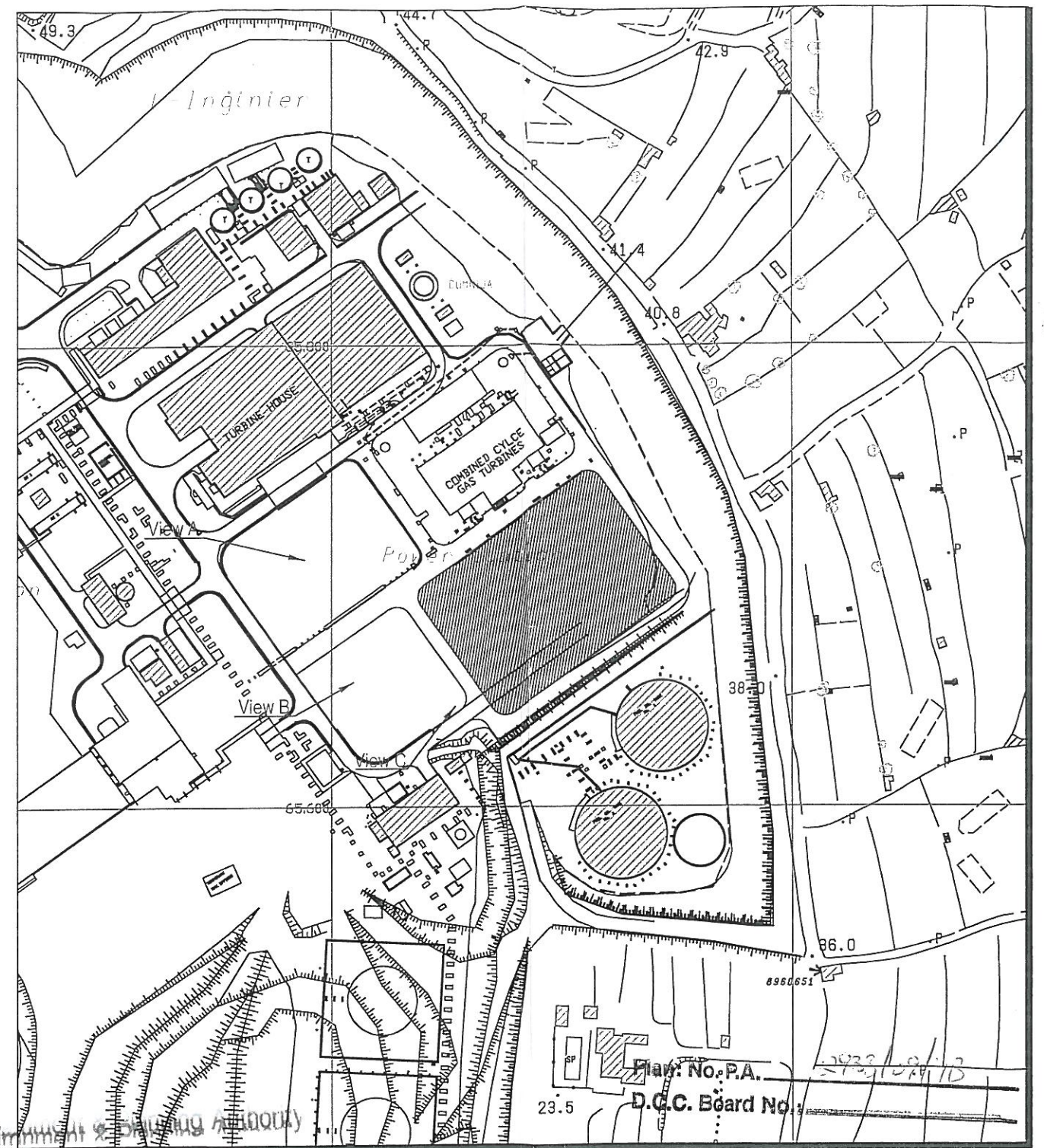
Sylvana De Bono  
Board Secretary  
MEPA





10 0 10 20 30 40 50 60 70 80 90 100 Metres

Scale 1:1000



50 100 150 200 250 Metres

Scale 1:2500

Board No. PA109-09/10 held on 28/1/2010

Chairman [Signature] Secretary [Signature]

Centre Coordinates:  $x = 60.100$   
 $y = 65.700$

Extracted from SS: 5865/5866  
6065/6066



CENTRAL ADMINISTRATION BUILDING  
DELMARA POWER STATION  
M'LORE  
CIVIL SECTION  
Perit Mario Scicluna  
TEL No. 22980842  
FAX No. 22980847

PROJECT  
Soil Investigation at Delimara Power Station Block 4

TITLE  
Site Plan

SCALE	1:1000 / 1:2500	DO NOT SCALE DRAWING
DRAWN BY	M. Vella	ISSUE
CHECKED BY	P. Baldacchino	DATE
APPROVED BY	M. Scicluna A&CE	Reg. File No.
Comp. File No.	Phase 3	DRG. No. CDS/DPS/19-10
Acad. V13		REVISED





## Permit with introductory note

Industrial Emissions (Integrated Pollution Prevention and Control) Regulations, LN 10 of 2013.

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**Delimara Power Station  
Enemalta Corporation,  
Delimara,  
Marsaxlokk,  
MXK 1320**

Permit number  
IP 0002/07/E

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## Introductory note

***This introductory note does not form part of the Permit***

The following Permit is issued under Regulation 7 of the Industrial Emissions (Framework) Regulations, 2013 (LN 9 of 2013) ("the Industrial Emissions (Framework) Regulations") to operate an installation carrying out activities covered by the description in Section 1.1 in Schedule 1 of the Industrial Emissions (IPPC) Regulations (LN 10 of 2013), to the extent authorised by the Permit, i.e.

**"Combustion of fuels in installations with a rated thermal input of 50 MW or more".**

Aspects of the operation of the installation which are not specifically regulated by conditions in the Permit may also be subject to the condition implied by Regulation 8 of the Industrial Emissions (IPPC) Regulations, which require the Operator to use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, managed, operated and decommissioned.

In some sections, the Permit conditions require the Operator to use Best Available Techniques (BAT), in each of the aspects of the management of the installation, to prevent and where that is not practicable to reduce emissions. These conditions do not explain what is BAT.

A non-technical description of the installation is given in the application, but the main activity of the installation is as follows:

- **Generation of electrical energy through the combustion of heavy fuel oil (HFO) and gasoil.**

Note that the Permit requires the submission of certain information to the Competent Authority (see sections 1, 2, 4 and 5). In addition, the Competent Authority has the power to seek further information at any time under regulation 11 of the Industrial Emissions (Framework) Regulations, provided that it acts reasonably.

### Other IPPC Permits relating to this installation

Permit holder	Permit Number	Date of Issue
<i>Not applicable</i>		

### Superseded Licences/Authorisations/Consents relating to this installation

Holder	Reference Number	Date of Issue
<i>Enemalta Corporation</i>	IP 0002/07/A	29 March 2010
<i>Enemalta Corporation</i>	IP 0002/07/B	6 December 2011
<i>Enemalta Corporation</i>	IP 0002/07/C	23 July 2012
<i>Enemalta Corporation</i>	IP 0002/07/D	17 September 2013

## Public Registers

This IPPC Permit and application is available to the public through the Competent Authority in accordance with the requirements of the Industrial Emissions (IPPC) Regulations. The applicant has made a request for certain information of a commercial nature to be withheld from the public. MEPA has been supplied with all this information and has accepted the request of the applicant, because it was deemed to be commercially confidential. Alternative text which provides relevant information but does not include the confidential information, has however been included in the application.

## Variations to the Permit

This Permit may be varied at any time in the future (by the Authority serving a Variation Notice on the Operator). If the Operator himself wants any of the Conditions of the

Permit to be changed, a formal application must be submitted to the Competent Authority. The **Status Log** within the Introductory Note to any such Variation Notice will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

### Surrender of the Permit

Before this Permit can be wholly or partially surrendered, an Application to surrender the Permit has to be made to the Competent Authority by the Operator. For the application to be successful, the Operator must be able to demonstrate to the Competent Authority that there is no pollution and/or public health risk and that no further steps are required to return the site to a satisfactory state.

### Transfer of the Permit or part of the Permit

Before the Permit can be wholly or partially transferred to another person, an Application to transfer the Permit has to be made to the Competent Authority, by the existing and proposed holders jointly. A transfer will be allowed unless the Authority considers that the proposed holder will not be the person who will have control over the operation of the installation or will not comply with the conditions of the transferred Permit. If, however, the Permit authorises the carrying out of a specified waste management activity, the transfer will only be allowed if the proposed holder is also considered to be a technically competent person.

### Status Log

Detail	Date	Comment
Application IP 0002/07	Received 05 February 2007	Not 'duly made'
Response to request for information	Request dated 16 June 2007	Response dated July 2007
Report on boiler conversion for emission reduction	PDS submitted 24 April 2008	Request for further information dated 14 July 2008. Further information submitted 24 September 2008
Noise survey	Report submitted 25 July 2008	
Application 'duly made'	27 April 2009	
Response to request for information	Request dated 27 April 2009	Response received 18 May 2009 Consolidated version received 18 May 2009
Public consultation	Commenced on 21 May 2009	Concluded on 20 June 2009
Re-classification of the phase 1 boilers (from 380 to 332 MW <sub>TH</sub> )	Official letter dated 28 September 2009 plus supporting documents.	
Permit determined	01 October 2009	
Permit issued	29 March 2010	
Application for variation of permit to include diesel engines	Application received on 11 February 2010	
Response to request for information	Request dated 19 April 2010	Response received 31 May 2010, 17 June 2010 and 26 July 2010
Response to request for	Request dated 17	Response received 12 May

Detail	Date	Comment
<i>information</i>	September 2010	and 2 June 2011
<i>Response to request for information regarding Nox emissions</i>	Request dated 24 June 2011	Response received 4 July 2011
<i>Response to request for information regarding socio-economic assessment</i>	Requests dated 24 June, 4 July and 18 July 2011	Response received on 4 August 2011
<i>Response to request for information</i>	Request dated 5 July 2011	Response received on 22 July, 27 July 2011.
<i>Correspondence regarding flue gas volume calculations</i>	Information submitted by Enemalta on 30 June, 8 and 29 July 2011 and 29 August 2011	Request accepted on 4 August 2011
<i>Request for variations to existing permit</i>	Received on 29 July 2011	
<i>Request for consolidated application</i>	Request made on 26 July 2011	Consolidated application received on 17 August (draft) and 23 August 2011 (final)
<i>Air dispersion model</i>	Report submitted on 24 August 2011	
<i>Updated cooling water dispersion modelling study</i>	Received on 7 September 2011	
<i>Public consultation</i>	Started on 24 August 2011	Concluded on 7 October 2011
<i>Renewal and variation determined</i>	5 December 2011	
<i>Permit issued</i>	6 December 2011	Permit expires on 6 December 2015 A consolidated permit is being issued
<i>Public consultation on proposed extension to condition 2.2.1.7.9 from September 2012 to June 2013</i>	Started on 17 May 2012	Concluded on 18 June 2012
<i>Variation determined</i>	12 July 2012	
<i>Permit issued</i>	23 July 2012	Permit expires on 6 December 2015 A consolidated permit is being issued
<i>Public consultation on proposed extension for HFO use from June 2013 to March 2013</i>	Started on 28 June 2013	Concluded on 28 July 2013
<i>Variation determined</i>	5 September 2013	
<i>Permit Issued</i>	17 September 2013	Permit expires on 6 December 2015 A consolidated permit is being issued
<i>Public consultation on the determination of the choice of fuel for DPS6</i>	Started on 11 February 2014	Concluded on 12 March 2014

Detail	Date	Comment
<i>Variation determined</i>	27 March 2014	
<i>Permit issued</i>	1 April 2104	Permit expires on 6 December 2015. A consolidated permit is being issued.

**End of Introductory Note**

## Permit

Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (LN 10 of 2013)

Permit number

**IP 0002/07/E**

The Malta Environment and Planning Authority (hereinafter the Authority; the Competent Authority or MEPA) in exercise of its powers under Regulation 7 of the Industrial Emissions (Framework) Regulations, 2013 (LN 9 of 2013) ("the Industrial Emissions (Framework) Regulations"), hereby authorises:

**Enemalta Corporation** (hereinafter "the Operator" or "the Permit Holder"),  
Of / Whose Registered Office (or principal place of business) is at  
**Church Wharf, Marsa MRS 1000**

to operate an installation at  
**Delimara Power Station, Delimara, Marsaxlokk, MXK 1320**

to the extent authorised by and subject to the conditions of this Permit.

Approval Stamp



## Conditions

### 1 General

These permit conditions shall be read in conjunction with the IPPC Application received on 02 February 2007, as subsequently clarified and recorded in the status log above, which forms an integral part of these permit conditions.

The operator shall undertake all necessary measures and precautions to prevent adverse health risks as identified by the Environmental Health Directorate. If requested the operator has to provide evidence of mitigating measures or removal of any possible public health risks.

#### 1.1 Permitted Activities

- 1.1.1 The Operator is authorised to carry out the activities and the associated activities specified in Table 1.1.1.

Table 1.1.1		
Activity listed in Schedule 1 of the Industrial Emissions (IPPC) Regulations / Associated Activity	Description of specified activity	Limits of specified activity
Section 1.1: Combustion installations with a rated thermal input exceeding 50 MW	Generation of electrical energy through the combustion of heavy fuel oil and gasoil. Installation consists of two boilers making up DPS1 (phase 1A and phase 1B), two open cycle gas turbines (DPS2 and DPS3), two combined cycle gas turbines (DPS4 and DPS5) and eight medium-speed combined cycle diesel engines (DPS6).	From receipt of fuel to delivery of utility.
Associated activity of fuel handling and storage	Handling and storage of heavy fuel oil and gas oil.	From receipt of the fuel to combustion in the combustion plant.
Associated activity of utilities	Sea water pre-treatment plant.	From intake of sea water to delivery of utility.
Associated activity of storage, treatment and disposal/recycling of waste materials	Handling, storage, treatment and disposal/recovery of wastes from installation.	From generation of waste to disposal or recycling onsite or offsite.
Associated activity of maintenance	Maintenance carried out in any workshop in the installation.	From maintenance activity to appropriate recovery/disposal of any wastes created.



## **1.2 Site**

- 1.2.1 The activities authorised under condition 1.1.1 shall not extend beyond the Site, as outlined in red on the Site Plan in Schedule 9 to this Permit.

### 1.3 Information to the public

- 1.3.1 The operator shall make emission data (most recent hourly, daily, diurnal and monthly average values and results of the most recent discontinuous measurement) publicly available via the Internet not later than 24 hours after the production of such data.
- 1.3.2 The Local Councils most affected by emissions from the Delimara Power Station including Birżebbuġa, Marsaxlokk and Żejtun may jointly and in agreement with both the Authority and the operator, establish independent ambient air monitoring systems to monitor for levels of particulate matter, nitrogen oxides, sulphur dioxide, carbon monoxide, as well as any other parameters that may be agreed with the Authority at the expense of the Operator.
- 1.3.3 The Local Councils most affected by emissions from the Delimara Power Station including Birżebbuġa, Marsaxlokk and Żejtun may jointly and in agreement with the Authority, jointly appoint an independent expert to assist in the interpretation of the emission data made publicly available pursuant to condition 1.3.1.

### 1.4 Overarching Management Conditions

- 1.4.1 Without prejudice to the other conditions of this Permit, the Operator shall implement and maintain an Environmental Management System (EMS), and an organisational structure, and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit. The EMS can take the form of a standardised system (e.g. EN ISO 14001:1996 or EMAS) or a non-standardised ("customised") system, provided that is properly designed and implemented. The EMS shall give information on the person responsible for environmental management on site, and standard operating procedures on environmentally relevant matters including contingency plan.
- 1.4.2 As part of the EMS, the Permit Holder shall submit the following reports annually as part of the AER of the site:
  - 1.3.2.1 Environmental Policy containing the installation's environmental objectives and targets;
  - 1.3.2.2 Environmental Management Programme report (for the reporting year);
  - 1.3.2.3 Environmental Management Programme proposal (for the following year);
- 1.4.3 The Permitted Installation shall, subject to the conditions of this Permit, be managed, controlled and operated as described in the application and subsequent responses to requests for information submitted as per the Status Log above, or as otherwise agreed in writing by the Authority.
- 1.4.4 All plant, equipment and technical means used in operating the Permitted Installation shall be maintained in good operating condition.
- 1.4.5 The Permitted Installation shall be managed, controlled and operated by staff suitably trained and fully conversant with the requirements of this Permit.

- 1.4.6 The Operator shall ensure that no development and/or consequent operation of the plant would impede further development for use of natural gas, both supplied through pipeline or in liquid form, as major fuel for use in electricity generation.

## 1.5 Improvement Programme

- 1.5.1 The Operator shall complete the improvements specified in Table 1.5.1 by the date specified in that table, and shall send written notification of the date of completion of each requirement to the Authority within 10 working days of the completion of each such requirement.

Table 1.5.1: Improvement programme		
Reference*	Requirement	Date
4	Submission of Outline Decommissioning Plan and land monitoring data, as per Conditions 2.16.1 and 2.16.3.	To be submitted by 15 December 2011.
5	External audit of the safety report.	To be submitted by end September 2012.
8	Fitting of high liquid level alarms on all fuel tanks, and high-high liquid level alarms with automatic shutdown on fuel tanks used for internal fuel transfer.	By 30 June 2012.
12	Submission of a land and groundwater monitoring proposal in conformity with Articles 16(2) and 22 of the Industrial Emissions Directive, 2010/75/EU.	To be submitted by end January 2013.
13	Submission of standard operating procedures indicating actions to be taken in case of failure or breakdown of abatement systems (e.g. FGD, bag filter, SCR system, effluent treatment plant, oily water treatment plant). The procedure shall include operation of DPS6 on diesel in case of failure of the FGD or bag filter systems.	To be submitted by end September 2012.
14	Submission of certification of rated thermal efficiency for the diesel engines.	To be submitted within one month of conclusion of commissioning of the diesel engines.
15	Submission of the following documentation regarding the conversion of the plant to gas: <ul style="list-style-type: none"> <li>(a) Feasibility study regarding conversion of DPS to various fuel options (namely LNG, CNG and Natural Gas)</li> <li>(b) Risk assessment</li> <li>(c) Infrastructural requirements regarding conversion of DPS to various fuel options (namely LNG, CNG and Natural Gas), including siting, and conversion of existing plant (DPS1-6)</li> <li>(d) Information regarding proposed fuel gas leak detection systems</li> <li>(e) Material safety data sheet for gas fuel proposed.</li> </ul>	(a) and (c) to be submitted by end December 2012.  (b), (d) and (e) to be submitted by end June 2013.

<b>Table 1.5.1: Improvement programme</b>		
<b>Reference*</b>	<b>Requirement</b>	<b>Date</b>
16	Installation of appropriate abatement to the satisfaction of the Authority to mitigate odours from existing fuel tanks.	By end October 2012.
17	Submission of proposals regarding methodology for marine ecological surveys.	By end May 2012.
18	Installation of continuous hydrocarbon detector at oil interceptors 2 & 4.	By end April 2012.
19	Submission of a study on infrastructural requirements, feasibility and environmental risks of marine transport of flue gas desulphurisation waste both to Malta Freeport and direct export from DPS.	By end March 2012.
20	Updates to the air dispersion modelling study carried out by the Authority as per condition 2.2.1.13.	<p>Proposed methodology to be submitted by end January 2013.</p> <p>First update to the study shall be submitted by end June 2013.</p> <p>Second update to the study shall be submitted by end June 2014.</p>

\* Requirements 4-8 refer to requirements present in IP 0002/07/A (modified as required); requirements 12 onwards are new in IP 0002/07/B.

## **1.6 Operational Changes**

- 1.6.1 The Operator shall seek the Authority's written agreement to any operational change as defined by LN 10 of 2013 and its amendments, by sending to the Authority: written notice of the details of the proposed change, including an assessment of its possible effects (including changes in emissions and waste production) on risks to the environment and public health from the Permitted Installation; any relevant supporting assessments and drawings; and the proposed implementation date.
- 1.6.2 Any such change shall not be implemented until agreed to in writing by the Authority. As from the agreed implementation date, the Operator shall operate the Permitted Installation in accordance with that change, and relevant provisions in the Application shall be deemed to be amended.

## **1.7 Pre-Operational Conditions**

- 1.7.1 There are no pre-operational conditions.

## **1.8 Off-site Conditions**

- 1.8.1 The Permit holder shall ensure that no chemicals or waste escape to the environment especially when transporting such materials offsite or onsite.
- 1.8.2 Transport of flue gas desulphurisation waste shall follow the route identified in the Traffic Impact Statement submitted in the IPPC application. However, the Authority may require marine transport of such

waste, depending on the outcome of the study on infrastructural requirements, feasibility and environmental risks of marine transport submitted as per Table 1.5.1 (reference 19).

- 1.8.3 Without prejudice to condition 1.8.2, should a change in the land route be proposed, the Permit holder is required to submit an updated Traffic Impact Statement to enable assessment of the request. In addition, once a land transport contractor has been identified, the operator shall have in place a spill response plan for use by transport operators in case of spillages during flue gas desulphurisation waste transfer.

## 2 Operating Conditions

### 2.1 In-Process Controls

- 2.1.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the IPPC application, or as otherwise agreed in writing by the Authority in accordance with conditions 1.6.1 and 1.6.2 of this Permit.

### 2.2 Emissions to Air

#### 2.2.1 Emissions to Air (excluding Odour, Noise or Vibration) from Specified Points: General Considerations

- 2.2.1.1 Waste gases from the combustion plants within the Delimara Power Station shall be discharged in a controlled manner by means of a stack.
- 2.2.1.2 A release from the Authorised Process into the atmosphere shall arise only from a release point specified in Table 2.2.1, which shall arise only from the source for that release specified in that Table.

**Table 2.2.1 Emission points to air**

Release Point	Source	Total Thermal Rating	UTM Co-ordinates <sup>1</sup>	
		MW <sub>TH</sub>	x-coordinates	y-coordinates
Chimney D1	DPS1 (Boilers phase 1A and phase 1B )	332	460,038	3,965,822
Chimney D2	DPS2 (OCGT1)	121	459,869	3,965,745
Chimney D3	DPS3 (OCGT2)	121	459,881	3,965,727
Chimney D4A	DPS4 (CCGT3 Bypass stack)	121	460,088	3,965,766
Chimney D4B	DPS4 (CCGT3 Main Stack)		460,072	3,965,789
Chimney D5A	DPS5 (CCGT4 Bypass stack)	121	460,037	3,965,731
Chimney D5B	DPS5 (CCGT4 Main Stack)		460,021	3,965,754
Chimney D6A	DPS6 (Diesel engines 1 & 2)	77	460,137	3,965,687
Chimney D6B	DPS6 (Diesel engines 3 & 4)	77	460,134	3,965,685
Chimney D6C	DPS6 (Diesel engines 5 & 6)	77	460,104	3,965,663
Chimney D6D	DPS6 (Diesel engines 7 & 8)	77	460,101	3,965,661

- 2.2.1.3 Boilers constituting DPS1 shall fire only HFO (Heavy Fuel Oil) in the Authorised Process in accordance with the Application.
- 2.2.1.4 Unless the boilers making up the plant DPS1 are fitted with a flue gas desulphurisation plant, the sulphur content of the fuel fed to the boilers

<sup>1</sup> Zone 33s, datum ED 50, ellipsoid – Hayford International.

constituting this plant shall in no case exceed that value which will allow the plant to achieve the limit value specified in this permit. Upon purchase of fuel, a copy of the buying specifications must be supplied to the Authority, and prior to delivery of fuel, fuel certificates must be supplied to the Authority for verification of the sulphur content. In case it results that the emissions of sulphur dioxide from DPS1 will exceed this limit value, the competent authority reserves the right to lower the maximum sulphur content of the HFO fired by this plant.

- 2.2.1.5 Gas Turbines DPS2, DPS3, DPS4 and DPS5 shall fire only gasoil in the Authorised Process in accordance with the Application. The gasoil used shall comply with the standards laid down by the Quality of Fuels Regulations (L.N. 44 of 2008 as may be amended from time to time), i.e. the sulphur content of the gas oil fired by gas turbines DPS2, DPS3, DPS4 and DPS5 shall in no case exceed 1 kg for every tonne of gas oil.
- 2.2.1.6 Diesel engines constituting DPS6 may fire either HFO or gasoil. If HFO is used, the sulphur content fed shall in no case exceed 10 kg for every tonne of heavy fuel oil. If gasoil is used, the sulphur content shall be as specified in condition 2.2.1.5.
- 2.2.1.7 If the operator opts to use HFO in DPS6 the following conditions shall apply over and above any other condition in the permit:
  - 2.2.1.7.1 A Monitoring Committee shall be set up, which shall be chaired by the Director of Environment Protection, one representative of Enemalta Corporation, and one representative and technical advisor from each of the local councils of Birżebbuġa and Marsaxlokk. Each member, including the Chairman, shall have one vote.
  - 2.2.1.7.2 The Committee shall meet at least once every month. Any member of the Committee may request the Chairman to convene any other meetings of the Committee and the Chairman shall convene such a meeting within 7 days from such a request.
  - 2.2.1.7.3 The air quality data referred to in condition 2.2.1.14 shall be supplied by the Authority to the consultant every two weeks (by not later than two weeks after the last sampling date in each two week period) and published on the operator's website.
  - 2.2.1.7.4 The operator shall, immediately and at all times, abide by any instructions, orders and directives given to him by the Authority.
- 2.2.1.8 The operator shall determine the mass of each fuel fired in the Authorised Process for each Reporting Year and report this as part of the AER.
- 2.2.1.9 The operator shall obtain certificates of analysis for one representative composite sample of HFO per delivery for the parameters listed in table 2.2.1.1. In addition, if the flue gas volume from DPS6 is calculated rather than measured, the parameters listed in table 2.2.1.2 shall be measured in one representative composite sample of each fuel delivery intended for use in the diesel engines. The analyses shall be carried out by a lab accredited (or in the process of accreditation, as confirmed by the National Accreditation Body (NAB-Malta) or equivalent) to at least EN ISO 17025:2005/Cor 1:2006 and preferably for each and every test listed in table 2.2.1.1.
- 2.2.1.10 Physical parameters in table 2.2.1.1 shall be measured using EN, EN ISO or ISO standard methods or equivalent.

- 2.2.1.11 The chemical parameters in tables 2.2.1.1 and 2.2.1.2 shall be analysed to the relevant standards (or equivalent) as specified by the said table. The methods for analysis of the parameters in table 2.2.1.2 shall have a precision suitable for the accurate calculation of flue gas volume. If a suitable method for analysis of any of the parameters in table 2.2.1.2 is not available, calculation of flue gas volume from DPS6 is not authorised; in such cases, flue gas volume shall be measured.

**Table 2.2.1.1 Standards for the analysis of physical and chemical parameters**

<b>Physical Parameters</b>		
<b>Parameter</b>	<b>Unit</b>	<b>Standard</b>
Density	kg.m <sup>-3</sup>	ISO 12185 or ISO 3675 or equivalent
Flash point	°C	EN ISO 2719:2002 or equivalent
Heat Value (Upper and Lower)	MJ.kg <sup>-1</sup>	ASTM D4868-00 (2005) or equivalent
Pour Point	°C	ISO 3016:1994 or equivalent
Viscosity	cSt	EN ISO 3104:1996 or equivalent
<b>Chemical Parameters</b>		
<b>Parameter</b>	<b>Unit</b>	<b>Standard</b>
Ash content	%	ISO 12185, ISO 3675 or equivalent
Nickel content	ppm	EN 13131:2000 or equivalent
Sulphur Content	mg S.kg <sup>-1</sup>	EN ISO 8754:2003 or equivalent
Vanadium content	ppm	EN 13131:2000 or equivalent
Water content	%	ISO 3733, ASTM D95 or equivalent

**Table 2.2.1.2 Standards for the analysis of chemical parameters for flow rate calculation**

<b>Parameter</b>	<b>Unit</b>	<b>Standard</b>
Sulphur Content	mg S.kg <sup>-1</sup>	EN ISO 8754:2003 or equivalent
Carbon content	% by weight	ASTM D5291 or equivalent EN or ISO
Hydrogen content	% by weight	ASTM D5291 or equivalent EN or ISO
Nitrogen content	% by weight	ASTM D3228 or equivalent EN or ISO
Oxygen content	% by weight	EN, ISO or equivalent

- 2.2.1.12 At the end of every year, the operator shall forward to the Authority a copy of all the certificates of analysis for every representative composite sample throughout the year as part of the AER, except where these have already been submitted to the Authority.
- 2.2.1.13 The operator shall update the dispersion modelling study carried out by the Authority twice, using the data from the plant's air emissions monitoring



systems, and ambient air monitoring data from Žejtun, Birżebbuġa and Marsaxlokk (including the data collected as required by 2.2.1.14). The updated studies shall assess the dispersion of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>, arsenic, cadmium, nickel, lead and vanadium and shall estimate the likelihood of there being any exceedances of the relevant limits laid down by LN 478 of 2010, especially but not limited to the most sensitive receptor(s) in the prevailing wind direction within a 15 km radius. The operator shall submit to the Authority a proposed methodology for this study, which shall be to the Authority's satisfaction.

- 2.2.1.13.1 The first updated study shall include an assessment of the impact from the operation of the diesel engines.
- 2.2.1.13.2 The second updated study shall include an assessment of the impact of closure of the boilers at Marsa Power Station and operation of the interconnector.
- 2.2.1.14 Starting in the first half of January 2012, the operator shall assess air quality in Marsaxlokk by carrying out daily monitoring of PM<sub>10</sub> and PM<sub>2.5</sub> at a location in Marsaxlokk to be agreed with the Authority, in accordance with the standards specified in LN 478 of 2010. Monitoring shall be carried out under representative conditions. Any meteorological data utilised by the consultant shall be generated *in situ*. The operator shall also monitor for arsenic, cadmium, nickel, lead and vanadium on a quarterly basis. The results of such monitoring shall be submitted as part of the Monthly and Annual Environmental Reports, in the formats specified in Schedule 4 and Schedule 2 respectively.
- 2.2.1.15 In order to ensure compliance with LN 478 of 2010, the Authority reserves the right to impose any additional conditions it deems necessary on the Operator.
- 2.2.1.16 The Authority shall be notified by the Operator of substantial changes in the type of fuel used or in the mode of operation of the installation. The Authority shall then determine whether the monitoring requirements laid down in condition 2.2 are still adequate or require adaptation.
- 2.2.1.17 Without prejudice to conditions 2.2.2.2, 2.2.3.2 and 2.2.4.2, the boilers constituting DPS1, the gas turbines DPS2, DPS3, DPS4 and DPS5 and the diesel engines constituting DPS6 shall be operated so as to give a smoke colour less than or equal to shade number 1 on the Ringelmann chart (see Schedule 5) except during periods of start up, and soot blowing. The incidence of this colour being exceeded during normal operations (i.e. excluding startups and soot blowing), shall be cumulatively less than 60 minutes in any 24 hour period from the whole installation.
- 2.2.1.18 The operator shall make sure that the frequency of, soot blowing and malfunctions, is minimised as far as is technically possible.
- 2.2.1.19 The operator shall ensure that all operations on-site shall be carried out in a manner such that air emissions and/or odours do not result in significant impairment of, or significant interference with amenities or the environment or in a public health risk beyond the site boundary.
- 2.2.1.20 The operator shall monitor continuously the speed and the direction of the wind at the site. The results of this monitoring shall be presented in the form of a wind rose as part of the AER. In addition, any meteorological data collected by the operator shall be made available to the Authority upon request.

### Determination of start-up and shut-down

- 2.2.1.21 The determination of periods of start-up and shut-down as defined in the following conditions shall be maintained in accordance with the provisions of Commission Implementing Decision 2012/249/EU.
- 2.2.1.22 The operator shall immediately inform the Authority should there be any changes in any aspects relating to each plant that affect start-up and shut-down periods, including the installed equipment, fuel type, plant role in the system and installed abatement technology,
- 2.2.1.23 The operator shall make sure that the frequency of start up and shut down periods are minimised as far as practicable.
- 2.2.1.24 The operator shall ensure that all abatement equipment is brought into operation as soon as is technically practicable.
- 2.2.1.25 Start-up and shut-down of the respective units is defined in the table 2.2.1.3:

Table 2.2.1.3 – Determination of start-up and shut-down for the respective unit at the Delimara Power Station				
Determination of start-up and shut-down for DPS 1				
	Phase I A		Phase I B	
End of Start-up period	17% of the rated electrical output		17% of the rated electrical output	
Start of Shut-down period	17% of the rated electrical output		17% of the rated electrical output	
Determination of start-up and shut-down for DPS 4 and DPS 5 (CCGT 3 and CCGT4)				
	DPS 4		DPS 5	
Mode	Open Cycle	Combined Cycle	Open cycle	Combined cycle
End of Start-up period	18% of the rated electrical output	18% of the rated I electrical output	18% of the rated electrical output	18% of the rated electrical output
Start of Shut-down period	18% of the rated electrical output	18% of the rated electrical output	18% of the rated electrical output	18% of the rated electrical output
Determination of start-up and shut-down for DPS 2 and DPS 3 (OCGT 1 and OCGT 2)				
	DPS 2		DPS 3	
End of Start-up period	18% of the rated electrical output		18% of the rated electrical output	
Start of Shut-down period	18% of the rated electrical output		18% of the rated electrical output	

<b>Determination of start-up and shut-down for DPS 6 (Diesel Engines 1 to 8)</b>		
	Diesel Engine	Use of more than 1 diesel engine (used in the start up of the second diesel engine)
End of Start-up period	Upstream and downstream temperature of the SCR is $>330^{\circ}\text{C}$	Upstream and downstream temperatures of the SCR of both engine 1 and engine 2 is $>330^{\circ}\text{C}$
End of Shut-down period	Engine load $\leq 13\%$ of the rated DE Electrical output	Engine 1 and Engine 2 $\leq 13\%$ of the rated DE Electrical output

## 2.2.2 Emissions to Air from DPS1 (boilers)

2.2.2.1 The Operator shall carry out monitoring of the parameters listed in Table 2.2.2.1, according to the frequency specified in this table. The monitoring method and the location of sampling points shall be in accordance with this table. Measurements shall be carried out in the waste gases of the individual units constituting DPS1.

2.2.2.2 The emission limit values specified in Table 2.2.2.1 shall not be exceeded. All concentrations shall be corrected to 273 K, 101.3 kPa, dry gas volume and to an oxygen ( $\text{O}_2$ ) content of 3%. These concentrations relate to volume flows without dilution.

**Table 2.2.2.1 Monitoring and emission limits for DPS1**

Parameter	Monitoring frequency	Monitoring method	Sampling points located according to	Emission limit		Maximum allowable factor subtracted by validation, in accordance with LN 172/10
Dust (TSP)	Continuous	EN 13284-2:2004	EN 13284-1: 2004	55 $\text{mg}/\text{Nm}^3$ (97% of all 48 hourly mean values)	50 $\text{mg}/\text{Nm}^3$ (calendar monthly mean value)	30%
$\text{SO}_2$	Continuous	ISO 7935:1992 or the equivalent EN standard	ISO 10396:2007 or the equivalent EN standard.	1639 $\text{mg}/\text{Nm}^3$ (97% of all 48 hourly mean values)	1490 $\text{mg}/\text{Nm}^3$ (calendar monthly mean value)	20%

Parameter	Monitoring frequency	Monitoring method	Sampling points located according to	Emission limit value		Maximum allowable factor subtracted by validation, in accordance with LN 172/10
NO <sub>x</sub>	Continuous	ISO 10849:1996 or the equivalent EN standard	ISO 10396:2007 or the equivalent EN standard	495 mg/Nm <sup>3</sup> (95% of all 48 hourly mean values)	450 mg/Nm <sup>3</sup> (calendar monthly mean value)	20%
CO	Continuous	EN 10558:2006	ISO 10396:2007 or the equivalent EN standard	110 mg/Nm <sup>3</sup> (97% of all 24 hourly mean values)	100 mg/Nm <sup>3</sup> (monthly average)	10%
Dioxins and furans (PCDDs and PCDFs)	Every two years	EN 1948-1,2,3,4:2006, sampling to be carried out over at least 6 hours		0.1 ng TEQ /Nm <sup>3</sup> (annual average) calculated as per schedule 6		-
Cadmium (Cd) and Thallium (Tl) together	Every six months	EN 14385:2004, sampling to be carried out over at least 6 hours	EN 13284-1: 2004	0.05 mg/Nm <sup>3</sup> (annual average)		-
Arsenic (As), Chromium (Cr), Cobalt (Co), Copper (Cu), Manganese (Mn), Nickel (Ni), Lead (Pb), Antimony (Sb) and Vanadium (V) together	Every six months	EN 14385:2004, sampling to be carried out over at least 6 hours	EN 13284-1: 2004	0.5 mg/Nm <sup>3</sup> (annual average)		-
PAHs as per Schedule 8	Annually	ISO 11338-1:2003 or equivalent, sampling to be carried out over at least 6 hours	ISO 12884:2000 or equivalent	-		-

2.2.2.3 Continuous measurements shall include the relevant process operation parameters of oxygen content, temperature, pressure and water vapour

content, velocity and flue gas volume, as per Condition 2.2.5.1, provided that where the sampled exhaust gas is dried prior to emission analyses, the Operator shall not be required to measure the water vapour content of the exhaust gas.

- 2.2.2.4 Discontinuous analyses shall be carried out by a laboratory accredited (or in the process of accreditation, as confirmed by the National Accreditation Body (NAB-Malta) or equivalent) to at least EN ISO 17025:2005/Cor 1:2006 and preferably for each and every analyte.
- 2.2.2.5 The operator may alternatively determine the concentration of heavy metals in the flue gases by subtracting the concentration of the metals in the boiler bottom-ash from the concentration of the metals in the fuel; taking into consideration the relative waste gas flow rates. Samples should be analysed to the relevant EN or EN ISO standards or equivalent.
- 2.2.2.6 In order to validate the hourly readings, the operator shall subtract a factor determined according to the procedure established by the relevant part of EN14181 and which shall in no case exceed the percentages of the measured valid hourly average value indicated in Table 2.2.2.1.
- 2.2.2.7 If the operator shows that carbon monoxide emissions are negligible through the submission of in-situ monitoring data which is representative of the operating mode of each plant, then the continuous monitoring requirement will be waived. These measurements shall be carried out by an auditor approved by MEPA.
- 2.2.2.8 If the continuous monitoring requirement is waived as per condition 2.2.2.7, the operator will be required to monitor carbon monoxide (CO) emissions discontinuously at least once daily. The sampling point shall be located as per BS 1756-4:1976 or the equivalent EN standard and the sampling time shall not be less than 6 hours.

### 2.2.3 Emissions to Air from DPS2-5 (Gas turbines)

- 2.2.3.1 The Operator shall carry out monitoring from DPS2-5 of the parameters listed in Table 2.2.3.1, according to the frequency specified in this table. The monitoring method and the location of sampling points shall be in accordance with this table.
- 2.2.3.2 The emission limit values specified in Table 2.2.3.1 shall not be exceeded. All concentrations shall be corrected to 273 K, 101.3 kPa, dry gas volume and to an oxygen (O<sub>2</sub>) content of 15%. These concentrations relate to volume flows without dilution.

**Table 2.2.3.1 Monitoring and emission limits for DPS2-5**

Parameter	Monitoring frequency	Monitoring method	Emission limit value	Maximum allowable factor subtracted by validation, in accordance with LN 172/10
Dust (TSP)	Continuous	ISO 11042-2: 1996 or the equivalent EN standard	-	-

Parameter	Monitoring frequency	Monitoring method	Emission limit value		Maximum allowable factor subtracted by validation, in accordance with LN 172/10
SO <sub>2</sub>	Continuous	ISO 11042-2: 1996 or the equivalent EN standard	-		-
NO <sub>x</sub> (measured as NO <sub>2</sub> )	Continuous	ISO 11042-2: 1996 or the equivalent EN standard	495 mg/Nm <sup>3</sup> (95% of all 48 hourly mean values)	450 mg/Nm <sup>3</sup> (calendar monthly mean value)	20%
CO	Continuous	ISO 11042-2: 1996 or the equivalent EN standard	55 mg/Nm <sup>3</sup> (97% of all 24 hourly mean values)	50 mg/Nm <sup>3</sup> (monthly average)	10%

- 2.2.3.3 Emissions from gas turbines DPS2 and DPS3 shall be monitored as per the standard in Table 2.2.3.1 above. In case this is not technically feasible, the operator shall use alternative monitoring techniques or other solutions which would ensure compliance with Regulation 14 of LN 172 of 2010.
- 2.2.3.4 Continuous measurements shall include the relevant process operation parameters of oxygen content, temperature, pressure and water vapour content, velocity and flue gas volume, as per Condition 2.2.5, provided that where the sampled exhaust gas is dried prior to emission analyses, the Operator shall not be required to measure the water vapour content of the exhaust gas.
- 2.2.3.5 In order to validate the hourly readings, the operator shall subtract a factor determined according to the procedure established by the relevant part of EN14181 and which shall in no case exceed the percentages of the measured valid hourly average value indicated in Table 2.2.3.1.

## 2.2.4 Emissions to Air from DPS6 (diesel engines)

- 2.2.4.1 The Operator shall carry out monitoring from DPS6 of the parameters listed in Table 2.2.4.1, according to the frequency specified in this table. The monitoring method and the location of sampling points shall be in accordance with this table.
- 2.2.4.2 The emission limit values specified in Table 2.2.4.1 shall not be exceeded. All concentrations shall be corrected to 273 K, 101.3 kPa, dry gas volume and to an oxygen (O<sub>2</sub>) content of 15%. These concentrations relate to volume flows without dilution. The Authority may revise emission limits and monitoring frequencies for metals depending on the monitoring results. Monitoring for metals and PAHs shall not be required if DPS6 is operated using solely gasoil.

**Table 2.2.4.1 Monitoring and emission limits for DPS6**

Parameter	Monitoring frequency	Monitoring method	Emission limit value		Maximum allowable factor subtracted by validation, in accordance with LN 172/10
Dust (TSP)	Continuous	EN 15267-3, EN 14181	55 mg/Nm <sup>3</sup> (97% of all 48 hourly mean values)	50 mg/Nm <sup>3</sup> (calendar monthly mean value)	30%
SO <sub>2</sub>	Continuous	EN 14181, EN 15267-3, EN ISO 14956	132 mg/Nm <sup>3</sup> (97% of all 48 hourly mean values)	120 mg/Nm <sup>3</sup> (calendar monthly mean value)	20%
NO <sub>x</sub> (measured as NO <sub>2</sub> )	Continuous	EN 14181, EN 15267-3, EN ISO 14956	176 mg/Nm <sup>3</sup> (95% of all 48 hourly mean values)	160 mg/Nm <sup>3</sup> (calendar monthly mean value)	20%
CO	Continuous	EN 14181, EN 15267-3, EN ISO 14956	264 mg/Nm <sup>3</sup> (97% of all 24 hourly mean values)	240 mg/Nm <sup>3</sup> (calendar monthly mean value)	10%
Ammonia	Continuous	EN 14181, EN 15267-3, EN ISO 14956	2.6 mg/Nm <sup>3</sup> (annual average)		-
Cadmium (Cd) and thallium (Tl) together	Every three months	EN 14385:2004, sampling to be carried out over at least 6 hours (sampling points located according to EN 13284-1:2004)	0.02 mg/Nm <sup>3</sup> (annual average)		-
Chromium (Cr), cobalt (Co), copper (Cu), manganese (Mn), lead (Pb) and antimony (Sb) together	Every three months		0.2 mg/Nm <sup>3</sup> (annual average)		-
Arsenic (As)	Every three months		0.005 mg/Nm <sup>3</sup> (annual average)		-

Parameter	Monitoring frequency	Monitoring method	Emission limit value	Maximum allowable factor subtracted by validation, in accordance with LN 172/10
Nickel (Ni)	Every three months	ISO 11338-1:2003 or equivalent, sampling to be carried out over at least 6 hours (sampling points located according to ISO 12284:2000)	0.345 mg/Nm <sup>3</sup> (annual average)	-
Vanadium (V)	Every three months		3.1 mg/Nm <sup>3</sup> (annual average)	-
PAHs as per Schedule 8	Annually		0.009 mg/Nm <sup>3</sup>	-

2.2.4.3 Continuous measurements shall include the relevant process operation parameters of oxygen content, temperature, pressure and water vapour content, velocity and flue gas volume, as per Condition 2.2.5, provided that where the sampled exhaust gas is dried prior to emission analyses, the Operator shall not be required to measure the water vapour content of the exhaust gas, and provided that flue gas volume and velocity may be calculated instead of measured where the parameters listed in table 2.2.1.2 are measured as per conditions 2.2.1.9 and 2.2.1.11.

2.2.4.4 Discontinuous analyses shall be carried out by a laboratory accredited (or in the process of accreditation, as confirmed by the National Accreditation Body (NAB-Malta) or equivalent) to at least EN ISO 17025:2005/Cor 1:2006 and preferably for each and every analyte.

2.2.4.5 The operator may alternatively determine the concentration of heavy metals in the flue gases by subtracting the concentration of the metals in the boiler bottom-ash from the concentration of the metals in the fuel; taking into consideration the relative waste gas flow rates. Samples should be analysed to the relevant EN or EN ISO standards or equivalent.

2.2.4.6 In order to validate the hourly readings, the operator shall subtract a factor determined according to the procedure established by the relevant part of EN14181 and which shall in no case exceed the percentages of the measured valid hourly average value indicated in Table 2.2.4.1.

## 2.2.5 Emissions to Air from DPS 1-6: Additional Monitoring Requirements



- 2.2.5.1 Without prejudice to previous conditions, the operator shall monitor continuously for the parameters listed in table 2.2.5.1 using the methods listed in the same table or their equivalent as may be agreed with the Authority.

**Table 2.2.5.1: Monitoring of additional parameters**

Parameter	Standard Number /Instrument	Title
Oxygen	ISO 12039:2001	Stationary Source Emissions - - Determination of carbon monoxide, carbon dioxide and oxygen - - Performance characteristics of automated measuring systems.
Water Content	EN 14790:2005	Determination of moisture content in stack gases.
Velocity	ISO 10780:1994	Stationary source emissions -- Measurement of velocity and volume flowrate of gas streams in ducts.
Flue gas volume	ISO 14164:1999	Stationary Source Emissions - - Determination of the volume flow rate of gas streams in ducts - - automated method.
Flue gas temperature (prior to discharge into the atmosphere)	Temperature Sensor	N/A
Flue gas pressure (prior to discharge into the atmosphere)	Pressure Sensor	N/A

## 2.2.6 Compliance with Total Emission Ceilings for Sulphur Dioxide (SO<sub>2</sub>) and Oxides of Nitrogen (NO<sub>x</sub>)

- 2.2.6.1 From the 1<sup>st</sup> January 2010 onwards, the total annual loads of sulphur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) from both the Marsa Power Station and Delimara Power Station together shall not exceed the ceilings specified in Table 2.2.6 or any other annual ceilings as may be amended by the Authority from time to time.

<b>Table 2.2.6 Emission Ceiling for Delimara Power Station and Marsa Power Station together.</b>	
<b>Pollutant</b>	<b>Total Annual Load</b>
Sulphur Dioxide (SO <sub>2</sub> )	8000 tons
Nitrogen Oxides (NO <sub>x</sub> )	4500 tons

- 2.2.6.2 The operator is to forward to the Authority:
- 2.2.6.2.1 By not later than end of September of each year, a detailed plan indicating how the installation will be operated in the following year in order to comply with the ceilings for sulphur dioxide and nitrogen oxides indicated in table 2.2.6. The measures communicated in this plan shall be to the satisfaction of the Authority.
- 2.2.6.2.2 By not later than end of September of each year (starting September 2009), the projected quarterly loads (Jan-Mar, Apr-

Jun, Jul-Sep, Oct-Dec) of SO<sub>2</sub> and NO<sub>x</sub> from Delimara Power Station covering the following calendar year.

- 2.2.6.2.3 By not later than 2 weeks after the end of each quarter, a report in the format specified in Schedule 3 on the actual loads of SO<sub>2</sub> and NO<sub>x</sub> emitted from Delimara Power Station during the previous quarter, and shall additionally submit revised projections of SO<sub>2</sub> and NO<sub>x</sub> from Delimara Power Station for the remaining quarters of that calendar year.
- 2.2.6.3 The measures to be included in the plan as per Condition 2.2.6.2.2 shall also take into account that the Operator currently operates another power plant which is located on a separate site and which is also covered by the requirements of the Industrial Emissions (IPPC) Regulations.
- 2.2.6.4 The Competent Authority reserves the right to reduce these ceilings further particularly but not solely:
  - 2.2.6.4.1 in the event of there being a new entrant on the power production market in Malta;
  - 2.2.6.4.2 if it transpires that due to unforeseen circumstances the contributions of other sectors to the National Ceilings as per LN 291 of 2002 as amended by LN 232 of 2004 have been underestimated or if it transpires that sectors which also contribute to the total annual loads of these pollutants have been ignored;
  - 2.2.6.4.3 if it is decided that such a decision is in the national interest.
- 2.2.6.5 The ceilings listed in table 2.2.6 shall expire on the 31 December 2019.

## **2.2.7 Emissions to Air (excluding Odour, Noise or Vibration) from Specified Points: Total Annual Emissions and Other Reporting**

- 2.2.7.1 Starting on the 1<sup>st</sup> January 2009 and for each subsequent year, the Operator shall keep an inventory of the total annual emissions of SO<sub>2</sub>, NO<sub>x</sub> and dust (as total suspended particles) from all combustion plants at the Delimara Power Station with a rated thermal input of 50 MW<sub>th</sub> or more, including the gas turbines and diesel engines. This inventory shall be submitted as part of the AER of the installation in the format specified in Schedule 2.
- 2.2.7.2 In addition to the total annual emissions of the pollutants listed in 2.2.7.1, the inventories shall also include the total fuel burn per plant, the fuel type and the average heat value of the fuel fired.
- 2.2.7.3 The Operator must keep record of the following:
  - 2.2.7.3.1 The validated hourly concentration values of TSP, SO<sub>2</sub>, NO<sub>x</sub> and CO for each combustion plant per day (in the format specified in Schedule 4 and clearly indicating any exceedances).
  - 2.2.7.3.2 24-hourly mean values for the concentration of carbon monoxide (CO) (in the format specified in Schedule 4 and clearly indicating any exceedances).

- 2.2.7.3.3 48-hourly mean concentration values of TSP, SO<sub>2</sub> and NO<sub>x</sub> (in the format specified in Schedule 4, and clearly indicating any exceedances).
- 2.2.7.3.4 For TSP, SO<sub>2</sub>, NO<sub>x</sub> and CO, calendar monthly mean concentrations (in the format specified in Schedule 4) and monthly loads for TSP, SO<sub>2</sub> and NO<sub>x</sub> (in the format specified in Schedule 2, and clearly indicating any exceedances).
- 2.2.7.3.5 The total annual load of TSP, SO<sub>2</sub> and NO<sub>x</sub>, which shall be calculated by adding the total mass of pollutant emitted per year, on the basis of the volumetric flow rates of waste gases (in the format specified in Schedule 2).
- 2.2.7.3.6 For DPS1 and DPS6, the total annual load of Ni and V, which shall be calculated by adding the total mass of pollutant emitted per year, on the basis of the volumetric flow rates of waste gases and by multiplying concentrations in the fuel by fuel use (in the format specified in Schedule 2).
- 2.2.7.3.7 For DPS6, the total annual load of ammonia, which shall be calculated by adding the total mass of pollutant emitted per year, on the basis of the volumetric flow rates of waste gases (in the format specified in Schedule 2).

## **2.2.8 Emissions to Air (excluding Odour, Noise or Vibration) from Specified Points: Performance and Calibration of Automated Measuring Systems**

- 2.2.8.1 The commissioning and operation of all automated measuring systems at the Delimara Power station shall follow EN 14181:2004 – Stationary Source Emissions – Quality Assurance of automated measurement systems.
- 2.2.8.2 Measuring systems shall be subject to control by means of parallel measurements with the reference methods listed in table 2.2.8 at least every year. The calibrations shall be performed by a lab accredited (or in the process of accreditation, as confirmed by the National Accreditation Body (NAB-Malta) or equivalent) to at least EN ISO 17025:2005/Cor 1:2006 and preferably accredited for each and every calibration.

<b>Table 2.2.8 Calibration of Automated Measuring Systems</b>	
<b>Standard Number</b>	<b>Title</b>
EN 14791:2005	Stationary source emissions - Determination of mass concentration of sulphur dioxide - Reference method.
EN 14792 :2005	Stationary source emissions - Determination of mass concentration of nitrogen oxides (NO <sub>x</sub> ) - Reference method: Chemiluminescence.
EN 13284-1:2001	Stationary source emissions - Determination of low range mass concentration of dust - Part 1: Manual gravimetric method.

- 2.2.8.3 For the parameters measured continuously, the data for 1 day shall be invalidated if on that day 3 or more hourly average concentration of dust (TSP), sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO) values are invalid due to malfunction or maintenance of the continuous monitoring system.

- 2.2.8.4 If more than 10 days in a year are invalidated for such situations, the Operator must take adequate measures to improve the continuous monitoring system.

**2.2.9 Emissions to Air (excluding Odour, Noise or Vibration) from Specified Points: Emergency Considerations**

- 2.2.9.1 In the case of an interruption in the supply of low sulphur fuel due to a serious shortage, the Director of Environment Protection may allow a suspension for a maximum of six (6) months from the obligation to comply with the emission limit values for sulphur dioxide from DPS1. In such cases, the operator shall operate DPS6 using diesel.
- 2.2.9.2 The Director of Environment Protection shall be immediately notified about any interruptions in the supply of low-sulphur fuel.
- 2.2.9.3 In case the operator opts to control sulphur dioxide emissions from DPS1 through the use of low sulphur fuel, condition 2.2.9.1 above shall not apply unless the operator secures a supply through a long term supply contract of low sulphur fuel to ensure compliance with the limit value for sulphur dioxide.
- 2.2.9.4 Notwithstanding condition 2.2.9.1, in case of emergency the operator is obliged to use the fuel having the lowest sulphur content available at the time so as to ensure to the fullest extent possible that the ambient levels specified in LN 478 of 2010 and subsequent amendments are not exceeded.
- 2.2.9.5 The operator shall keep an adequate supply of reagents used for abatement on site to ensure adequate abatement in case of shortage. In case of a malfunction or breakdown of any abatement equipment, or shortage of reagent, the Operator shall reduce or close down operations if a return to normal operations is not achieved within 24 hours.
- 2.2.9.6 Under no circumstance shall the cumulative unabated operation in any twelve-month period exceed 120 hours.
- 2.2.9.7 The Director of Environment Protection may allow exceptions to the 24 hours and 120 hours in 2.2.9.5 and 2.2.9.6 respectively in cases where in the Director's judgement:
- 2.2.9.7.1 there is an overriding need to maintain energy supplies
- 2.2.9.7.2 the plant with the breakdown would be replaced for a limited period by another plant which would cause an overall increase in emissions.
- 2.2.9.8 The Director of Environment Protection shall be notified about any malfunction or breakdown of the abatement equipment within 24 hours as per Condition 5.15.1.2 of this permit.
- 2.2.9.9 The Operator shall keep together in a log book all notifications compiled after:
- (a) the occurrence of any malfunction to the abatement equipment,
- (b) an interruption in the supply of low-sulphur fuel.

- 2.2.9.10 The log book shall be made available for inspection upon request.

## **2.3 Discharges to sewers**

- 2.3.1 The Operator shall abide by the conditions of any Sewer Discharge Permit from the Water Services Corporation. The operator shall also abide by the provisions of the Sewer Discharge Control Regulations (LN139 of 2002 as amended by LN378 of 2005 and as may be amended from time to time).
- 2.3.2 Rainwater shall be segregated from all process areas that are potentially contaminated with raw materials, intermediates and/or products.
- 2.3.3 Rainwater shall not be discharged into the sewer.
- 2.3.4 With the exception of sanitary waters, the Operator shall not discharge any waste waters into the sewers.

## **2.4 Discharges to groundwater**

- 2.4.1 No emission from the Permitted Installation shall give rise to the introduction into groundwater of any substance in List I and List II (as defined in the Regulations for The Protection of Groundwater against Pollution caused by Certain Dangerous Substances, 2002 (LN 203 of 2002)).
- 2.4.2 For substances other than those in List I or II (as defined in LN 203 of 2002), the Operator shall not allow any discharges to groundwater.
- 2.4.3 The operations of the installation shall not hinder the achievement of good chemical and quantitative status of groundwaters as prescribed under the Water Policy Framework Regulations, LN194 of 2004 as may be amended from time to time.

## 2.5 Emissions to Marine Water

### 2.5.1 Emissions to Marine Water from Specified Points: General Considerations

2.5.1.1 This Part 2.5 of this Permit shall not apply to discharges to groundwater or sewers.

2.5.1.2 Waste waters shall not be discharged into marine water unless from the sources specified in table 2.5.1.1, and only from the sources for those release points specified by the table in question.

**Table 2.5.1.1 Emissions to Marine Water**

Outlet Number (as per Schedule 9)	Details	UTM Co-ordinates <sup>2</sup>	
		x-coordinate	y-coordinate
Point 1	Water reservoir overflow	459,647	3,965,869
Point 2	Oil interceptor (water from the waste storage area, turbine hall drains)	459,754	3,965,707
Point 3	Water reservoir overflow	459, 903	3,965,595
Point 4	Oil interceptor (fuel tank area), water from fuel centrifugation	459,860	3,965,516
Point 5	Water treatment, cooling systems, waste water from steam generation, waste water from boiler washdown	460,154	3,965,839

2.5.1.3 Dry outlets and release points whose sources are unidentified should be securely and permanently disconnected from the discharge pipe-work. Furthermore the operator shall not discharge any waste waters through these outlets.

2.5.1.4 Waste waters may contain microbiocidal agents only after having undergone shock treatment with microbiocides. This shall not apply to the use of hydrogen peroxide or ozone.

2.5.1.5 No specified emission to water shall exceed the emission limit values set out in Table 2.5.1.2, without prejudice to condition 2.5.1.16. The emission limits shall apply to the waste water at the point of discharge into the sea. There shall be no other emissions to water of environmental significance.

2.5.1.6 Monitoring and analyses of each substance shall be carried out according to the frequencies specified in Table 2.5.1.2 and according to the methodologies specified in the same table or equivalent methods as approved by the Authority. Where a method with a detection limit appropriate for the emission limit value in Table 2.5.1.2 is not available, the Authority may allow a method with a higher detection limit to be used instead. Samples taken shall be representative.

2.5.1.7 Monitoring of parameters 1 and 4-25 from point 4 is required prior to discharge of waste water **only** in case of a spillage of fuel from any tank. Testing of total petroleum hydrocarbons shall however be carried out continuously whenever water from fuel centrifugation (or other forms of water removal) is being discharged.

<sup>2</sup> Zone 33s, datum ED 50, ellipsoid – Hayford International.



- 2.5.1.8 The Authority may change monitoring parameters and frequencies as it considers appropriate, depending on the monitoring results submitted by the operator. The authority may require monitoring for adsorbable organic halogens (AOX) should the Operator start using organic halogenated compounds.

**Table 2.5.1.2 Emission limits and monitoring for emissions to marine water**

No.	Parameter	Emission limit value (annual average)	Measurement methodology	Monitoring frequency	
				Point 5	Point 2
1	Flow	-	Flow meter	Continuous or calculated	Continuous or calculated
2	pH	6-10	pH meter	Continuous	-
3	Temperature	8 °C above marine water	Digital thermometer	Continuous	-
4	Biological oxygen demand (BOD5)	25 mg/L	EN 1899: 1998	Annual	Annual
5	Total Nitrogen	10 mg/L	EN 12260:2003	Quarterly	Annual
6	Phosphorous compounds as total phosphorous, as per EN ISO 15681	1 mg/L	EN ISO 15681: 2004	Annual	Annual
8	Chlorine dioxide and oxidants (given as chlorine)	0.3 mg/L	DIN 38408-5	Quarterly	Annual
9	Arsenic	5 µg/L	ISO 11885: 2007	Quarterly	Annual
10	Cadmium <sup>3</sup>	0.2 µg/L	ISO 11885: 2007	Quarterly	Annual
11	Chromium (Total)	0.5 mg/L	ISO 11885: 2007	Every six months	Annual
12	Copper	0.5 mg/L	ISO 11885: 2007	Quarterly	Annual
13	Lead	7.2 µg/L	ISO 11885: 2007	Quarterly	Annual
14	Mercury	0.05 µg/L	ISO 11885: 2007	Every six months	Annual
15	Nickel	20 µg/L	ISO 11885: 2007	Quarterly	Annual
16	Tin	1.0 mg/L	ISO 11885: 2007	Annual	Annual
17	Vanadium	4 mg/L	ISO 11885: 2007	Annual	Annual
18	Zinc	4 mg/L	Method 3125B, AWWA/APHA, 20 <sup>th</sup> Ed, 1999	Every six months	Annual
19	Total petroleum hydrocarbons	5 mg/L	ISO 9377-2: 2000	Every six months	Annual

<sup>3</sup> Tests from the cooling water outfall for cadmium, chromium, copper, nickel, lead and zinc shall be carried out on composite samples consisting of samples of equal size taken at monthly intervals and blended prior to analysis, in accordance with ISO 5667-3:2003 or equivalent.

No.	Parameter	Emission limit value (annual average)	Measurement methodology	Monitoring frequency	
				Point 5	Point 2
20	Tributyl tin compounds (tributyltin cation; CAS number 36643-28-4)	0.0002 µg/L	EN ISO 17353:2005	Quarterly	Annual
21	Total Suspended Solids	35 mg/L	EN 872:2005	Annual	Annual
22	Benzene (CAS number 71-43-2)	8 µg/L	EN ISO 15680:2003	Quarterly	Annual
23	PAHs as follows:				
	Benzo(a)pyrene	0.05 µg/L	EN ISO 17993:2003	Annual	Annual
	Benzo(b)fluoranthene, Benzo(k)fluoranthene	Sum of 2 PAHs: 0.03 µg/L	EN ISO 17993:2003	Annual	Annual
	Benzo(g,h,i)perylene, Indeno(1,2,3-cd)-pyrene	Sum of 2 PAHs: 0.002 µg/L	EN ISO 17993:2003	Annual	Annual
24	C10-C13 chloroalkanes (CAS number 85535-84-8)	0.4 µg/L	EPA 8270D:2007	Annual	Annual
25	Polychlorinated biphenyls (CAS number 1336-36-3)	3 µg/L	USEPA method 8082, EA method 174 and 5109631	Annual	Annual

- 2.5.1.9 In case of any exceedances of the emission limit values in Table 2.5.1.2, the operator shall as part of the AER submit an action programme to the Authority aimed at achieving these emission limits. Alternatively, the operator may designate a mixing zone following the procedures specified in Regulation 8(b) (Mixing Zones) in Legal Notice 24 of 2011.
- 2.5.1.10 No substance shall be discharged in a manner, or at a concentration which following initial dilution, causes tainting of fish or shellfish.
- 2.5.1.11 The operator is to maintain an operating journal in which the operating and auxiliary substances are listed. The operator shall also attach Material Safety Data Sheets of the operating and auxiliary substances.
- 2.5.1.12 An annual report summarising emissions to water from the installation shall be submitted to the Authority as part of the AER. The information contained in this report shall be prepared in accordance with format specified in Schedule 2.
- 2.5.1.13 The operator shall make sure that any sampling and chemical analysis is carried out by a laboratory accredited (or in the process of accreditation, as confirmed by the National Accreditation Body (NAB-Malta) or equivalent) to at least EN ISO 17025: 2005/Cor 1: 2006 and preferably for each and every test listed in table 2.5.1.2. The operator shall include a copy of the laboratory's accreditation certification in the AER.

- 2.5.1.14 The operations of the installation shall not hinder the achievement of good status for surface water as required under the Water Policy Framework Regulations, LN 194 of 2004 (as amended).
- 2.5.1.15 The operator shall not use any of the priority substances in the field of water policy listed in schedule 7 at the site covered by this permit.
- 2.5.1.16 As from 1 December 2020, the operator shall not discharge any of the following substances:  
 Benzo(a)pyrene  
 Benzo(b)fluor-anthene  
 Benzo(k)fluor-anthene  
 Benzo(g,h,i)-perylene  
 Indeno(1,2,3-cd)-pyrene  
 C10-C13 chloroalkanes  
 Cadmium  
 Mercury  
 Tributyltin compounds
- 2.5.1.17 The operator shall carry out ecological surveys to assess the impact of the cooling water outfall on the habitat types and species listed in the Schedules to the Flora, Fauna and Natural Habitats Protection Regulations (LN 311/06), including *Pinna* spp., and *Posidonia* and *Cymodocea* meadows, in the surrounding waters. The surveys shall be carried out annually in the same month each year, with the first survey being carried out by end December 2012. Any decline in the conservation status of the habitat types and species in the area, especially those listed in the Schedules to LN 311/06, shall be immediately reported to the Authority, and followed up with proposals for mitigation measures, which shall be reviewed and agreed to by the Authority prior to their implementation. This information shall be included with the Annual Environmental Reports, in the format indicated in Schedule 2. The operator shall submit to the Authority a proposed methodology for this study, which shall be to the Authority's satisfaction.

## 2.5.2 Discharges to Marine Water: General Monitoring Conditions

- 2.5.2.1 All sampling carried out by the operator with the scope of monitoring compliance with the conditions listed in this permit shall be carried out according to the standards listed in table 2.5.2 or equivalent.

Table 2.5.2 Sampling	
Standard	Description
ISO 5667-1: 2006	Water quality -- Sampling -- Part 1: Guidance on the design of sampling programmes and sampling techniques
ISO 5667-3: 2003	Water quality -- Sampling -- Part 3: Guidance on the preservation and handling of water samples
ISO 5667-7: 1993	Water quality -- Sampling -- Part 7: Guidance on sampling of water and steam in boiler plants
ISO 5667-10: 1992	Water quality -- Sampling -- Part 10: Guidance on sampling of waste waters
ISO 5667-14: 1998	Water quality -- Sampling -- Part 14: Guidance on quality assurance of environmental water sampling and handling

- 2.5.2.2 The operator shall use a monitoring survey of the sediments around the cooling water inlet and outlet by end December 2012, in order to determine the impact of the installation on the marine environment.

### **2.5.3 Discharges to Marine Water: Requirements for Waste Water arising from Non-process Water**

- 2.5.3.1 These requirements apply to discharges from points 2 and 4.
- 2.5.3.2 The operator shall carry out a visual examination of the surface water discharge daily and shall maintain a log of such inspections. The operator shall ensure that no visible oil layer is present in surface water prior to discharge. Surface water that appears contaminated shall be treated prior to discharge to seawater.
- 2.5.3.3 The oily water separator system shall have a continuous hydrocarbon detector with alarm. For point 4, no discharge of wastewater is allowed if the emission limit value is exceeded. Detection of oily water in point 2 or 4 above the emission limit value shall be followed by immediate investigation and appropriate mitigation measures.
- 2.5.3.4 Surface run-off (rainwater) that might be contaminated by any spillage of fuel from fuel storage and handling shall be collected and treated prior to discharge.
- 2.5.3.5 In the event that any analyses or observations made on the quality or appearance of waste water from surface runoff should indicate that a contamination has taken place, the operator shall:
- 2.5.3.5.1 Carry out an immediate investigation to identify and isolate the source of the contamination;
  - 2.5.3.5.2 Put in place measures to prevent further contamination and to minimise the effects of any contamination on the environment;
- and
- 2.5.3.5.3 notify the Authority as soon as is possible as per Condition 5 of this permit.

### **2.5.4 Discharges to Marine Water: Other Conditions**

- 2.5.4.1 All storage areas (including for fuel, waste, chemicals, etc.) shall be rendered impervious to the materials stored therein. In addition, areas for storage of liquid hazardous materials shall be bunded, either locally or remotely, to a volume not less than the greater of the following
- 2.5.4.1.1 110% of the capacity of the largest tank or container within the bunded area.
  - 2.5.4.1.2 25% of the total volume of substance which could be stored within the bunded area.

Areas for storage of solid hazardous materials shall also have appropriate vehicle access control measures.

- 2.5.4.2 Drainage from bunded areas shall be diverted for collection and safe disposal, or appropriate treatment prior to discharge.
- 2.5.4.3 The integrity testing of any bunds for tanks/containers as required by condition 2.5.4.1 up to 25 m<sup>3</sup> must be carried out at least once every three years according to CIRIA 163, Construction Industry Research and Information Association Report 163 – Construction of Bunds for Oil Storage Tanks. The test must be carried out by an approved auditor and the inspection report and any ensuing certification must be included in the AER in the format specified in Schedule 2. Testing of bunds for wastes is not required if hazardous liquid wastes are stored on drip trays or prefabricated bunds.
- 2.5.4.4 For bunds of tanks as required by condition 2.5.4.1 greater than 25 m<sup>3</sup>, visual inspections shall be carried out at least weekly by a warranted engineer, who shall as a minimum examine the following elements:
- Identification of any cracks or faults in the bund walls or floors;
  - Whether the bund is holding rainwater during/after episodes of rain;
  - Whether drain holes are present in the bund which could lead to emissions (if this is the case, these would need to be sealed with waterproof cement or a material of at least equivalent impermeability);
  - The presence of any damp patches which could indicate cracks.
- Any faults identified during the inspection must be followed by immediate action to remedy the situation. Such inspections must be recorded, together with any faults and remedial actions taken.
- Such bunds shall also be certified annually by a warranted civil engineer.
- 2.5.4.5 The unloading of HFO and gasoil shall be supervised at all times and shall be undertaken in accordance with the standard operating procedure or as amended.
- 2.5.4.6 The pipes, pumps, valves and flanges forming part of the system which transfers fuel from the delivery ship to the tanks in the tank farm shall be certified to be leak-proof by an approved auditor at least once every three years. The inspection report and any ensuing certification must be included in the AER in the format specified in Schedule 2.
- 2.5.4.7 All oil transfers shall be undertaken in accordance with the oil spillage response plan submitted as part of the IPPC permit application.
- 2.5.4.8 All personnel involved in the transfer of HFO and gasoil from ships to storage or from storage to the generating stations shall be trained in the oil spillage response plan. Records of such training shall be maintained and made available for inspection by Authority personnel.
- 2.5.4.9 The loading and unloading of other materials shall be carried out in designated areas protected against spillage and leachate run-off.
- 2.5.4.10 All fuel tanks shall be fitted with a high level alarm and, for fuel tanks used for internal fuel transfer, a high-high liquid level alarm with automatic stoppage of pumps and automatic closure of valves in the event of a high-high level alarm.
- 2.5.4.11 All flanges and valves on over-ground pipes used to transport materials other than uncontaminated water, where no permanent provision for containment of leaks is provided, shall be subject to weekly visual inspection or otherwise monitored for leaks to the satisfaction of the Authority. All such inspections shall be recorded in a log which shall be available for inspection by the Authority.

- 2.5.4.12 All the flanges, valves and over-ground pipes listed in 2.5.4.11 shall be certified by an accredited auditor to be completely leak-proof at least once every three years. Any ensuing inspection report shall be included in the AER in the format specified in Schedule 2.
- 2.5.4.13 The operator shall have in storage an adequate supply of containment booms and suitable absorbent material to absorb any spillage.
- 2.5.4.14 Valves on bunds shall be maintained in closed position except during bund drainage. Drainage of water collecting in bunds shall be carried out under constant supervision. No discharges shall be undertaken from bunds where there is a visible film of oil on the bund water.
- 2.5.4.15 All the oil interceptors shall be monitored on a monthly basis and maintained to ensure efficient operation. A log of monitoring and interceptor waste removal shall be maintained on site for inspection.
- 2.5.4.16 All the oil interceptors shall be inspected by an accredited auditor at least once every three years. The accredited auditor shall amongst other things inspect the interceptor for efficiency of operation. Any ensuing certification shall be included in the AER.
- 2.5.4.17 The operator shall carry out ultrasonic testing of shell thickness on fuel tanks and report this as part of the AER. Such testing shall be carried out every two years (starting in 2012) for existing fuel tanks, and every five years (starting in 2016) for new fuel tanks servicing DPS6.

## **2.6 Fugitive emissions of substances to air**

- 2.6.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions of substances to air from the Permitted Installation, in particular from the:
  - process areas
  - storage areas, including solvent storage, raw materials (including fuel) storage and waste storage
  - buildings
  - pipes, valves and other transfer systems
  - open surfaces

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.
- 2.6.2 Fuel tanks shall be connected to appropriate abatement systems to the satisfaction of the Authority, such that fugitive emissions and odours from the fuel tanks are sufficiently mitigated. The operator shall keep a log of opening and closing times of pressure relief valves.
- 2.6.3 The Operator shall use BAT so as to prevent or where that is not practicable to reduce emissions of litter from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

## **2.7 Fugitive emissions of substances to water and sewer**

- 2.7.1 Subject to condition 2.7.2, the Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions of substances to

water (other than groundwater) and sewer from the Permitted Installation, in particular from:

- All structures under or over ground
- Surfacing
- Storage areas
- Bunded areas.

- 2.7.2 The Operator shall undertake all necessary measures and precautions to prevent spillage of raw materials, intermediates, products, waste and any other materials.
- 2.7.3 Connection points for fuel unloading must be appropriately contained. Any accidental release of substances shall be duly treated prior to discharge or disposed/recovered appropriately. Records shall be kept of such discharges, including the volume discharged.
- 2.7.4 Rainwater shall be segregated from all areas (including areas for fuel storage and raw materials) that are potentially contaminated.
- 2.7.5 Rainwater shall not be discharged into the sewer or onto a public place or thoroughfare.
- 2.7.6 The rate of flow into treatment chambers (e.g. interceptors) shall not exceed design capacity.



## **2.8 Waste**

### **2.8.1 Waste storage and handling**

- 2.8.1.1 The Operator shall use BAT in the design, maintenance and operation of all facilities for the storage and handling of waste on site such that there are no releases to water or land during normal operation and that emissions to air and risk of accidental release to water or land are minimised.

### **2.8.2 Waste recovery or disposal**

- 2.8.2.1 The Operator shall be committed to reduce waste generation where possible.

- 2.8.2.2 Waste produced at the Permitted Installation shall be recycled, reused or recovered unless technically and/or economically impossible. When practical recyclable wastes should be segregated to facilitate recycling.

- 2.8.2.3 Unless approved in writing by the Authority, the Permit Holder is prohibited from mixing a hazardous waste of one Category with a hazardous waste of another category or with any other waste, substances or materials.

- 2.8.2.4 A full record which shall be open to inspection by authorised persons of the Authority at all times, shall be kept by the Permit Holder on matters relating to the waste management operations and practices at this site. This record shall be included as part of the plan for the Environmental Management System of the installation and shall be in place by not later than six months from the date of issue of this permit. This record shall as a minimum contain details of the following:

- 2.8.2.4.1 The tonnages and EWC Codes for the waste materials removed off site as per Decision 2000/532/EC establishing a list of waste as may be amended from time to time.

- 2.8.2.4.2 The names of the Company and carrier of the waste and their Permit details (either waste registration or waste management permit).

- 2.8.2.4.3 Details of the ultimate disposal/recovery destination facility for the waste and its appropriateness to accept the consigned waste stream, to include its Waste Management Permit details and number.

- 2.8.2.4.4 Written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site.

- 2.8.2.4.5 Details of all wastes consigned abroad for disposal or recovery and classified as List A or List B in accordance with Annex V of the EU Transfrontier Shipment of waste regulations (Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste, as may be amended from time to time). The rationale for the classification must form part of the record.

- 2.8.2.4.6 Details of any approved waste mixing as per condition 2.8.2.3.

- 2.8.2.5 Disposal of wastes are to be managed in accordance with the legal obligations of the Waste Regulations 2011 as per Legal Notice 184 of 2011 as may be amended from time to time.

- 2.8.2.6 Disposal or recovery of waste shall take place only at permitted sites. No waste shall be disposed of/recovered either on site or off-site without prior notice to, and prior written agreement of, the Authority.
- 2.8.2.7 Any packaging waste and separately collected non-hazardous waste including but not limited to glass, plastic, metal, wood, cardboard and paper shall not be disposed of in a landfill.
- 2.8.2.8 All wastes shall be stored within (a) designated and controlled storage area(s) prior to ultimate disposal; wastes to be recycled should be stored in a designated labelled container or area and not mixed with other wastes. The operator shall ensure adequate protection and containment of all wastes.
- 2.8.2.9 The Permit Holder shall ensure that waste transferred to another person is packaged and labelled in accordance with national, European and any other standards which are in force in relation to such labelling. While awaiting collection, recovery or disposal all waste shall be stored in designated areas protected, as may be appropriate, against spillage, leachate run-off and accidental damage. The waste is to be clearly labelled and appropriately segregated.
- 2.8.2.10 Liquid and hazardous wastes shall be stored in (a) labelled, closed container(s) within a designated and controlled storage area(s) prior to ultimate disposal which shall be appropriately contained to ensure no contamination of the environment and/or public health risk in case of spillage. Wastes of different natures should not be mixed in the same container.
- 2.8.2.11 Waste oils must be stored in a secure leakproof container and may only be disposed of through a company authorised for the collection of waste oils or at an authorised site. A record must be maintained of the quantities, nature, manner and date of dispatch of the oil.
- 2.8.2.12 No storage of waste is permitted for a period exceeding 12 months.
- 2.8.2.13 On-site disposal of wastes by any means including burning, disposal to drain or surface water, burying or deposition on land is prohibited, unless specifically approved by a permit from the Authority or the Water Services Corporation (WSC).
- 2.8.2.14 Transport of hazardous waste within the Maltese Islands shall be accompanied by the necessary waste transfer permits issued by the Authority. Applications for such permits are made through the hazardous waste consignment note procedure available from the Authority's Offices.
- 2.8.2.15 Each movement of hazardous waste to authorised facilities shall be covered by a valid consignment permit obtainable from the Authority. Each movement shall also be covered by a consignment note obtainable from the Authority.
- 2.8.2.16 Disposal certificates shall be kept on record and made available for inspection for a period of at least 5 years from date of their issue.
- 2.8.2.17 Waste sent off-site for recovery or disposal shall be conveyed only by an authorised waste carrier as per Activity 38 of Schedule 1 of Legal Notice 106 of 2007 as may be amended from time to time. The waste shall be transported only from the site of the activity to the site of recovery/disposal in a manner which shall not adversely affect the environment and in accordance with all relevant National and European legislation.
- 2.8.2.18 The transport of waste off-site shall be by means of a waste carrier authorised for that waste.

- 2.8.2.19 Off-site disposal or recycling of wastes may only take place at a facility licensed for that purpose by the Authority.
- 2.8.2.20 Shipment of hazardous waste abroad is to follow the obligations listed in Council Regulation (EC) 1013/2006 of the European Parliament and of The Council of 14 June 2006 on shipments of waste, as may be amended from time to time.
- 2.8.2.21 None of the waste streams listed in Annexes 3, 4 and 5 of the EU Transfrontier Shipment of Wastes Regulations Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (as may be amended from time to time) shall be consigned for recovery/disposal without the prior agreement of the Authority.
- 2.8.2.22 Records shall be maintained for the disposal of all hazardous waste, including quantities, dates, contractor name and manner of disposal. The records should be maintained for a period of 5 years and be made available for inspection by the Authority upon request.
- 2.8.2.23 No storage of waste, equipment or materials is permitted on property outside the site premises.
- 2.8.2.24 Non-hazardous waste awaiting collection may be placed outside the site premises for a period not exceeding 12 hours.
- 2.8.2.25 Drums and containers of chemicals/oils shall be stored in designated and secure storage areas. Storage areas shall be bunded or otherwise designed so that surface and ground waters cannot be contaminated by spillages.
- 2.8.2.26 All storage of materials or waste shall take place only in locations where thorough clean-up and site reinstatement can be readily undertaken.
- 2.8.2.27 For any decommissioned equipment, the permit holder shall submit to the Authority a proposal for the screening of the intended equipment to be discarded which should include the details of any hazardous materials in the equipment (including but not limited to radioactive sources, hazardous chemicals, etc.), decontamination procedures and the procedures for final disposal.
- 2.8.2.28 The Operator shall have in place a waste collection, transport and export service contract for flue gas desulphurisation waste, a copy of which shall be submitted to the Authority prior to the first generation of flue gas desulphurisation waste. Otherwise, DPS6 shall be operated using solely diesel until the situation is rectified.
- 2.8.2.29 When the maximum site capacity for storage of flue gas desulphurisation waste has been reached, DPS6 shall be operated using solely diesel until the situation is rectified.
- 2.8.2.30 A summary record of the waste quantities removed from the site shall be made for each quarter of the reporting year (January-March, April-June, July-September and October-December) and shall be submitted to the Authority in the format specified in Schedule 3.
- 2.8.2.31 As part of the Annual Environmental Report for the installation, the Operator shall produce a report on the off-site transfers of waste from the Permitted Installation over the previous calendar year, by end of March of each year, providing the information listed in the format specified in Schedule 2.

## 2.9 Odour

- 2.9.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce odorous emissions from the Permitted Installation, in particular by:
- 2.9.1.1 limiting the use of odorous materials;
  - 2.9.1.2 restricting odorous activities;
  - 2.9.1.3 controlling the storage conditions of odorous materials;
  - 2.9.1.4 controlling processing parameters to minimise the generation of odour;
  - 2.9.1.5 optimising the performance of abatement systems;
  - 2.9.1.6 timely monitoring, inspection and maintenance;
  - 2.9.1.7 employing, where appropriate, an approved odour management plan; provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.
- 2.9.2 There shall be no significant offensive odour, as perceived by an Authorised Officer of the Competent Authority, at sensitive locations.
- 2.9.3 In case of complaints from sensitive receptors regarding odours from the urea solution, the Authority may require the Operator to submit an odour management plan, which would include recommendations for abatement of the odour and timeframes for implementation.

## 2.10 Emissions to Land

- 2.10.1 This Part 2.10 of this Permit shall not apply to emissions to groundwater.
- 2.10.2 The operator shall take all precautions to ensure that no emission from the Permitted Installation shall be made to land.
- 2.10.3 In the event of accidental contamination of land, the operator shall notify the Authority immediately, forward a decontamination plan and execute it within 1 week of the event.

## 2.11 Noise and Vibration

- 2.11.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce emissions of noise and vibration from the Permitted Installation, in particular by:
- 2.11.1.1 equipment maintenance, e.g. circulating pumps, extraction fans, compressors, silencers.
  - 2.11.1.2 use and maintenance of appropriate attenuation, eg. silencers, barriers, enclosures;
  - 2.11.1.3 appropriate timing and location of noisy activities and vehicle movements;

2.11.1.4 periodic checking of noise emissions, either qualitatively or quantitatively; and

2.11.1.5 maintenance of building fabric

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.11.2 Emergency generators/alarms/sirens/release valves shall only be tested between the hours of 7.00 and 19.00 Monday to Friday and not on any Public Holiday.

2.11.3 The level of noise emitted from the installation at all operational times shall not exceed the background noise level by 5dB, excluding during the use of emergency sirens and alarms and start-ups.

2.11.4 Noise monitoring is to be carried annually, to ensure that the above limits are not exceeded. The locations shall be chosen and the measurements and assessment made according to BS 4142:1997.

2.11.5 As part of the AER, records of noise monitoring of the previous year shall be submitted to the Competent Authority by not later than end of March after the end of each reporting year, in the format specified in Schedule 2 of this permit. A detailed report shall also accompany such results.

## **2.12 Management and Technically Competent Person**

2.12.1 A copy of this Permit and those parts of the application referred to in this Permit shall be available at the place of work, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.

### **Training**

2.12.2 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.

2.12.3 All staff shall be fully conversant with those aspects of the Permit conditions which are relevant to their duties and shall be provided with adequate professional technical development and training and written operating instructions to enable them to effectively carry out their duties.

2.12.4 The Operator shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and public health and shall keep records of all relevant training.

### **Maintenance**

2.12.5 All plant and equipment used in operating the Permitted Installation shall be maintained in good operating condition.

2.12.6 The Operator shall maintain a record of plant and equipment covered by condition 2.12.5, and for such plant and equipment:

2.12.6.1 a written or electronic maintenance programme; and

2.12.6.2 records of its maintenance.

## **Incidents and Complaints**

- 2.12.7 The Operator shall maintain and implement written procedures for:
- 2.12.7.1 taking prompt remedial action, investigating and reporting to the Competent Authority actual or potential non-compliance with operating procedures or emission limits and if such events occur;
  - 2.12.7.2 investigating incidents, (including any malfunction, breakdown or failure of plant, equipment or techniques, down time, any short-term and long-term remedial measures and near-misses) and prompt implementation of appropriate actions; and
  - 2.12.7.3 ensuring that detailed records are made of all such actions and investigations.
- 2.12.8 The Operator shall record and investigate complaints concerning the Permitted Installation's effects or alleged effects on the environment and public health. The record shall give the date and nature of complaint, time of complaint, name of complainant (if given), a summary of any investigation and the results of such investigation and any actions taken.
- 2.12.9 As part of the AER of the Permitted Installation, the Operator shall provide report on incidents and complaints in the format specified in Schedule 2.

## **Attendance of Technically Competent Person(s)**

- 2.12.10 Attendance of the technically competent person(s) at the Site shall be recorded in the Site diary on arrival and departure.
- 2.12.11 For the whole operational hours permitted for the Site under this Permit, the Technically Competent Person/s shall be physically in attendance at the Site. The Technically competent Person/s has to be permanently present on site during generation of electrical energy. The permit holder is to provide details as to how he intends to provide this coverage in order to take into account unavoidable absences due to continuous operation, vacation or sick leave.
- 2.12.12 Where the Site has been notified to the Authority as being either non-operational or closed, the Technically Competent Person shall be capable of attending the Site within one hour.

## **Changes in Technically competent Persons**

- 2.12.13 Any changes in technically competent management (Person/s) and the name of any incoming person together with evidence that such person has the required technical competence shall be submitted to the Authority in writing within 5 working days of the change in management.
- 2.12.14 In the event of the death, dismissal, resignation, leave, or of extended sick leave of the Technically Competent Management of the Site, the Permit Holder shall immediately inform the Authority, and prove to the Authority that the Permit Holder is actively seeking a replacement.

## **2.13 Energy Efficiency**

- 2.13.1 As part of the AER, the Operator shall produce a report on the energy and fuel consumed at the Permitted Installation over the previous calendar year, providing the information listed in Schedule 2 in the format specified therein.
- 2.13.2 The Operator shall maintain and operate the Permitted Installation so as to secure energy efficiency, in particular by:
  - 2.13.2.1 ensuring that the appropriate operating and maintenance systems are in place;
  - 2.13.2.2 ensuring that all installation is adequately insulated to minimise energy loss or gain;
  - 2.13.2.3 ensuring that the type of lighting used is energy-efficient;
  - 2.13.2.4 ensuring that all appropriate containment methods (e.g. seals) are employed and maintained to minimise energy loss;
  - 2.13.2.5 maintaining and implementing an energy management system which shall include the monitoring of main energy flows for each generating unit, and an energy efficiency plan which targets areas for improving energy efficiency and identifies energy-saving techniques that are applicable to the activities and their associated environmental benefit, and prioritises them. The energy efficiency plan shall be updated at least once every 2 years.

## **2.14 Accident prevention and control**

- 2.14.1 In the case of an accident, the Operator shall follow the Emergency Plan submitted as part of the IPPC application and updated according to the improvement programme of the installation.
- 2.14.2 The plan shall be reviewed at least every 2 years or as soon as practicable after an accident, whichever is the earlier, and the Authority notified of the results of the review within 2 months of its completion.
- 2.14.3 The Operator shall maintain and implement all health and safety measures in compliance with Act XXVII of 2000; Occupational Health and Safety Authority Chapter 424 and all relevant subsidiary legislation, in particular but not limited to implementing a risk assessment which covers the operation of the whole installation including the diesel engines and associated activities, and including the handling, storage and disposal of any material generated.
- 2.14.4 The Operator shall comply with the provisions of the Control of Major Accident Hazards Regulations (Legal Notice 37 of 2003 as amended).
- 2.14.5 The Operator and Permit Holder shall have sufficient employees trained to deal with any emergency that may arise, e.g. fire-fighting and first aid.
- 2.14.6 The Operator and Permit Holder is to keep the Authority updated on any major changes in operations that may impact on the health and safety of the employees.

- 2.14.7 The Operator and Permit Holder are to make available Health and Safety documentation freely available.

## 2.15 Transport

- 2.15.1 Independent of any Environment Management System, the Operator shall be responsible for making use of the services of an ADR (The European Agreement concerning the International Carriage of Dangerous Goods by Road) certified carrier for transport of hazardous chemicals and hazardous wastes on land.
- 2.15.2 The Operator shall make use of the services of a registered waste carrier for the transport of waste from the site in accordance with LN 106/2007.
- 2.15.3 As part of the AER, the operator shall submit the name of each carrier used in the transport of the substances specified in Conditions 2.15.1 and 2.15.2, in the format specified in Schedule 2.

## 2.16 Closure and Decommissioning

- 2.16.1 As part of the improvement programme of the installation, the operator shall submit to the Authority an outline Decommissioning Plan within the timeframe specified in Condition 1.5.1. This Decommissioning Plan shall at least include the information required by conditions 2.16.3, 2.16.5.1, 2.16.5.4 and 2.16.5.5.
- 2.16.2 Two years before the planned decommissioning of all or part of the site, the operator shall submit to the authority a full Decommissioning Plan which shall at least include all the information required by conditions 2.16.3 to 2.16.5.
- 2.16.3 The operator shall submit to the Authority a report by a qualified geologist on the likelihood of their being a significant contamination of the land on the site by any of the pollutants in Schedule 8 Should it result that the land is likely to contain environmentally significant amounts of these pollutants, this report shall contain as a minimum the measured concentrations of the substances specified in Schedule 8:
- 2.16.3.1 This monitoring programme shall amongst other things include the location of the points for the sampling of land, information on the sampling methods, the handling of the samples, the pre-treatment/extraction of the analytes (where applicable) and the methods used in order to analyse the samples.
- 2.16.3.2 Samples should be analysed to the relevant EN or EN ISO standards or equivalent.
- 2.16.3.3 Samples shall be managed<sup>4</sup> by a lab accredited (or in the process of accreditation, as confirmed by the National Accreditation Body (NAB-Malta) or equivalent) to at least EN ISO 17025:2005/Cor 1:2006 and preferably accredited for each and every analysis.

<sup>4</sup> sampled, handled, pre-treated/extracted or analysed.



- 2.16.3.4 Land monitoring shall be repeated at least every four years, and results included in the AER.
- 2.16.4 Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the permitted activity, the operator shall to the satisfaction of the Authority, decommission, render safe or remove for disposal/recovery, any land, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution and that may pose a public health risk.
- 2.16.5 The operator shall submit to the Authority for review a full Decommissioning Plan. This full Decommissioning Plan shall at least include the following information:
- 2.16.5.1 A detailed monitoring programme which will illustrate how the operator will measure the current levels of various pollutants in the land:
- 2.16.5.1.1 The list of the pollutants to be monitored for shall be as per Schedule 8.
- 2.16.5.1.2 The monitoring programme shall amongst other things include the location of the points for the sampling of land, the sampling methods, the handling of the samples, the pre-treatment/extraction of the analytes (where applicable) and the methods used in order to analyse the samples.
- 2.16.5.1.3 Samples should be analysed to the relevant EN or EN ISO standards or equivalent.
- 2.16.5.1.4 Samples shall be managed<sup>4</sup> by a lab accredited (or in the process of accreditation, as confirmed by the National Accreditation Body (NAB-Malta) or equivalent) to at least EN ISO 17025:2005/Cor 1:2006 and preferably accredited for each and every analysis.
- 2.16.5.2 The levels to which the site and any affected land will have to be decontaminated.
- 2.16.5.3 The methods which will be used in order to decontaminate the land. Such methods may also include isolation.
- 2.16.5.4 A waste management plan which shall include:
- 2.16.5.4.1 The identification and characterisation of sources, types and quantities of waste (including equipment, fuels, by-products such as ash, etc.);
- 2.16.5.4.2 Criteria for segregation of wastes;
- 2.16.5.4.3 Proposed treatment, conditioning, transport, storage and disposal/recovery methods;
- 2.16.5.4.4 Potential reuse/recycling of such wastes.

- 2.16.5.5 The identification of potential sources of emissions to the atmosphere, land and water (both seawater and groundwater) pollution which might arise from the decontamination process and corresponding mitigation measures to minimise the likelihood of such emissions.
- 2.16.6 The Operator shall maintain and operate the Permitted Installation so as to prevent or minimise any pollution and public health risk, including the generation of waste, on closure and decommissioning in particular by:-
  - 2.16.6.1 Attention to the design of new plant or equipment;
  - 2.16.6.2 The maintenance of a record of any events which have, or might have, impacted on the condition of the site along with any further investigation or remediation work carried out; and
  - 2.16.6.3 The maintenance of a decommissioning plan to demonstrate that the installation can be decommissioned avoiding any pollution and public health risk and returning the site of operation to a satisfactory state.
- 2.16.7 Notwithstanding condition 2.16.4 of this Permit, the Operator shall carry out a review of the outline Decommissioning Plan at least every 4 years.
- 2.16.8 The Operator shall notify the Authority immediately upon a decision being taken to decommission the site.
- 2.16.9 A finalised version of the Site Closure Plan shall be submitted to the Authority for approval not later than 10 days after the Authority is notified of the intention to decommission the site.
- 2.16.10 The approved Decommissioning Plan shall be implemented within 18 months of final cessation or decommissioning of the Permitted activities or part thereof, or according to a timeframe as may be agreed with the Authority.

## **2.17 Multiple Operator installations**

- 2.17.1 This is not a multi-Operator installation.

## **3 Records**

- 3.1 The Operator shall ensure that all records required to be made by this Permit and any other records made by it in relation to the operation of the Permitted Installation shall:-
  - 3.1.1 be made available for inspection by the Authority at any reasonable time;
  - 3.1.2 be supplied to the Authority on demand and without charge and in the format requested;
  - 3.1.3 be legible;
  - 3.1.4 be made as soon as reasonably practicable;

- 3.1.5 indicate any amendments which have been made and shall include the original record wherever possible; and
- 3.1.6 be retained at the Permitted Installation, or other location agreed by the Authority in writing, for a minimum period of 5 years from the date when the records were made, unless otherwise agreed in writing with the Authority.

## **4 Reporting**

- 4.1 All reports and written and/or oral notifications required by this Permit and notifications required by Regulation 7 of the Industrial Emissions (IPPC) Regulations shall be made and sent to the Authority using the contact details notified in writing to the Operator by the Authority.
- 4.2 The Operator shall submit to the Authority an AER of the previous year by not later than end of March of each year, providing the information listed in Schedule 2 of this Permit and in the format specified therein. The AER shall be forwarded to the Authority in electronic format.
- 4.3 The Operator shall submit to the Authority the information listed in Schedule 3 Quarterly Reporting and in the format specified therein within two months after the end of each quarter. This information shall be forwarded to the Authority in electronic format.
- 4.4 The Operator shall submit to the Authority the information listed in Schedule 4 Monthly Reporting and in the format specified therein within two weeks after the end of each month. This information shall be forwarded to the Authority in electronic format.
- 4.5 The European Pollutant Release and Transfer Register (E-PRTR) report for the installation shall be submitted as part of the Annual Environment Report, by end of March of each year, or as required by Legislation. All quantities shall be reported, even when these do not exceed the thresholds mentioned in EC Regulation 166/2006. The format used for reporting shall be that established by Legislation, notably Legal Notice 152 of 2007, as may be amended from time to time.
- 4.6 The Operator shall, within 6 months of receipt of written notice from the Authority, submit to the Authority a report assessing whether all appropriate preventive measures continue to be taken against pollution, in particular through the application of the best available techniques, at the installation. The report shall consider any relevant published technical guidance current at the time of the notice which is either supplied with or referred to in the notice, and shall assess the costs and benefits of applying techniques described in that guidance, or otherwise identified by the Operator, that may provide environmental improvement.
- 4.7 The applicant is liable to the following penalties for breaches related any condition:
  - A daily fine of €200 for every breach notified, for the first seven days following notification.
  - After the lapse of the first seven days the fine will be increased to €500 daily for every breach notified.

## 5 Notifications

This section is without prejudice to any other notification requirement in this permit.

5.1 The Operator shall notify the Authority without delay of:-

- 5.1.1 the detection of an emission of any substance which exceeds any limit or criterion in this Permit specified in relation to the substance;
- 5.1.2 the detection of any fugitive emission which has caused, is causing or may cause significant pollution and/or a public health risk unless the quantity emitted is so trivial that it would be incapable of causing significant pollution and/or a public health risk or incapable of being detected;
- 5.1.3 the detection of any malfunction, breakdown or failure of plant or techniques which has caused, is causing or has the potential to cause significant pollution and /or a public health risk; and
- 5.1.4 any accident which has caused, is causing or has the potential to cause significant pollution and /or a public health risk.

5.2 The Operator shall submit written confirmation to the Authority of any notification under condition 5.1, by sending:-

- 5.2.1 the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and
- 5.2.2 the more detailed information listed in Part B of Schedule 1 as soon as practicable thereafter;
- 5.2.3 the information listed in Schedule 2 according to the timeframe specified in Condition 4.2;

and such information shall be in accordance with that Schedule.

5.3 The Operator shall give written notification as soon as practicable prior to any of the following:-

- 5.3.1 permanent cessation of the operation of part or all of the Permitted Installation;
- 5.3.2 cessation of operation of part or all of the Permitted Installation for a period likely to exceed 1 year; and
- 5.3.3 resumption of the operation of part or all of the Permitted Installation after a cessation notified under condition 5.3.2.

5.4 The Operator shall notify the Authority, as soon as practicable, of any information concerning the state of the site which affects or updates that provided to the Authority as part of the Site Report submitted with the application for this Permit.

5.5 The Operator shall notify the following matters to the Authority in writing within 10 working days of their occurrence:-

- 5.5.1 Where the Operator is a registered company:-

- 5.5.1.1 any change in the Operator's trading name, registered name or registered office address;
  - 5.5.1.2 any change to particulars of the Operator's ultimate holding company (including details of an ultimate holding company where an Operator has become a subsidiary); and
  - 5.5.1.3 any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.
- 5.5.2 Where the Operator is a corporate body other than a registered company:
- 5.5.2.1 any change in the Operator's name or address; and
  - 5.5.2.2 any steps taken with a view to the dissolution of the Operator.
- 5.5.3 In any other case: -
- 5.5.3.1 the death of any of the named Operators (where the Operator consists of more than one named individual);
  - 5.5.3.2 any change in the Operator's name(s) or address(es);
  - 5.5.3.3 any steps taken with a view to the Operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case them being in a partnership, dissolving the partnership.

## **6. Greenhouse gas emissions permit**

- 6.1 The conditions in this permit are without prejudice to any condition in the Greenhouse gas Emissions Permit pursuant to LN 434 of 2013 – European Union Greenhouse Gas Emissions Trading Scheme for Stationary Installations, Regulations, 2013.

## 7. Interpretation

- 7.1 In this Permit, the following expressions shall have the following meanings:-
- 7.1.1 “AER” means the Annual Environmental Report;
- 7.1.2 “Application” means the application for this Permit, together with any response to a notice served under Regulation 5 to the Industrial Emissions (IPPC) Regulations and any operational change agreed under the conditions of this Permit;
- 7.1.3 “Authorised Officer” means any officer of the Authority authorised in writing pursuant to Part X of the Environment Protection Act 2001 to exercise any of the powers specified in Part X of that Act;
- 7.1.4 “Background concentration” means such concentration of that substance as is present in:
- 7.1.4.1 water supplied to the site; or
- 7.1.4.2 where more than 50% of the water used at the site is directly abstracted from ground or surface water on site, the abstracted water; or
- 7.1.4.3 where the Permitted Installation uses no significant amount of supplied or abstracted water, the precipitation onto the site.
- 7.1.5 “BAT” means best available techniques, which means the most effective and advanced stage of development of activities and their methods of operation which indicates the practical suitability of particular techniques to prevent and where that is not practicable to reduce emissions and the impact on the environment as a whole. For these purposes: “available techniques” means “those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced in Malta, as long as they are reasonably accessible to the operator”; “best” means “in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole” and “techniques” “includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.”;
- 7.1.6 “BREF” means the latest version of the BAT reference document published by the European Commission;
- 7.1.7 “Combustion plant” or “plant” means any technical apparatus in which fuels are oxidised in order to use the heat thus generated. Where two or more separate plants are installed in such a way that their waste gases could be discharged through a common stack, the combination formed by such plants shall be regarded as a single unit;
- 7.1.8 “Composite sample” shall refer to a sample which is taken continuously over a given period, or a sample consisting of several samples taken either continuously or discontinuously over a given period;
- 7.1.9 “Direct discharge” shall refer to the introduction into marine waters and internal coastal water of any effluent;
- 7.1.10 “Diesel engine” shall mean an internal combustion engine which operates according to the diesel cycle and uses compression ignition to burn fuel;

- 7.1.11 “*Effluent*” shall refer to any discharge of water or waste water that can no longer be used as it is for the application it was originally intended;
- 7.1.11 “*Emission limit value*”
- 7.1.11.1 for discharges to air: means the permissible quantity of a substance contained in the waste gases from the combustion plant which may be discharged into the air during a given period; it shall be calculated in terms of mass per volume of the waste gases expressed in  $\text{mg}/\text{Nm}^3$ , assuming an oxygen content by volume in the waste gas of 3 % in the case of liquid fuels used in boilers and 15 % in the case of gas turbines and diesel engines;
- 7.1.11.2 for discharges to marine waters: shall refer to the limit value given in table 2.5.1.2 in this permit;
- 7.1.12 “*Fuel*” means any solid, liquid or gaseous combustible material used to fire the combustion plant with the exception of waste;
- 7.1.13 “*Fugitive emission*” means an emission to air or water (including sewer) from the Permitted Installation which is not controlled by an emission or background concentration limit under conditions 2.2 to 2.5 of this Permit;
- 7.1.14 “*Gas oil*” or “*diesel*” means any petroleum-derived liquid fuel falling within CN code 2710 00 67 or 2710 00 68, or any petroleum-derived liquid fuel which, by reason of its distillation limits, falls within the category of middle distillates intended for use as fuel and of which at least 85 % by volume (including losses) distils at 350°C by the ASTM D86 method;
- 7.1.15 “*Gas turbine*” means any rotating machine which converts thermal energy into mechanical work, consisting mainly of a compressor, a thermal device in which fuel is oxidised in order to heat the working fluid, and a turbine;
- 7.1.16 “*Groundwater*” means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil;
- 7.1.17 “*GJ . Mg<sup>-1</sup>*” means gigajoule per megagramme;
- 7.1.18 “*Heavy fuel oil*” means any petroleum-derived liquid fuel falling within CN code 2710 00 71 to 2710 00 78, or any petroleum-derived liquid fuel, other than gas oil which, by reason of its distillation limits, falls within the category of heavy oils intended for use as fuel and of which less than 65 % by volume (including losses) distils at 250°C by the ASTM D86 method. If the distillation cannot be determined by the ASTM D86 method, the petroleum product is likewise categorised as a heavy fuel oil;
- 7.1.19 “*Industrial Emissions (IPPC) Regulations*” means the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (LN 10 of 2013) and words and expressions defined in the Industrial Emissions (IPPC) Regulations shall have the same meanings when used in this Permit save to the extent they are specifically defined in this Permit. It shall include any future amendments or superseding legislation.;
- 7.1.20 “*Installation*” means the stationary technical unit (composed of one or more plants) where combustion of fuels (the main activity) is taking place, and any other directly associated activities on the same site which have a

technical connection with the main activity and which could have an effect on emissions and pollution;

- 7.1.21 *“Land”* means the upper layer of the earth’s crust and shall include all the various components of the lithosphere to the rock-water and rock-air boundary, where the topmost 200 cm which is made up of inorganic and organic components and which serves as a habitat for micro- and macroorganisms is defined as soil;
- 7.1.22 *“Malta”* means the Island of Malta, the Island of Gozo and the other islands of the Maltese Archipelago, including the territorial waters thereof;
- 7.1.23 *“Marine waters”* shall refer to the waters which are outside the limit defined by coastal waters up to the limit delineated by the limit of territorial waters;
- 7.1.24 *“mg . Nm<sup>-3</sup>”* or *“mg/Nm<sup>3</sup>”* means milligramme per normal metre cubed;
- 7.1.25 *“Mg . month<sup>-1</sup>”* means megagramme per month;
- 7.1.26 *“Monitoring”* includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys;
- 7.1.27 *“Permitted Installation”* means the activities and the limits to those activities described in Table 1.1.1 of this Permit;
- 7.1.28 *“Qualified random sample”* shall refer to a composite sample of at least five random samples taken over a maximum period of twenty-four hours at intervals of no less than two minutes and blended;
- 7.1.29 *“Sewer”* means sewer within the meaning of section 219(1) of the Water Industry Act 1991;
- 7.1.30 *“Staff”* includes employees, directors or other officers of the Operator, and any other person under the Operator’s direct or indirect control, including contractors;
- 7.1.31 *“Technically Competent Person”* means a person possessing the qualifications, experience and technical competence to abide by the conditions of the Permit;
- 7.1.32 *“Technically Competent Management”* means the Technically Competent Person or Persons in control of the day-to-day activities authorised by the Permit and carried on at the Site;
- 7.1.33 *“The Authority”* or *“the Competent Authority”* or *“MEPA”* means the Malta Environment and Planning Authority or such other body or person as the Minister responsible for the environment may by order in the Gazette prescribe;
- 7.1.34 *“The Permit Holder”* means the Permit Holder specified in the Permit or other person to whom the Permit has been transferred in accordance with the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations (LN 10 of 2013), and any statutory provisions or regulations amending or replacing them;
- 7.1.35 *“The Operator”* means a person who is in occupation of the Site and has responsibility for carrying out day to day activities at the Site;



- 7.1.36 “*The Regulations*” means the Industrial Emissions (Integrated Pollution Prevention and Control) Regulations 2013 (LN 10 of 2013), and any regulations amending or replacing them;
- 7.1.37 “*The Site*” means the land, structures, combustion plants and equipment to which this Permit relates;
- 7.1.38 “*Total nitrogen*” shall refer to the sum of total Kjeldahl nitrogen (organic N + NH<sub>3</sub>), nitrate V (NO<sub>3</sub><sup>-</sup>) – nitrogen and nitrate III (NO<sub>2</sub><sup>-</sup>) – nitrogen;
- 7.1.39 “*TSP*” means Total Suspended Particulates;
- 7.1.40 “*Waste gases*” means gaseous discharges containing solid, liquid or gaseous emissions; their volumetric flow rates shall be expressed in cubic metres per hour at standard temperature (273 K) and pressure (101,3 kPa) after correction for the water vapour content, hereinafter referred to as (Nm<sup>3</sup>/h);
- 7.1.41 “*Year*” or “*reporting year*” means calendar year ending on the 31 December;
- 7.1.42 “% w/w” means percentage weight by weight;
- 7.2 Where a minimum limit is set for an emission parameter such as pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.
- 7.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means:-
- 7.3.1 in relation to gases from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- 7.3.2 in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.
- 7.4 Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such conflict.

## Schedule 1

### Notification of abnormal emissions

This page outlines the information that the Operator must provide to satisfy conditions 5.1.1 and 5.1.2 of this Permit.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the Industrial Emissions (IPPC) Regulations..

#### Part A

Permit Number	
Name of Operator	
Location of Installation	
Location of the emission	
Time and date of the emission	

Substance(s) emitted	Media (e.g. air, groundwater)	Best estimate of the quantity or the rate of emission (include units)	Time between which the emission took place

Measures taken, or intended to be taken, to stop the emission	
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#### Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment and any public health risk or harm which has been or may be caused by the emission.	
The dates of any unauthorised emissions from the installation in the preceding 24 months.	

Name <sup>5</sup>	
I.D. Card No./Passport No.	
Post	
Signature	
Date	

<sup>5</sup> authorised to sign on behalf of Operator

## Schedule 2

### Annual Environmental Report

**Important note**

By this submission, you confirm that you give your explicit consent for the entire contents of this Annual Environment Report to be made available on the Authority's public website.

#### S2.1 Introduction

IPPC Permit Number	
Reporting Year	
Name and location of Site	
Brief description of activities at the site	

#### S2.2 Environment Management System & Reporting

Please attach a supporting document with the following:

1. Environmental Policy containing the installation's environmental objectives and targets;
2. Environmental Management Programme report (for the reporting year);
3. Environmental Management Programme proposal (for the following year);
4. European Pollutant Release and Transfer Register Report (as per Condition 4.5)<sup>6</sup>.

Tick (✓)


#### S2.3 Process Data

##### S2.3.1 Annual Summary

	Units	Previous reporting year <sup>7</sup>	Current reporting year
Quantity of energy produced	MWh		
Total Annual Energy Consumption (from electricity and other sources)	MWh		
Energy consumption per unit product	MWh consumed/ MWh produced		
Annual water consumption	m <sup>3</sup>		
Water consumption per unit product	m <sup>3</sup> /MWh		
Annual quantity of waste produced	tonnes		
Waste produced per unit product	tonne waste/ MWh		

##### S2.3.2 Fuel consumption

	Units	Sulphur Content <sup>8</sup>	Consumption	
			Previous Year	Current Year
Heavy Fuel Oil	m <sup>3</sup>			
Gas Oil	m <sup>3</sup>			

<sup>6</sup> The format used for reporting shall be that published in the Government Gazette (<http://www.doi.gov.mt/EN/gazetteonline/2007/07/gazts/GG%2013.7.pdf>)

<sup>7</sup> In this Annual Environmental Report, "previous reporting year" is not applicable for the first reporting year (2012) for the diesel engines (DPS6) only

<sup>8</sup> Specify units (e.g. as percentage, or mg/kg)

## S2.4 Monitoring Data of Emissions to Air

### S2.4.1 Summary of emissions to air (concentrations)

#### S2.4.1.1 Emissions of Dust (TSP), Nitrogen Oxides (NO<sub>x</sub>) and Sulphur Dioxide (SO<sub>2</sub>)

Parameter	Emission point reference	Standard methodology used	Annual average pollutant concentration	Mean Monthly Limit Value	Total annual number of exceedances of monthly mean value after validation		48 hourly Mean Limit Value (% compliance)	Percentage of exceedances of 48 hourly mean limit value after validation	
			mg.Nm <sup>-3</sup>	mg.Nm <sup>-3</sup>	Previous year	Present year	mg.Nm <sup>-3</sup>	Previous year	Present year
Total Suspended Particulates	DPS1								
Oxides of Nitrogen	DPS1								
Sulphur Dioxide	DPS1								
Total Suspended Particulates	DPS2								
Oxides of Nitrogen	DPS2								
Sulphur Dioxide	DPS2								
Total Suspended Particulates	DPS3								
Oxides of Nitrogen	DPS3								
Sulphur Dioxide	DPS3								
Total Suspended Particulates	DPS4								
Oxides of Nitrogen	DPS4								
Sulphur Dioxide	DPS4								
Total Suspended Particulates	DPS5								
Oxides of Nitrogen	DPS5								
Sulphur Dioxide	DPS5								
Total Suspended Particulates	DPS6								
Oxides of Nitrogen	DPS6								
Sulphur Dioxide	DPS6								

Additional documentation to be submitted:

Tick (✓)

Accreditation certificate(s) of laboratory

#### S2.4.1.2 Emissions of Carbon monoxide (CO)

Emission point reference	Standard methodology used	Annual average pollutant concentration	Monthly Limit Value	Total annual number of exceedances of monthly mean value after validation	
		mg.Nm <sup>-3</sup>	mg.Nm <sup>-3</sup>	Previous year	Present year
DPS1					
DPS2					
DPS3					
DPS4					
DPS5					
DPS6					

**S2.4.1.3 Emissions of Dioxins and Furans (PCDDs and PCDFs)**

<b>Sampling last carried out in (year)</b>	
<b>Sampling due in (year)</b>	

If monitoring was due in current reporting year, the following information shall be submitted:

Emission point reference	Standard methodology used	Mean Annual Limit Value	PCDD & PCDF concentration	Annual average Pollutant Concentration <sup>1</sup>	
		ng.Nm <sup>-3</sup>	ng.Nm <sup>-3</sup>	Present year	Previous report
				ng.Nm <sup>-3</sup>	ng.Nm <sup>-3</sup>
DPS1					

Additional documentation to be submitted:

Tick (✓)

Accreditation certificate(s) of laboratory

<sup>1</sup> All exceedances in this Annual Environmental Report are to be clearly highlighted in red.

**S2.4.1.4 Emissions of Metals**

Dates on which sampling was carried out:

	DPS1	DPS6 (when applicable)
1 <sup>st</sup> six months:		
2 <sup>nd</sup> six months:		

Emission point reference	Metals	Standard methodology used	Mean Annual Limit Value	Concentration 1 <sup>st</sup> six months	Concentration 2 <sup>nd</sup> six months	Annual average Pollutant Concentration	
			mg.Nm <sup>-3</sup>	mg.Nm <sup>-3</sup>	mg.Nm <sup>-3</sup>	Present year	Previous year
						mg.Nm <sup>-3</sup>	mg.Nm <sup>-3</sup>
DPS1	Cadmium and thallium together						
DPS1	Arsenic, chromium cobalt, copper, manganese, nickel, lead, antimony and vanadium together						
DPS6	Cadmium and thallium together						
DPS6	Chromium cobalt, copper, manganese, lead and antimony together						
DPS6	Arsenic						
DPS6	Nickel						
DPS6	Vanadium						

Additional documentation to be submitted:

 Accreditation certificate(s) of laboratory ☐ Tick (✓)

### S2.4.1.5 Emissions of PAHs

	Date on which sampling was carried out
DPS1	
DPS6 (when applicable)	

Emission point reference	Standard methodology used	Naphthalene	Anthracene	Phenantrene	Fluoranthene	Benzo(a) anthracene	Chrysene	Benzo(a) pyrene	Benzo(ghi) perylene	Benzo(k) fluoranthene	Indeno(1,2,3-cd)pyrene
		mg.kg <sup>-1</sup> dust	mg.kg <sup>-1</sup> dust	mg.kg <sup>-1</sup> dust	mg.kg <sup>-1</sup> dust	mg.kg <sup>-1</sup> dust	mg.kg <sup>-1</sup> dust	mg.kg <sup>-1</sup> dust	mg.kg <sup>-1</sup> dust	mg.kg <sup>-1</sup> dust	mg.kg <sup>-1</sup> dust
DPS1											
DPS6											

Emission point reference	Emission limit value	PAH (sum 10) measurements mg.kg <sup>-1</sup> dust	
		Present year	Previous year
DPS1			
DPS6			

Additional documentation to be submitted:

Accreditation certificate(s) of laboratory ☐ Tick (✓)

### S2.4.1.6 Emissions of Ammonia

Emission point reference	Standard methodology used	Mean Annual Limit Value	Annual average Pollutant Concentration (mg.Nm <sup>-3</sup> )	
		mg.Nm <sup>-3</sup>	Present year	Previous year
DPS6				



**S2.4.2 Monthly Loads of Particulates, SO<sub>2</sub> and NO<sub>x</sub>***ONE PAGE PER PLANT TO BE SUBMITTED*

Operator: Enemalta Corporation Ltd.	Plant no. DPS ____
Location: Delimara.	Heat Value of Fuel fired: _____ GJ.Mg <sup>-1</sup>
Reporting year: _____	

Month	Fuel Burn During this period  Mg . month <sup>-1</sup>	Monthly SO <sub>2</sub> Load  Mg	Monthly NO <sub>x</sub> Load  Mg	Monthly Dust Load  Mg
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				
TOTAL				

Pollutant Load (Mg) = Pollutant concentration (µg.Nm<sup>-3</sup>) × 1×10<sup>-9</sup> × WGF (m<sup>3</sup>.month<sup>-1</sup>)  
(WGF = waste gas flow rate).

**S2.4.3 Annual Data****S2.4.3.1 Annual Load of Particulates, SO<sub>2</sub> and NO<sub>x</sub>**

Units	Rated Thermal Input	Type	Fuel	Fuel Burn	Heat Value	Annual Emissions <sup>*</sup> SO <sub>2</sub>	Annual Emissions <sup>*</sup> NO <sub>x</sub>	Annual Emissions <sup>*</sup> dust
	MW <sub>TH</sub>					Mg.yr <sup>-1</sup>	Mg.yr <sup>-1</sup>	Mg.yr <sup>-1</sup>
Delimara 1	332	Steam Boiler	HFO					
Delimara 2	121	Gas Turbine	Gasoil					
Delimara 3	121	Gas Turbine	Gasoil					
Delimara 4	121	Gas Turbine	Gasoil					
Delimara 5	121	Gas Turbine	Gasoil					
Delimara 6	308	Diesel engines						
<b>Total</b>								

\* Sum of the total emissions during normal operations + total emissions during start-up/shut down periods.

**S2.4.3.2 Annual Load of Ni and V****ONE PAGE PER PLANT (DPS1, DPS6<sup>i</sup>) TO BE SUBMITTED**

Operator: Enemalta Corporation Ltd. Location: Delimara. Reporting year: _____	Plant no. DPS ____ Heat Value of Fuel fired _____ GJ.Mg <sup>-1</sup>
---	--

*Method 1: Metal content of fuel x fuel burn*

Year	Fuel Burn (Mg . year <sup>-1</sup> )	Average Ni content (mg Ni.Mg <sup>-1</sup> )	Average V content (mg V.Mg <sup>-1</sup> )	Annual Ni Load (Mg)	Annual V Load (Mg)
Previous					
Current					

Metal Load (Mg) = metal content (mg metal .Mg<sup>-1</sup>) × 1×10<sup>-9</sup> × FB (Mg.year<sup>-1</sup>)

FB = Fuel Burn.

Metal = nickel or vanadium.

*Method 2: Metal concentration in flue gas x flue gas volume*

Year	Flue gas volume	Average Ni content	Average V content	Annual Ni Load (Mg)	Annual V Load (Mg)
Previous					
Current					

Additional documentation to be submitted:

Accreditation certificate(s) of laboratory Tick (✓)  
☐

<sup>i</sup> When applicable.

**S2.4.3.3 Annual Load of Ammonia***ONE PAGE TO BE SUBMITTED FOR DPS 6*

Operator: Enemalta Corporation Ltd.	Plant no. DPS ____
Location: Delimara.	Heat Value of Fuel fired ____ GJ.Mg <sup>-1</sup>
Reporting year: _____	

Year	Annual Ammonia Load  (Mg)
Previous	
Current	

Additional documentation to be submitted:

Tick (✓)

Accreditation certificate(s) of laboratory

☐

**S2.4: Certificates of Analysis for physical and chemical parameters of fuels**

Documentation to be submitted:

Certificates of analysis for physical and chemical parameters of fuels for reporting year (indicate number of certificates submitted)

Accreditation certificate(s) of laboratory

Tick (✓)


**S2.5: Wind Rose**

Documentation to be submitted:

Wind rose for the reporting year showing wind speed and direction at the site

Tick (✓)

--

**S2.6: Ambient Air Quality Monitoring**

Sampling location	
Number of PM <sub>10</sub> daily samples taken during reporting year	
Number of PM <sub>2.5</sub> daily samples taken during reporting year	
Number of samples analysed for arsenic, cadmium, nickel, lead and vanadium during reporting year	

	PM <sub>10</sub> (ug/m <sup>3</sup> )	PM <sub>2.5</sub> (ug/m <sup>3</sup> )
Annual limit value (in accordance with LN 478 of 2010)	40	25
Annual average measurement		
Highest recorded measurement during reporting year		
Daily limit value (in accordance with LN 478 of 2010)	50	n/a
Number of exceedances of daily limit value		n/a

Sampling dates	Monitoring result (specify units)				
	Arsenic	Cadmium	Nickel	Lead	Vanadium
<b>Average</b>					

Note: In the table above, underline values which exceed the target/limit values specified in LN 478 of 2010.

Name of laboratory carrying out sampling and measurement	
--	--

Additional documentation to be submitted:

Tick (✓)

Accreditation certificate(s) of laboratory

--

## S2.7 Emissions to Marine Water

### S2.7.1 Emissions to Marine Water: Physical and Chemical Monitoring

ONE REPORT PER OUTLET TO BE SUBMITTED

Name of outlet and reference number: \_\_\_\_\_

No.	Parameter	Limit (annual average)	Standard methodology used	Concentration (annual average) <sup>1</sup>			Total annual mass emissions		
				Units	Previous year	Present year	Units	Previous year	Present year
1	Flow			-	-	-			
2	pH								
3	Temperature								
4	Biological oxygen demand (BOD5)								
5	Total Nitrogen								
6	Phosphorous compounds as total phosphorous, as per EN ISO 15681								
8	Chlorine dioxide and oxidants (given as chlorine)								
9	Arsenic								
10	Cadmium								
11	Chromium (Total)								
12	Copper								
13	Lead								
14	Mercury								
15	Nickel								
16	Tin								
17	Vanadium								
18	Zinc								
19	Total petroleum hydrocarbons								

<sup>1</sup> Exceedances are to be clearly highlighted in red.

No.	Parameter	Limit (annual average)	Standard methodology used	Concentration (annual average) <sup>1</sup>			Total annual mass emissions		
				Units	Previous year	Present year	Units	Previous year	Present year
20	Tributyl tin compounds (tributyltin cation; CAS number 36643-28-4)								
21	Total Suspended Solids								
22	Benzene (CAS number 71-43-2)								
23	PAHs as follows:								
	Benzo(a)pyrene								
	Benzo(b)fluor-anthene, Benzo(k)fluor-anthene								
	Benzo(g,h,i)-perylene, Indeno(1,2,3-cd)-pyrene								
24	C10-C13 chloroalkanes (CAS number 85535-84-8)								
25	Polychlorinated biphenyls (CAS number 1336-36-3)								

Name of laboratory where tests in this section have been carried out	
Is this laboratory accredited (certified) for the above tests?	Yes <input type="checkbox"/> No <input type="checkbox"/>

Additional documentation to be submitted:

Tick (✓)

Accreditation certificate(s) of laboratory

Were there any exceedances in the present reporting year?	Yes <input type="checkbox"/> No <input type="checkbox"/>
---	--

If yes, one of the following is also to be submitted:

Action programme aimed at achieving emission limits

Document designating a mixing zone following the procedures specified in Regulation 8(b) (Mixing Zones) of Legal Notice 24 of 2011

Tick (✓)


**S2.7.2 Emissions to Marine Water: Ecological Monitoring**

<b>Date on which survey was carried out:</b>	
Did the survey reveal a decline in the conservation status of any of the habitat types and species in the area, especially those listed in the Schedules LN 311/06?	Yes <input type="checkbox"/> No <input type="checkbox"/>

Additional documentation to be submitted:

Ecological survey for reporting year

Proposals for mitigation measures (only required if the survey revealed a decline in the conservation status)

Tick (✓)




**S2.8 Noise monitoring<sup>i</sup>**

Monitoring point <sup>ii</sup>	Date sampled	Time sampled	Operating conditions	Noise measurement	Units	Other comments (if any)

Additional documentation to be submitted:

Map showing monitoring points	Tick (✓)
Detailed noise report <sup>iii</sup>	<input type="checkbox"/>

<sup>i</sup> Noise monitoring shall be carried out according to BS 4142:1997.

<sup>ii</sup> Monitoring points should be labelled using a unique code, and should be suitably sited. A corresponding labelled map showing the location of each monitoring points shall be submitted.

<sup>iii</sup> The detailed noise report should include information about the various monitoring points chosen, an analysis of the results and suggestions for improvement (if applicable).

## S2.9 Off-site transfers of waste

[illegible]

European Waste Catalogue Code (Reference: Decision 2000/532/EC)

<sup>ii</sup> For hazardous waste only. If waste is not hazardous, please write "n/a".

## S2.10 Testing of bunds, pipes, pumps, valves, flanges, over-ground pipes and tanks

Number of bunds on site for tanks/containers $\leq 25 \text{ m}^3$ requiring testing in accordance with condition 2.5.4.3	
Number of oil interceptors on site	
Number of tanks on site	
Date of last test for bunds for tanks/containers $\leq 25 \text{ m}^3$	
Testing for bunds for tanks/containers $< 25 \text{ m}^3$ due on (date)	
Number of existing fuel tanks on site	
Date of last ultrasonic testing of shell thickness for above tanks	
Ultrasonic testing of shell thickness for above tanks due on (date)	
Number of fuel tanks on site for DPS6	
Date of last ultrasonic testing of shell thickness (DPS6)	
Ultrasonic testing of shell thickness (DPS6) due on (date)	
Date of last test for pipes, pumps, valves and flanges for fuel delivery from delivery ship to tank farm	
Testing of pipes, pumps, valves and flanges for fuel delivery from delivery ship to tank farm due on (date)	
Date of last test for other flanges, valves and over-ground pipes on site	
Testing of other flanges, valves and over-ground pipes on site due on (date)	
Date of last test for oil interceptors	
Testing for oil interceptors due on (date)	

Additional documentation to be submitted if test was carried out during previous reporting year:

Inspection report and certification by approved auditor for bunds for tanks/containers $\leq 25 \text{ m}^3$ on site	Tick (✓)
Inspection report and certification by approved auditor for pipes, pumps, valves and flanges for fuel delivery from delivery ship to tank farm	
Inspection report and certification by approved auditor for other flanges, valves and over-ground pipes on site	
Inspection report and certification by approved auditor for oil interceptors	
Ultrasonic test report of tank shell thickness	

*Bunds for tanks/containers  $> 25 \text{ m}^3$ :*

Number of bunds on site for tanks $> 25 \text{ m}^3$	
Number of visual inspections carried out during reporting year on each bund	
Total number of faults identified during reporting year	
Total number of faults rectified during reporting year	

Additional documentation to be submitted for bunds for tanks/containers  $> 25 \text{ m}^3$ :

Bund certification by warranted civil engineer	Tick (✓)
Summary report by warranted engineer on the visual inspections undertaken during the reporting year (including reports on faults and remedial actions taken)	

## S2.11 Incidents and Complaints

### S2.11.1 Non-Compliance Incidents during Reporting Year

Date of incident	Brief description of Incident	Cause	Corrective action

Total number of non-compliance incidents for previous year:

Total number of non-compliance incidents for current reporting year:

### S2.11.2 Complaints made by the public

Date of complaint	Description of complaint	Actions taken

Total number of complaints for previous year:

Total number of complaints for current reporting year:

## S2.12 Transport

Name of ADR certified carrier used during reporting year	Material(s) transported

Name of registered waste carrier used during reporting year	Waste type(s) transported

## S2.13 Land monitoring

Land monitoring carried out in (year):

Land monitoring due in (year)

*If land monitoring was due in current reporting year:*

Sampling date/s

Additional documentation to be submitted:

Land monitoring programme

Land monitoring results

Accreditation certificates of laboratory

Tick (✓)


### Schedule 3

#### Quarterly Reporting

**Important note**

By this submission, you confirm that you give your explicit consent for the entire contents of this Quarterly Report to be made available on the Authority's public website.

Period covered by this report: \_\_\_\_\_

**S3.1 Waste**

Waste removed from site (EWC code & description)	Quantity	Units

**S3.2 Air emissions****S3.2.1 Quarterly reporting of SO<sub>2</sub> and NO<sub>x</sub> loads****S3.2.2.1 SO<sub>2</sub> load**

Period	Projected load <sup>i</sup>	Actual load	Revised projected load
	tonnes	tonnes	tonnes
January – March			
April – June			
July – September			
October – December			
<b>Total annual load</b>			

**S3.2.2.2 NO<sub>x</sub> load**

Period	Projected load <sup>i</sup>	Actual load	Revised projected load
	tonnes	tonnes	tonnes
January – March			
April – June			
July – September			
October – December			
<b>Total annual load</b>			

<sup>i</sup> As submitted to the Authority in September of previous year

## Schedule 4

### Monthly reporting

**Important note**

By this submission, you confirm that you give your explicit consent for the entire contents of this Monthly Report to be made available on the Authority's public website.

**S4.1 Daily Statistical Analysis of Continuous Monitoring****S4.1.1 Data for Particulates**

*ONE PAGE PER DAY TO BE SUBMITTED FOR EACH PLANT  
(DPS 1-6)*

Operator: Enemalta Corporation Ltd.	Emission Limit Value: ____ mg . Nm <sup>-3</sup>
Location: Delimara	
Date: ____ / ____ / ____	Plant no.: ____

Time	Validated Hourly average (mg . Nm <sup>-3</sup> )	Validity of Data*
0000 hrs		
0100 hrs		
0200 hrs		
0300 hrs		
0400 hrs		
0500 hrs		
0600 hrs		
0700 hrs		
0800 hrs		
0900 hrs		
1000 hrs		
1100 hrs		
1200 hrs		
1300 hrs		
1400 hrs		
1500 hrs		
1600 hrs		
1700 hrs		
1800 hrs		
1900 hrs		
2000 hrs		
2100 hrs		
2200 hrs		
2300 hrs		

<b>Validated mean daily concentration of particulates</b>	<b>mg . Nm<sup>-3</sup></b>
---	-----------------------------

Notes:

- (a) The validated hourly average is calculated by subtracting a factor determined according to the procedure established by the relevant standard referred to in this permit and which shall in no case exceed 30% from the hourly average.
- (b) Validated mean daily concentration average is calculated from the validated hourly averages

\*In this column mark valid data entries with a ✓ and invalid data entries with a ×.

**S4.1.2 Data for Sulphur Dioxide**

**ONE PAGE PER DAY TO BE SUBMITTED FOR EACH PLANT  
(DPS 1 - 6)**

Operator: Enemalta Corporation Ltd.	Emission Limit Value: _____ mg . Nm <sup>-3</sup>
Location: Delimara	
Date: ____/____/____	Plant no.: _____

Time	Validated Hourly average (mg . Nm <sup>-3</sup> )	Validity of Data*
0000 hrs		
0100 hrs		
0200 hrs		
0300 hrs		
0400 hrs		
0500 hrs		
0600 hrs		
0700 hrs		
0800 hrs		
0900 hrs		
1000 hrs		
1100 hrs		
1200 hrs		
1300 hrs		
1400 hrs		
1500 hrs		
1600 hrs		
1700 hrs		
1800 hrs		
1900 hrs		
2000 hrs		
2100 hrs		
2200 hrs		
2300 hrs		

<b>Validated mean daily concentration of sulphur dioxide</b>	<b>mg . Nm<sup>-3</sup></b>
--	-----------------------------

Notes:

- (a) The validated hourly average is calculated by subtracting a factor determined according to the procedure established by the relevant standard referred to in this permit and which shall in no case exceed 20% from the hourly average.
- (b) Validated mean daily concentration average is calculated from the validated hourly averages.

\*In this column mark valid data entries with a ✓ and invalid data entries with a ✕.

**S4.1.3 Data for Nitrogen Oxides**

**ONE PAGE PER DAY TO BE SUBMITTED FOR EACH PLANT  
(DPS1-6)**

Operator: Enemalta Corporation Ltd.	Emission Limit Value: _____ mg . Nm <sup>-3</sup>
Location: Delimara	
Date: ____/____/____	Plant no.: _____

Time	Validated Hourly average (mg . Nm <sup>-3</sup> )	Validity of Data*
0000 hrs		
0100 hrs		
0200 hrs		
0300 hrs		
0400 hrs		
0500 hrs		
0600 hrs		
0700 hrs		
0800 hrs		
0900 hrs		
1000 hrs		
1100 hrs		
1200 hrs		
1300 hrs		
1400 hrs		
1500 hrs		
1600 hrs		
1700 hrs		
1800 hrs		
1900 hrs		
2000 hrs		
2100 hrs		
2200 hrs		
2300 hrs		

<b>Validated mean daily concentration of nitrogen oxides</b>	<b>mg . Nm<sup>-3</sup></b>
--	-----------------------------

Note:

- (a) The validated hourly average is calculated by subtracting a factor determined according to the procedure established by the relevant standard referred to in this permit and which shall in no case exceed 20% from the hourly average.
- (b) Validated mean daily concentration average is calculated from the validated hourly averages

\*In this column mark valid data entries with a ✓ and invalid data entries with a ✕.



**S4.1.4 Data for Carbon Monoxide**

**ONE PAGE PER DAY TO BE SUBMITTED FOR EACH PLANT  
(DPS 1 - 6)**

Operator: Enemalta Corporation Ltd.	Emission Limit Value: _____ mg . Nm <sup>-3</sup>
Location: Delimara.	
Date: ____/____/____	Plant no.: _____

Time	Validated Hourly average (mg . Nm <sup>-3</sup> )	Validity of Data*
0000 hrs		
0100 hrs		
0200 hrs		
0300 hrs		
0400 hrs		
0500 hrs		
0600 hrs		
0700 hrs		
0800 hrs		
0900 hrs		
1000 hrs		
1100 hrs		
1200 hrs		
1300 hrs		
1400 hrs		
1500 hrs		
1600 hrs		
1700 hrs		
1800 hrs		
1900 hrs		
2000 hrs		
2100 hrs		
2200 hrs		
2300 hrs		

<b>Validated mean daily concentration of carbon monoxide</b>	<b>mg . Nm<sup>-3</sup></b>
--	-----------------------------

Note:

- (a) The validated hourly average is calculated by subtracting a factor determined according to the procedure established by the relevant standard referred to in this permit and which shall in no case exceed 10% from the hourly average.
- (b) Validated mean daily concentration average is calculated from the validated hourly averages.

\*In this column mark valid data entries with a ✓ and invalid data entries with a ✕.









Note:  
*In the table above underline daily averages which exceed the daily emission limit values.*

*In the table above underline daily averages which exceed the daily emission limit values.*

#### S4.4 Monthly Statistical Analysis of Continuous Monitoring

##### S4.4.1 Monthly Concentration Data for Particulates, SO<sub>2</sub>, NO<sub>x</sub> and CO

ONE PAGE PER MONTH TO BE SUBMITTED FOR EACH PLANT

Reporting year	
Month	
Plant	

	Particulates	SO <sub>2</sub>	NO <sub>x</sub>	CO
Monthly average concentration for the period (mg . Nm <sup>-3</sup> )				
No of exceedances of 48-hour limit in period				-
Highest individual 48-hour average in period (mg . Nm <sup>-3</sup> )				-
Mean 48-hourly average, in period (mg . Nm <sup>-3</sup> )				-
No of exceedances of 24 hr limit in period	-	-	-	
Highest individual 24 hr average in period (mg . Nm <sup>-3</sup> )				
Mean daily average, in period (mg . Nm <sup>-3</sup> )				
Highest individual 1 hr average in period (mg . Nm <sup>-3</sup> )				
Mean 1 hr average in period (mg . Nm <sup>-3</sup> )				
Percentage of boiler operating time that continuous monitors available during reporting period				





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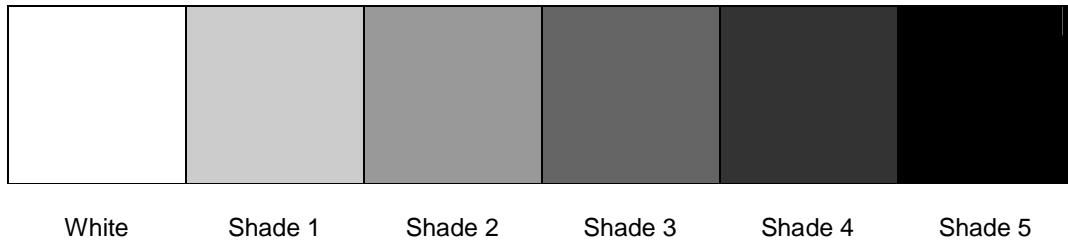
## Schedule 5

### Ringelmann Chart

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The Ringelmann scale is made up of six fields, four of which are shades of grey in between white and black; the percentage of black in each shade is shown below:

Shade 1	20%
Shade 2	40%
Shade 3	60%
Shade 4	80%



## Schedule 6

### Equivalence Factors

The concentrations of the following dioxins and furans determined in the waste gas shall be multiplied by the given equivalence factors and summed up in order to assess compliance with emission limit values for these substances.

Substance	Equivalence factor
2,3,7,8-Tetrachlordibenzodioxin (TCDD)	1
1,2,3,7,8-Pentachlordibenzodioxin (PeCDD)	0.5
1,2,3,4,7,8-Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,7,8,9-Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,6,7,8-Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,4,6,7,8-Heptachlordibenzodioxin (HpCDD)	0.01
Octachlordibenzodioxin (OCDD)	0.001
2,3,7,8-Tetrachlordibenzofuran (TCDF)	0.1
2,3,4,7,8-Pentachlordibenzofuran (PeCDF)	0.5
1,2,3,7,8-Pentachlordibenzofuran (PeCDF)	0.05
1,2,3,4,7,8-Hexachlordibenzofuran (HxCDF)	0.1
1,2,3,7,8,9-Hexachlordibenzofuran (HxCDF)	0.1
1,2,3,6,7,8-Hexachlordibenzofuran (HxCDF)	0.1
2,3,4,6,7,8-Hexachlordibenzofuran (HxCDF)	0.1
1,2,3,4,6,7,8-Heptachlordibenzofuran (HpCDF)	0.01
1,2,3,4,7,8,9-Heptachlordibenzofuran (HpCDF)	0.01
Octachlordibenzofuran (OCDF)	0.001

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**Schedule 7**


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**List of Priority Substances and Certain Other Pollutants in the field of  
Water Quality**


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Alachlor	Hexachloro-cyclohexane
Anthracene	Isoproturon
Atrazine	Naphtalene
Brominated diphenylether	Nonylphenol
Carbon tetrachloride	Octylphenol
Chlorpyrifos	Pentachloro-benzene
Chlorfenvinphos	Pentachloro-phenol
Aldrin	Simazine
Dieldrin	Tetrachloroethylene
Endrin	Trichloroethylene
Isodrin	Trichloro-benzenes
DDT	Trichloro-methane
1,2-Dichloroethane	Trifluralin
Dichloromethane	
Di(2-ethylhexyl)-phthalate	
Diuron	
Endosulfan	
Fluoranthene	
Hexachloro-benzene	
Hexachloro-butadiene	

---

**Schedule 8**

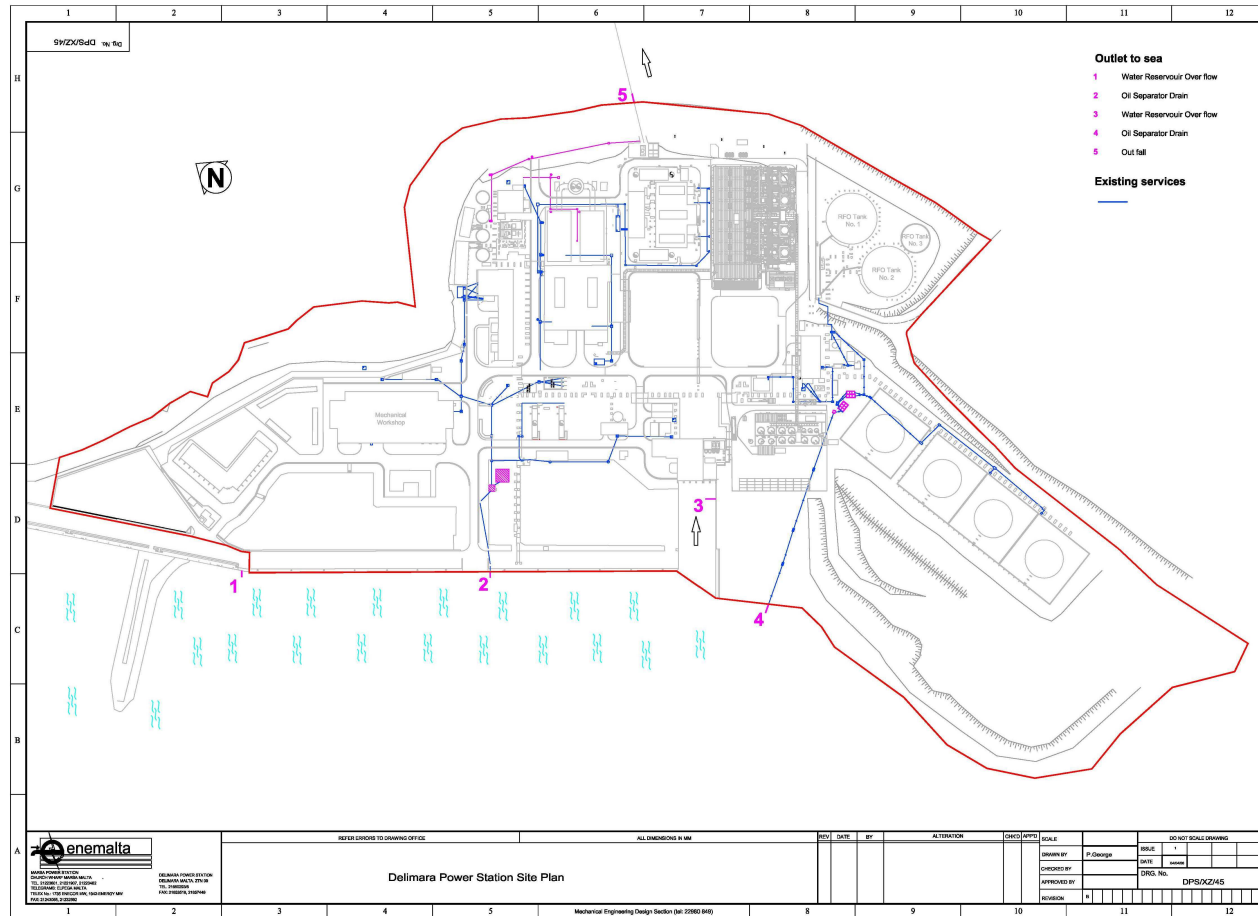
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**List of pollutants to be measured in land**


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Pollutant
<b>Metals</b>
Mercury
Cadmium
Lead
Copper
Zinc
Arsenic
Chromium
Selenium
Nickel
Vanadium
Cobalt
Thallium
Manganese
Antimony
<b>Inorganic compounds</b>
Asbestos fibres
<b>Alkanes</b>
Straight-chain alkanes from C <sub>10</sub> to C <sub>70</sub>
Cycloalkanes
<b>Aromatic compounds</b>
Benzene
Ethyl benzene
Toluene
Xylene
Alkylbenzenes
<b>Polycyclic aromatic hydrocarbons (PAHs)</b>
PAH (sum 10)
Naphthalene
Anthracene
Phenatrene
Flouranthene
Benzo(a)anthracene
Chrysene
Benzo(a)pyrene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Indeno(1,2,3-cd)pyrene
<b>Other contaminants</b>
Mineral oil

## Schedule 9 Site Plan



END OF PERMIT

<b>Malta Resources Authority</b>	
<b>Address:</b> 2 <sup>nd</sup> Floor, Millennia, Aldo Moro Road, Marsa MRS9065, Malta	 MALTA RESOURCES AUTHORITY
<b>Telephone:</b> + 356 2295 5100 (General)	

**European Union Greenhouse Gas Emissions Trading Scheme  
- Greenhouse Gas Emissions Permit -**

**Permit Reference Number: MT-2**

## Introductory Note

This Greenhouse Gas Emissions Permit ('Permit') is being issued pursuant to the European Union Greenhouse Gas Emissions Trading Scheme for Stationary Installations Regulations, 2013 (Legal Notice 434 of 2013), transposing Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC..

The Permit authorises the Operator holding the Permit to undertake the activities (as defined in Schedule 1 to Legal Notice 434 of 2013) as indicated in this permit at the specified installation/s, resulting in emissions of the listed greenhouse gases from the specified emission points.

The Permit includes conditions and requirements that must be met in respect of such emissions, including monitoring and reporting requirements and notification requirements. It also contains an obligation for the Operator of the installation/s to surrender allowances equal to the total emissions of specified greenhouse gases from the installation/s in each calendar year within four months following the end of that year. Applicable penalties are set out in the legal notice for infringements of this obligation.

Any correspondence relating to this permit should be referred to:

By e-mail: [emissions\\_trading\\_scheme@mra.org.mt](mailto:emissions_trading_scheme@mra.org.mt)

Or

By post: Attn. Emissions Trading Scheme  
Climate Change Unit  
Malta Resources Authority  
2<sup>nd</sup> Floor, Millennia, Aldo Moro Road  
Marsa MRS9065, Malta

## Definitions

For the purposes of this permit, the definitions in Legal Notice 434 of 2013 shall apply.

In addition, the following definitions shall apply:

- "Annual emissions" means emissions made in a calendar year. For the purposes of condition 4.2, the annual emissions shall be deemed to be increased by:
- a.) the amount of any annual emissions in respect of which allowances were not surrendered in accordance with condition 4.2 in the previous calendar year;
  - b.) the amount of emissions which are determined as having been unreported in reports submitted in that year and/or previous years.
- "Legal Notice 434 of 2013" means Legal Notice 434 of 2013, European Union Greenhouse Gas Emissions Trading Scheme for Stationary Installations Regulations, 2013, as may be amended.



## 1. The Permitted Installation(s)

Pursuant to Regulation 4 of Legal Notice 434 of 2013, the Authority issues this Greenhouse Gas Emissions Permit, subject to the conditions specified in the permit, and to any subsequent revisions, amendments or corrections deemed appropriate, to:

*Enemalta Corporation  
Church Wharf  
Marsa MRS 1000  
Malta*

to carry out the following activity/ies at the installation/s indicated:

<i>DPS</i>	<i>Delimara Power Station</i>	<i>Combustion installation with a rated thermal input exceeding 20MW (except hazardous or municipal waste installations)</i>
<i>Delimara Marsaxlokk MXK 1320 Malta</i>		

## 2. Technical Description of the Installation/s

2.1. This Permit authorises the Operator to emit the specified greenhouse gases from the emission points listed in Table 2.1.

Table 2.1.

Installation Reference	Emitting Unit Reference	Emitting Unit Description	Description of Emission Point	Greenhouse Gas
DPS	S1	Heavy Fuel Oil fired Boiler 1 (DPS1A)	Stack (D1A)	CO <sub>2</sub>
DPS	S2	Heavy Fuel Oil fired Boiler 2 (DPS1B)	Stack (D1B)	CO <sub>2</sub>
DPS	S3	Gasoil fired Open Cycle Gas Turbine 1 (DPS2)	Stack (D2)	CO <sub>2</sub>
DPS	S4	Gasoil fired Open Cycle Gas Turbine (DPS3)	Stack (D3)	CO <sub>2</sub>
DPS	S5	Gasoil fired Combined Cycle Gas Turbine 3/1 (DPS4)	Bypass Stack <sup>1</sup> (D4A); and, Stack after HRSG unit (D4B)	CO <sub>2</sub>
DPS	S6	Gasoil fired Combined Cycle Gas Turbine 3/2 (DPS5)	Bypass Stack (D5A); and, Stack after HRSG <sup>2</sup> unit (D5B)	CO <sub>2</sub>
DPS	S7	Heavy Fuel Oil/Gasoil fired Combined Cycle Diesel Engines 1&2 (DPS6A)	Stack (D6A)	CO <sub>2</sub>
DPS	S8	Heavy Fuel Oil/Gasoil fired Combined Cycle Diesel Engines 3&4 (DPS6B)	Stack (D6B)	CO <sub>2</sub>
DPS	S9	Heavy Fuel Oil/Gasoil fired Combined Cycle Diesel Engines 5&6 (DPS6C)	Stack (D6C)	CO <sub>2</sub>
DPS	S10	Heavy Fuel Oil/Gasoil fired Combined Cycle Diesel Engines 7&8 (DPS6D)	Stack (D6D)	CO <sub>2</sub>

2.2. The Operator shall ensure that emissions of the specified greenhouse gases shall take place only as set out in this Permit.

<sup>1</sup> Bypass stacks for units DPS4 and DPS5 are used for unit start-ups only.

<sup>2</sup> "HRSG" refers to Heat Recovery Steam Generator.

- 2.3. This Permit does not put conditions in relation to emissions of gases other than those specified in this Permit.
- 2.4. This Permit is issued for the purposes of permitting requirements pursuant to Legal Notice 434 of 2013 only. It shall not be construed as removing any obligations and requirements of the Operator under any other legislation or other permit unless specifically so provided by Legal Notice 434 of 2013.

### **3. Monitoring and Reporting**

- 3.1. Monitoring of emissions of greenhouse gases indicated in section 2 from activities as stipulated in section 1 shall be performed according to the monitoring and reporting plan submitted and approved pursuant to Regulation 15 of Legal Notice 434 of 2013, and in accordance with the requirements set out in the same Regulation.
- 3.2. Reporting of annual emissions of greenhouse gases from activities as stipulated in section 2 above shall be carried out in accordance with Regulation 16 of Legal Notice 434 of 2013.
- 3.3. The Operator shall submit a report of the annual emissions for each of the greenhouse gases listed in Table 2.1 in respect of a calendar year, no later than 31<sup>st</sup> March of the following year. The first report shall be submitted by 31<sup>st</sup> March of the year following the year during which the installation/s covered by this permit was/were deemed to fall within the scope of Legal Notice 434 of 2013, and shall be submitted in respect of the calendar year during which the installation/s was/were deemed to fall within the scope of Legal Notice 434 of 2013.
- 3.4. The Operator shall ensure that an annual emissions report submitted under Condition 3.3 has been verified by a Verifier appointed by the Operator. Verification of a report shall be carried out in accordance with Regulation 16 of Legal Notice 434 of 2013. The Operator shall make available to the Verifier any information and data relating to emissions of the specified greenhouse gases which the Verifier may require in order to verify the report to be submitted under condition 3.3. The Operator shall notify the Verifier's conclusions to the Authority at the same time as submitting the report.

### **4. Allowances**

- 4.1. The Operator shall, by 30<sup>th</sup> April of each year at the latest, surrender a number of allowances equal to the annual emissions of the greenhouse gases specified in Table 2.1 in the preceding calendar year, as monitored, reported and verified in accordance with section 3. The first such surrender of allowances shall be made by 30<sup>th</sup> April of the year following the year during which the installation/s covered by this permit was/were deemed to fall within the scope of Legal Notice 434 of 2013, and shall be in respect of emissions occurring during the whole calendar year during which the installation/s was/were deemed to fall within the scope of Legal Notice 434 of 2013.
- 4.2. With regards to activities or parts of activities which have ceased to take place during the previous year, and which have been duly notified to the Authority, the Operator shall surrender allowances equal to the annual emissions of the relevant greenhouse gases from such activities in the preceding calendar year or part thereof. The total allowances surrendered shall also include such allowances as may be necessary to

cover emissions outstanding or due pursuant to Legal Notice 434 of 2013 in any earlier calendar years.

- 4.3. The holding, transfer and cancellation of allowances by the Operator shall be in accordance with any applicable provisions and, or any requirements of the European Union and/or national legislation relating to the establishment of a Union Registry pursuant to Directive 2003/87/EC and any other guidance issued by the Authority or the National Registry Administrator.

## **5. Notifications**

- 5.1. The Operator shall notify the Authority in writing of:
- a) any changes planned in the nature or function of the installation/s;
  - b) any extension or reduction of the capacity of the installation/s;
  - c) in the case of a permit covering more than one installation, any instance where one or more of the installations cease carrying out all of the activities listed under section 1, but the operator continues to carry out at least one activity in one installation.

Such a notification shall be made by not later than 120 days prior to such a change effectively taking place.

- 5.2. The Operator shall notify the Authority in writing of any change in the name of the Operator by not later than 60 days prior to such a change effectively taking place.
- 5.3. The Operator shall notify the Authority immediately on becoming aware of any factor that has prevented or may prevent compliance with any of the conditions of this permit. Details of the factor and why compliance has been or may be prevented shall be provided.

## **6. Inspections**

- 6.1. The Authority may, from time to time, carry out any inspections it deems appropriate to ensure that the operator is abiding by all the conditions set out in this permit and all the provisions set out in relevant legislation and any other guidance issued by the Authority.
- 6.2. Inspectors of the Authority shall, at any time during which the plant is operating and at any other reasonable time, be allowed to inspect all operations and documentation deemed necessary to ensure compliance with the conditions set out in this permit and all the provisions set out in relevant legislation and any other guidance issued by the Authority.

## **7. Penalties**

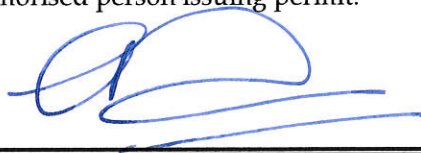
- 7.1 In the event that the Operator fails to abide by monitoring and reporting obligations set out in section 3, he may be held liable for the payment of an administrative fine as provided for under Regulation 18 of Legal Notice 434 of 2013.

- 7.2 In the event that the Operator fails to surrender allowances in accordance with conditions set out in section 4, he shall be held liable to the payment of an excess emissions penalty as provided under Regulation 19 of Legal Notice 434 of 2013. In addition to the payment of the excess emissions penalty, the Operator shall also have to surrender an amount of allowances equal to those excess emissions in respect of which an excess emissions penalty was paid.

## **8. Transfer, Surrender and Revocation of this Permit.**

- 8.1 This Permit may be transferred in accordance with the rules set out in Regulation 8 of Legal Notice 434 of 2013.
- 8.2 This Permit may be surrendered in accordance with the rules set out in Regulation 9 of Legal Notice 434 of 2013.
- 8.3 This Permit may be revoked by the Authority in accordance with the rules set out in Regulation 10 of Legal Notice 434 of 2013.

Signature of authorised person issuing permit:



Name of authorised person issuing permit:

Ing. Anthony Rizzo  
Chief Executive Officer

Position of authorised person within competent authority:

Date of issue of permit:

27-Jan-2014

Authority Stamp:



### **Appendix III**

**Copy of the certificate of incorporation or  
registration as per section A3.5**

# COMPANIES ACT, 1995

MALTA

## CERTIFICATE OF REGISTRATION LIMITED LIABILITY COMPANY

(PURSUANT TO SECTION 77)

**D3 POWER GENERATION LIMITED**

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Name of Company

**Enemalta Building, Triq Belt il-Hazna, Marsa MRS 1571, Malta**

---

Registered Office

**C 66510**

---

Registration Number

This is to certify that the above-mentioned Company  
has been registered by the Registrar of Companies as a  
Limited Liability Company on the

**29<sup>th</sup> August 2014**

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Date of Registration



**Joseph Farrugia**

---

*f/ Registrar of Companies*

Dated this **29<sup>th</sup>** ..... day of **August** ..... 20 **14** .....



# COMPANIES ACT, 1995

MALTA

## CERTIFICATE OF REGISTRATION LIMITED LIABILITY COMPANY

(PURSUANT TO SECTION 77)

**SEP (Malta) Holding Ltd**

---

Name of Company

**120, St. Ursula Street, Valletta VLT 1236, Malta**

---

Registered Office

**C 67784**

---

Registration Number

This is to certify that the above-mentioned Company  
has been registered by the Registrar of Companies as a  
Limited Liability Company on the

**26<sup>th</sup> November 2014**

---

Date of Registration

  
**Jean Kar Portelli**

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*f/Registrar of Companies*

Dated this **26<sup>th</sup>** ..... day of **November** ..... 20 **14** .....



C66510/11

**D3 POWER GENERATION LIMITED – C66510**

Enemalta Building  
Triq Belt il-Hazna  
Marsa, MRS 1571  
Malta

**A S**  
**- 4 FEB 2015**

Certified extract of extraordinary resolutions in writing signed by all the shareholders of D3 POWER GENERATION LIMITED (the “Company”) on 10 December, 2014.

*“Omissis....*

IT WAS RESOLVED by means of an extraordinary resolution:

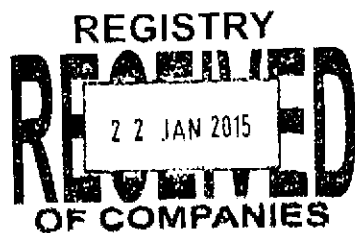
*...omissis....*

6. to approve and adopt the new and revised Memorandum and Articles of the Company in the form attached to these Resolutions as Annex B with effect from the date of allotment of 150,000,000 (one hundred fifty million) Ordinary A Shares of €1 (one Euro) each fully paid up to SEP (Malta) Holding Ltd and to authorise any one Director and/or the Company Secretary to issue a certified copy of the revised and updated version of the Memorandum and Articles of Association and of these Resolutions.

*...omissis”*

**Certified True Extract**

Dr. Aron Mifsud Bonnici  
Company Secretary



## MEMORANDUM OF ASSOCIATION

OF

**D3 Power Generation Limited**

1. **NAME**

The name of the Company is D3 Power Generation Limited.

2. **PRIVATE COMPANY**

The Company shall be a private limited liability Company.

3. **REGISTERED OFFICE**

The registered office of the Company shall be situated at Enemalta Building, Triq Belt il-Hazna, Marsa MRS1571, Malta or at such other address as may be determined by the Board of Directors of the Company.

4. **OBJECTS**

The objects of the Company are:

- a) to establish, operate and/ or maintain power plants and any other mechanisms used in the generation of electricity in Malta;
- b) to generate electrical energy in Malta and to enter into agreements with other Maltese entities for the provision and distribution of such electrical energy in Malta;
- c) to purchase, acquire, own, hold, manage, lease, administer, sell or otherwise dispose of natural resources which are to be used for the fulfilment of the objects of the Company, including but not limited to heavy fuel oil and liquefied natural gas;
- d) to purchase, acquire, own, hold manage, lease, administer, convert, sell or otherwise dispose of property of any kind which the Company may consider necessary for the fulfilment of these objects, whether immovable or movable, personal or real, and whether or not belonging to the Company, and to subscribe for, take, purchase or otherwise acquire, hold, sell or dispose of shares or other interest or securities of any other company;
- e) to import, export, distribute, and otherwise deal in any goods, and to provide consultancy, representation and agency services in the business, industrial and commercial fields;
- f) to obtain loans, overdrafts, credits and other financial and monetary facilities without limit and otherwise borrow or raise money in such manner as the Company shall think fit,

whether as sole borrower or jointly with other persons and/or severally, and to provide by way of security for the repayment of the principal and interest thereon and/or the fulfilment of any of the Company's obligations, a hypothec, pledge, privilege, lien, mortgage or other charge or encumbrance over the assets of the Company;

- g) to guarantee the obligations and/or the repayment of indebtedness of any person although not in furtherance of the Company's corporate purpose and whether or not the Company receives any consideration or derives any direct or indirect benefit therefrom, and to secure such guarantee by means of a hypothec, privilege, lien, mortgage, pledge or other charge or encumbrance over the assets of the Company;
- h) to enter into derivative contracts and/or contracts for differences of any kind, including without limitation swaps, options, forwards, futures, equity derivatives, credit derivatives, securities lending transactions, sale and buy back transactions, repurchase and reverse repurchase transactions, obligations linked to the performance of any asset a basket of assets, a currency, an index a right or an obligation, any price value formula or other market recognised value reference, and similar transactions and/or agreements, loans, overdrafts and other financial agreements or facilities which are entered into for the purpose of or in connection with any of the foregoing, and to grant any form of security or collateral, whether by way of title transfer or otherwise, for the purpose of or in connection with any of the foregoing;
- i) to apply, administer and procure any permits and/ or licences required for any activity conducted, or to be conducted in pursuance of the Company's objects;
- j) to carry out such activities as may be ancillary to the above or as may be necessary or desirable to achieve the above objects.

Nothing in the foregoing shall be construed as enabling or empowering the Company to carry on any activity, business or service that requires a licence or other authorisation under or in terms of the Banking Act, Chapter 371 of the Laws of Malta, the Financial Institutions Act, Chapter 376 of the Laws of Malta, the Investment Services Act, Chapter 370 of the Laws of Malta, the Insurance Business Act, Chapter 403 of the Laws of Malta, the Insurance Intermediaries Act, Chapter 487 of the Laws of Malta or the Trusts and Trustees Act, Chapter 331 of the Laws of Malta without a licence or other appropriate authorisation from the relevant competent authority.

The foregoing objects shall be construed consistently with and subject to the provisions of the Companies Act, 1995.

#### **4A. POWERS OF THE COMPANY**

In attaining its objects, the Company shall have the following powers:

- (a) To purchase, and acquire and to sell and transfer, take on or grant on lease, exchange or under any title whatsoever, any asset and to carry out such amelioration, upgrading or reconstruction work on such assets as may be necessary for the development of the Company.
- (b) To sell, manage, improve, process, manufacture, exchange, insure, let on lease or otherwise, mortgage, dispose of, turn to account, grant rights and privileges in respect of, or otherwise deal with all or any part of the property and rights of the Company for such consideration as the Company may think fit.

- (c) To appoint agents of the Company in any part of the world.
- (d) To enter into any arrangements with any governments or authorities, municipal, local or otherwise, in any part of the world, and to obtain from any such government or authority all rights, concessions and privileges that may seem conducive to the Company's objects, or any of them.
- (e) To enter into partnership, joint venture or into any arrangement for sharing profits, union of interests, reciprocal concession, or co-operation with any person or Company carrying on or engaged in or about to carry on or engage in any business or transaction which the Company is authorised to carry on or engage in, and to take or otherwise acquire and hold shares or stock in or securities of any such Company, and to subsidise or otherwise assist any such person or Company.
- (f) To acquire and undertake the whole or any part of the business, goodwill and assets of any person, firm or Company carrying on or proposing to carry on any of the businesses which this Company is authorised to carry on, and as part of the consideration for such acquisition to undertake all or any of the liabilities of such person, firm or Company, or to acquire an interest in, amalgamate with or enter into any arrangement for sharing profits, or for co-operation, or for mutual assistance with any such person, firm or Company, and to give or accept, by way of consideration for any of the acts or things aforesaid or property acquired, any shares, debentures, debenture stock or securities that may be agreed upon, and to hold and retain or sell, mortgage and deal with any shares, debentures, debenture stock or securities so received.
- (g) To lend and advance money or give credit to such persons and on such terms as may seem expedient to the Company, only where necessary and in relation to the business of the Company.
- (h) To draw, make, accept, endorse, negotiate, discount, execute and issue promissory notes, bills of exchange and other negotiable or transferable instruments.
- (i) To receive dividends, capital gains, royalties and similar income, rents, interest, any other income or gains derived from investments (including income or gains on the disposal of such investments), and profits or gains attributable to a permanent establishment (including a branch).
- (j) To employ any number of workers for the purposes for which the Company is established and to remunerate any person, firm or company rendering services to the Company, whether by cash payment or by the allotment to him or them of shares or securities of the Company credited as paid up in full or in part or otherwise.
- (k) To pay all or any expenses incurred in connection with the formation, promotion and incorporation of the Company, or to contract with any person, firm or company to pay the same, and to pay commissions to brokers and others for underwriting, placing, selling or guaranteeing the subscription of any shares, debentures, debenture stock or securities of this Company.
- (l) To grant pensions, allowances, gratuities and bonuses to Directors, ex-Directors, officers, ex-officers, employees or ex-employees of the Company or the dependants or relatives of such persons.

- (m) To promote any other company for the purpose of acquiring all or any of the property or undertaking any of the liabilities of the Company, or of undertaking any business or operations which may appear likely to assist or benefit the Company or to enhance the value of any property or business of the Company, and to subscribe for or otherwise acquire all or any part of the shares or securities of any such company as aforesaid.
- (n) To amalgamate with any other company whose objects are similar to those of this Company, whether by sale or purchase (for fully or partly paid-up shares or otherwise) of the undertaking subject to the liabilities of this undertaking and / or any such other company as aforesaid, with or without winding-up, or by sale or purchase (for fully or partly paid shares or otherwise) of all or a controlling interest in the shares or stock of this or any such other company as aforesaid, or by partnership, or any arrangement of the nature of partnership or in any other manner.
- (o) To distribute among the members *in specie* any property of the Company or any proceeds of sale or disposal of any property of the Company, but so that no distribution amounting to a reduction of capital be made except with the sanction (if any) for the time being required by law.
- (p) To sell or dispose of the undertaking, property and assets of the Company or any part thereof in such manner and for such consideration as the Company may think fit.
- (q) To apply for, register, purchase, or by other means acquire, hold, develop, exploit, protect and renew any patents, patent rights, *brevets d'inventions*, licenses, secret processes, trademarks, designs, royalties, copyrights, grants, options, protection and concessions and other exclusive and non-exclusive rights, and to grant licenses or rights in respect thereof, and to disclaim, alter, modify, use and turn to account, and to manufacture under or grant licenses or privileges in respect of the same, and to expend money in experimenting upon testing and improving any patents, inventions or rights which the Company may acquire or propose to acquire.
- (r) To do all or any of the things referred to in this Para.4A in any part of the world, and either as principals, agents, contractors or otherwise, and either alone or in conjunction with others, and either by or through agents, sub-contractors, or otherwise.
- (s) Where the laws of an approved country or jurisdiction so allow, and upon obtaining the consent of the Registrar of Companies in Malta, to apply to the proper authority of such country or jurisdiction to have the Company registered as continued as if it had been incorporated or registered under the laws of that other country or jurisdiction.

## 5. **LIMITED LIABILITY**

The liability of the members of the Company is limited to the amount, if any, unpaid on the issued shares respectively held by them.

## 6. **CAPITAL**

The authorised share capital shall be of €166,666,667 (one hundred sixty six million six hundred sixty six thousand six hundred sixty seven euro) divided into:

- 150,000,000 (one hundred and fifty million) Ordinary A shares of €1 each;
- 16,666,666 (sixteen million six hundred sixty six thousand six hundred sixty six) Ordinary B shares of €1 each;
- 1 (one) Ordinary C share of €1.

The Issued Share Capital of the Company shall be of €16,666,667 (sixteen million six hundred sixty six thousand six hundred sixty seven euro) divided into :

- 150,000,000 (one hundred and fifty million) Ordinary A shares of €1 each;
- 16,666,666 (sixteen million six hundred sixty six thousand six hundred sixty six) Ordinary B shares of €1 (one euro) each and
- 1 (one) Ordinary C share of €1 (one euro) each.

Each issued share shall be fully paid up.

## 7. **CLASS RIGHTS**

- A. Subject to the provisions of the Memorandum and Articles of Association, the holders of the Ordinary A and Ordinary B shares shall be entitled to one (1) vote in General Meetings for each of such shares held, to dividends distributed and to any surplus assets of the Company upon liquidation of the Company;
- B. The holder or holders of a majority in nominal value of the Ordinary A shares as a class shall be entitled to nominate and appoint to the Board at any time not more than three (3) A Directors, one of whom shall be the Chairman and to remove and replace the A Directors by notice to such director(s), the B Shareholder(s) and the Company;

The holder or holders of a majority in nominal value of the Ordinary B Shares as a class shall be entitled to nominate and appoint to the Board at any time not more than one(1) B Director and to remove and replace the B Director by notice to such director(s), the A Shareholder(s) and the Company.

- C. The holder of the Ordinary C share shall not be entitled to vote in respect of its share nor to receive any dividends distributed. On the return of assets on a liquidation or otherwise, the holder of the Ordinary C share shall only be entitled to a repayment of the nominal amount paid up on such Ordinary C share to the extent that there are sufficient assets of the Company available for distribution and remaining after payment of the Company's debts and liabilities and after payment of the nominal amount paid up on the Ordinary A and Ordinary B shares of the Company.

## **SUBSCRIBERS**

**(a) SEP (MALTA) HOLDING LTD. (C67784)**

120, St. Ursula Street  
Valletta  
Malta

150,000,000 (one hundred fifty million) Ordinary A shares of €1 (one euro) each, fully paid up.

**(b) ENEMALTA PLC (C65836)**

Triq Belt il-Hazna  
Marsa MRS1571  
Malta

16,666,666 (sixteen million six hundred sixty six thousand six hundred sixty six) Ordinary B shares of €1 (one euro) each, fully paid up.

**(c) MALTA GOVERNMENT INVESTMENTS LTD (C10175)**

Clock Tower  
Level 1 Tigne Point  
Sliema  
Malta

1 (one) Ordinary C share of €1(one euro), fully paid up.

**8. DIRECTORS**

(a) The Company's affairs shall be entrusted to a Board of Directors which shall consist of not less than two (2) and not more than four (4) Directors.

(b) The Directors of the Company are :

**Full Name**

**Address**

Sheng Baojie  
[Chinese passport number P01262034]  
– **A Director & Chairman**

Rm. 801, No. 4, Lane 300,  
Jinxu Road,  
Pudong New Area,  
Shanghai,  
People's Republic of China

Zhou Jing  
[Chinese passport number P01741268]  
– **A Director**

Rm. 402-403, No. 23,  
Neijiang No. 1 Cun,  
Yangpu District,  
Shanghai,  
People's Republic of China



Chen Zhichao  
[Chinese passport number P01360586]  
– **A Director**

Rm. 3, No. 476,  
Shuichuan, Machang Village,  
Nicheng Town,  
Pudong New Area,  
Shanghai,  
People's Republic of China

Jonathan Scerri  
[I.D. No. 176075M] – **B Director**

4, Triq il-Katlan,  
Attard,  
Malta

- (c) The legal and judicial representation of the Company shall be vested in the Chairman and any one director acting jointly.

In addition to the aforesaid, the Board may from time to time appoint any one or more Director(s) and/ or any person or persons to represent the Company for a specific purpose or in a specific case or cases or classes of cases.

- (d) Any Power of Attorney issued by the Company shall be executed by the Chairman and any one other director acting jointly, or by any person authorised by the Board of Directors for this purpose and such power of attorney shall be considered as executed by the Company.

9. **SECRETARY**

The first Secretary of the Company is Dr. Aron Mifsud Bonnici, holder of Maltese Identity Card No. 018574M and residing at Rydal Lodge, Wied Anglu, Naxxar, Malta.

**Certified True Copy:**

  
\_\_\_\_\_  
Dr. Aron Mifsud Bonnici  
Company Secretary

**ARTICLES OF ASSOCIATION**  
**OF**  
**D3 POWER GENERATION LIMITED**

1. **PRELIMINARY**

**Regulations for the Management of a Private Company**

The Company is established as a private company as defined in the Companies Act, 1995 (hereinafter called the "Companies Act") and accordingly:

- (i) the right to transfer shares is restricted in the manner hereinafter prescribed;
- (ii) the number of members of the Company is limited to fifty;
- (iii) the invitation to the public to subscribe to shares or debentures of the Company is prohibited;
- (iv) the Company shall not have the power to issue share warrants to bearer.

**Regulations for the Management of a Limited Liability Company**

The following regulations shall be the sole Articles of Association of the Company, The Regulations contained in Part I and Part II of the First Schedule to the Companies Act shall not apply.

2. **RESOLUTIONS**

A resolution in writing signed by :

- (a) all the members for the time being entitled to receive notice of and to attend and vote at any general meeting of the Company, or
- (b) all the Directors, or if there is only one, the Sole Director, appearing as directors of the Company from time to time in the public register of the Company at the Registry of Companies,

shall be valid and effectual as if it had been passed at a meeting of the relevant body duly convened and held.

Several distinct copies (including fax copies) of the same document or resolution signed by each of the members or Directors shall when placed together constitute one writing for the purposes of this Article.

3. **SHARE CAPITAL AND VARIATION OF RIGHTS**

- (a) Any share in the Company may be issued with such preferred, deferred or other special rights or such restrictions, whether in regard to dividend, voting, return of capital or otherwise as the Company may from time to time by extraordinary resolution determine.

- (b) Subject to the provisions of Article 115 of the Companies Act any preference shares may, with the sanction of an extraordinary resolution, be issued on the terms that they are, or at the option of the Company are liable, to be redeemed on such terms and in such manner as the Company before the issue of the shares may by extraordinary resolution determine.
- (c) The Company in issuing and allotting new shares:
- (i) shall not allot any of them on any terms to any person unless:
    - an offer has first been made to each existing Member holding shares of the same class to allot to him at least on the same terms, a proportion of those shares which is as nearly as practicable equal to the proportion in nominal value held by him of the aggregate of the shares in the Company; and
    - where such an offer as described above is not subscribed for in whole or in part, an offer of the unallocated new shares has been made to each other existing Member to allot to him at least on the same terms, a proportion of those shares which is as nearly as practicable equal to the proportion in nominal value held by him of the aggregate of the shares in the Company; and
  - (ii) shall not allot any of those shares to any person, unless the Members in General Meeting otherwise determine, before the expiration of any period of offer made to existing Members in terms of Article 3(c)(i) or before a negative or positive reply from all such holders in terms thereof. Any such shares not subscribed for by the existing Members in terms of their pre-emptive right, may be offered for subscription to the general public under the same or other conditions which however cannot be more favourable than an offer made under Article 3(c)(i); unless (x) the Company by extraordinary resolution in General Meeting shall have resolved that the statutory pre-emption requirements shall be restricted or withdrawn for a particular allotment of shares or (y) the Company by extraordinary resolution in General Meeting shall have resolved to authorise the Board of Directors to restrict or withdraw the statutory pre-emption requirements if the Board of Directors is authorised to issue shares in accordance with Article 85 of the Companies Act and for as long as the Board of Directors remains so authorised.
- (d) Article 3(c) shall not apply to a particular allotment of shares if these are, or are to be, wholly or partly paid up otherwise than in cash.
- (e) A Member holding shares shall not have the right to assign in favour of third parties the right competent to him to accept an offer made to him pursuant to the provisions of Article 3(c).
- (f) The Company is authorised to acquire its own shares in terms of Article 106 of the Companies Act.
- (g) If at any time the share capital is divided into different classes of shares the rights attached to any class (unless otherwise provided by the terms of the issue of the shares of that class) may, whether or not the Company is being wound up, be varied with the consent in writing of the holders of three-fourths of the issued shares of that class, or with the sanction of an extraordinary resolution passed at a separate general meeting of the holders of the shares of the class. To every such separate general meeting the provisions of these Articles relating to General Meetings shall apply.

- (h) The Company may exercise the power of paying commissions or of making discounts or allowances provided it complies with the requirements of Article 113 of the Companies Act. Such commission may be satisfied by the payment of cash or the allotment of fully or partly paid shares or partly in one way and partly in the other.
- (i) Every person whose name is entered as a member in the register of members shall be entitled without payment to receive one certificate for all his shares or several certificates each for one or more of his shares. If a share certificate be defaced, lost or destroyed, it may be renewed on application of the member on such terms (if any) as to evidence and indemnity and the payment of out-of-pocket expenses of the Company for investigating evidence as the Board of Directors think fit.

#### 4. **CALL ON SHARES**

- (a) The Board of Directors may from time to time make calls upon the members in respect of any moneys unpaid on their shares. A call may be revoked, modified or postponed as the Board of Directors may determine. Any member shall be entitled to at least seven (7) days notice.
- (b) The joint holders of a share shall be jointly and severally liable to pay all calls in respect thereof.
- (c) If a sum called in respect of a share is not paid before or on the date appointed for the payment thereof, the person from whom the sum is due shall pay interest thereon from the day appointed for payment thereof to the time of actual payment at such rate not exceeding eight *per centum* (8%) as the Board of Directors may determine, but the Board of Directors shall be at liberty to waive payment of such interest wholly or in part.
- (d) Any sum which by the terms of issue of a share becomes payable on allotment or at any fixed date, whether on account of the nominal value of the share or by way of premium shall for the purposes of these Articles be deemed to be a call duly made and payable on the date on which, by the terms of issue or at any fixed date, the same becomes payable, and in case of non-payment, all the relevant provisions of these Articles as to payment of interest and expenses, forfeiture or otherwise shall apply as if such sum had become payable by virtue of a call duly made and notified.
- (e) The Board of Directors may, on the issue of shares, differentiate between the holders as to the amount of calls to be paid and the times of payment.
- (f) The Board of Directors may, if they think fit, receive from any member willing to advance the same, all or any part of the moneys uncalled and unpaid upon any shares held by him, and upon all or any of the moneys so advanced may (until the same would, but for such advance, become payable) pay interest at such rate not exceeding eight *per centum* (8%), as may be agreed upon between the Board of Directors and the member paying such sum in advance.

#### 5. **TRANSFER**

- (a) The instrument of transfer of any share shall be executed by or on behalf of the transferor and transferee and the transferor shall be deemed to remain a holder of the share until the name of the transferee is entered in the register of members in respect thereof.
- (b) A part of a share may not form the object of a transfer.

- (c) Any member may transfer his shares to another member for such consideration as may be agreed between the transferor and the transferee and the other members shall have no rights of option with respect to such shares.
- (d) If any member (hereinafter referred to as the **"Transferring Shareholder"**) wishes to transfer any shares in the Company to a person who is not a member of the Company he shall inform the Board of Directors by a notice in writing (hereinafter referred to as **"Transfer Notice"**).
- (e) The receipt by the Board of Directors of a Transfer Notice shall constitute an authority to them to offer for sale to the other members of the Company the shares specified therein at their fair value as provided in the Transfer Notice or as otherwise determined by the auditors.
- (f) The Board of Directors shall offer such shares in the first place to the then existing registered holders of shares of that class pro rata the number of shares of that class held by them respectively. Such offer shall be made by notice in writing containing all details as necessary in relation to the shares being transferred as well as inviting the members to state, in writing within fourteen (14) days what number of shares, if any, they are willing to purchase. If the offer is not accepted within such time, it shall be deemed to have been declined. Any shares not taken up by the members of that class shall then be offered, using the same procedure as aforesaid, to the other members of the Company, pro rata to the number of shares held by them, irrespective of class.
- (g) If any or all the shares on offer are not acquired in the manner prescribed in the foregoing clauses the Transferring Shareholder shall be entitled to sell the remaining shares to the person named in the Transfer Notice at a price that is not less than their fair value.
- (h) Notwithstanding the provisions of the preceding clauses, no restriction shall apply when a transfer of shares is approved by an extraordinary resolution of the Company in general meeting.

## 6. **PLEDGING OF SECURITIES**

- (a) The members may enter into any agreement relating to the pledging of their shares or the creation of any rights in connection with the said shares for any reason they may deem fit and with such third parties as they deem appropriate. Provided that no such agreement may be entered into without the prior approval of the Members of the Company by means of an extraordinary resolution.
- (b) The holders of other securities issued by the Company may enter into any agreement relating to the pledging of their securities or the creation of any rights in connection with the said securities for any reason they may deem fit and with such third parties as they deem appropriate. Provided that no such agreement may be entered into without the prior approval of the Members of the Company by means of an extraordinary resolution.
- (c) Upon the Company being notified of such a pledge agreement, the Company shall record that fact in its register of members or debentures and the Company shall recognize all rights validly granted to any third parties and shall act according to and consistently with the terms of such agreement in all matters.

- (d) Insofar as and to the extent that such a pledge agreement validly vests third parties with rights pertaining to the shares or debentures normally exercisable respectively by the members or the debenture holders of the Company, such rights shall be exercisable by the third parties as though they were the members or debenture holders of the Company to the exclusion of the member or members or holder or holders of the relevant securities.

7. **TRANSMISSION OF SHARES**

Shares are transferable on death of a shareholder to his heirs according to any will or the law. Until such time as the rightful heir is established the estate of the deceased member will be deemed to be the holder of the shares.

8. **FAILURE TO PAY UP UPON CALL**

Where a member fails to pay up such part of any share after a call has been made to this effect such member shall be liable to the Company and the Company may sue the member for the collection of a civil debt.

9. **MEETINGS IN MALTA**

All meetings of the Board of Directors and any general meeting of the members of the Company shall be held in Malta unless otherwise resolved by the Board of Directors of the Company.

10. **GENERAL MEETINGS**

- (a) The Annual General Meeting of the Company shall be held at such time and at such place as the Board of Directors shall appoint.
- (b) All General Meetings other than the Annual General Meeting shall be called Extraordinary General Meetings, and an Extraordinary General Meeting shall be held at least every six(6) months
- (c) The Board of Directors may, whenever they think fit, convene an extraordinary General Meeting, and extraordinary General Meetings shall also be convened on such requisition, or, in default, may be convened by such requisitionists, as provided by Article 129 of the Companies Act.

11. **NOTICE OF GENERAL MEETINGS**

- (a) Notice of any general meeting shall be given to all members of the Company, to all Directors, and to the auditors of the Company.
- (b) A general meeting of the Company shall be called by fourteen (14) days' notice in writing at the least. The notice shall be exclusive of the day on which it is served or deemed to be served and of the day for which it is given, and shall specify the place, the day and the hour of meeting and, in case of special business the general nature of that business, and shall be given, in the manner hereinafter mentioned or in such other manner, if any, as may be prescribed by the Company in general meeting, to such persons as are, under the Articles of the Company entitled to receive such notices from the Company:

Provided that a meeting of the Company shall, notwithstanding that it is called by shorter notice than that specified in this Article, be deemed to have been duly called if it is so agreed by all the members entitled to attend and vote thereat.

12. **PROCEEDINGS AT GENERAL MEETINGS**

(a) N/A

(b) No business shall be transacted at a General Meeting of the Company unless a quorum of members is present at the time the meeting proceeds to business.

(c) The quorum for the transaction of business at any general meeting of the Company shall be two shareholders consisting of 1 holder of Ordinary A shares and 1 holder of Ordinary B shares.

If within half an hour from the time appointed for the meeting a quorum is not present, the meeting, if convened by the requisition of members, shall be dissolved; in any other case it shall stand adjourned to the same day in the next week, at the same time and place or to such other day and at such other time and place as the Board of Directors may determine, and if at the adjourned meeting a quorum is not present within half an hour from the time appointed for the meeting, the member or members present shall constitute a quorum.

(d) Each Ordinary A and Ordinary B share shall entitle the member to one (1) vote.

(e) The Chairman, if any, of the Board of Directors shall preside as chairman at every general meeting of the Company, or if there is no such Chairman, or if he shall not be present within fifteen (15) minutes after the time appointed for the holding of the meeting or is unwilling to act, the Board of Directors present shall elect one of their number to be chairman of the meeting.

If at any meeting no Director is willing to act as chairman or if no Director is present within fifteen (15) minutes after the time appointed for holding the meeting, the members present shall choose one of their number to be chairman of the meeting.

This requirement shall not apply if the Chairman or members of the Board of Directors are in a country different from that in which the general meeting is being held.

(f) The chairman of the meeting may, with the consent of any general meeting at which a *quorum* is present (and shall if so directed by the meeting), adjourn the meeting from time to time and from place to place, but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place. When a meeting is adjourned for thirty (30) days or more, notice of the adjourned meeting shall be given as in the case of an original meeting. Save as aforesaid, it shall not be necessary to give any notice of an adjourned meeting or of the business to be transacted at an adjourned meeting.

(g) At any general meeting of the Company, a resolution put to the vote of the meeting shall be decided by poll.

(h) In the case of an equality of votes, the chairman of the meeting shall not be entitled to a second or casting vote.

- (i) Subject to any rights or restrictions for the time being attached to any class or classes of shares, on a poll every Member shall have one (1) vote for each share of which he is the holder.
- (j) No member shall be entitled to vote at any general meeting unless all calls or other sums presently payable by him in respect of shares in the Company have been paid up.
- (l) The instrument appointing a proxy and the power of attorney or other authority, if any, under which it is signed or a notarially certified copy of that power or authority shall, as far as possible, be deposited at the registered office of the Company or at such other place as is specified for the purpose in the notice convening the meeting, not less than twenty-four (24) hours before the time for holding the meeting or adjourned meeting, at which the person named in the instrument proposes to vote, or, in the case of a poll, not less than twenty-four (24) hours before the time appointed for the taking of the poll, in order to allow time for the verification of the authenticity of the instrument by the Chairman.
- (m) An instrument appointing a proxy shall be in the following form or a form as near thereto as circumstances permit:

*"I/We.....,of .....  
being member/members of the above-named company, hereby  
appoint.....of ..... and/or  
..... of ..... as my/our joint and several  
proxy to receive or waive notice of, attend and vote for me/us on my/our  
behalf at the (annual or extraordinary, as the case may be) general meeting  
of the company, to be held on the .... day of ....., 20 ... and at any  
adjournment thereof.*

*Signed this ....day of ....., 20 ... .*

-----  
*Name:*

*in the presence of:*

-----  
*Name:*

*This form is to be used in favour of\* / against\* the resolutions. - or - Unless  
otherwise instructed, the proxy will vote as he thinks fit\* "*

-----  
*\* Strike out whichever is not desired..*

- (n) Proxies may be given by means of a fax or an electronic document scan sent by e-mail and the person so appointed shall enjoy all the rights of the person issuing such a proxy: provided that the veracity of the source of the fax or of the e-mail by which the electronic document scan is sent is confirmed and accepted by the Chairman of the meeting at which it is produced in accordance with paragraph (l) hereof.

### 13. **THE BOARD OF DIRECTORS**



- (a) The administration and management of the Company shall be vested in a Board of Directors.
- (b) Directors shall hold office until such time as they die, resign or are otherwise removed. Any person who ceases to be a Director shall be eligible for re-appointment.
- (c) The remuneration of the Directors shall from time to time be determined by the Company in general meeting. Such remuneration shall be deemed to accrue from day to day. The Directors may also be paid all travelling, hotel and other expenses properly incurred by them in attending and returning from meetings of the Board of Directors or any committee of the Directors or General Meetings of the Company or in connection with the business of the Company.
- (d) The shareholding qualification for Directors may be fixed by the Company in general meeting, and unless and until so fixed no qualification shall be required.
- (e) A Director is empowered to appoint another person in his stead as an alternate director by means of a written instrument and such person so appointed shall enjoy all the powers and rights of the said Director including the right to attend and vote at meetings of the Board of Directors. Such alternate Director shall have a vote or votes in addition to his own vote. "*Written instrument*" includes a telefax, an e-mail message or electronic scan.
- (f) The Board of Directors shall have the powers mentioned in the Memorandum of Association as further defined hereafter:
  - (i) The Board of Directors may from time to time borrow or raise any sum or sums of money upon any terms as to interest or otherwise as it may deem fit, and for the purpose of securing the same or for any other purpose, grant any mortgage or hypothec on any of the assets of the Company and/or create and issue any perpetual or redeemable debentures or debenture stock or charge on the undertaking or the whole or any part of the assets, present or future, of the Company; and any debentures, debenture stock and other securities may be issued at a discount, premium or otherwise, and with any special privileges as to redemption, surrender, drawing, allotments of shares, attending and voting at General Meetings of the Company, appointment of directors and otherwise.
  - (ii) The Board of Directors shall have the power to:
    - (1) formulate any rules and regulations of the Company;
    - (2) establish amortization and depreciation policies of the Company;
    - (3) decide on the organizational structure of the Company;
    - (4) decide on the set up of any branch of the Company;
    - (5) prepare annual reports, annual work plans, business plans and annual budgets of the Company;
    - (6) submit proposals to the General Meeting on distribution of dividends and utilisation of profits;
    - (7) decide on any capital expenditure of the Company;
    - (8) decide on the creation of any reserves, allocation of amounts to any reserves, and the utilisation of the Company's reserves;
    - (9) appoint and dismiss the Company's executive officers and determine their remuneration;
    - (10) decide on the execution, modification or termination of any gas supply agreement, power purchase agreement, and any related

- agreements thereto entered into by the Company;
- (11) the execution or termination of any other agreement or contract having a value being equal to or more than one million Euro (€1,000,000) but lower than ten million Euro (€10,000,000), and the execution or termination of any other agreement or contract having a value being less than one million Euro (€1,000,000) but not covered by the prevailing annual budget of the Company;
  - (12) decide on the disposal of any assets or other transactions, each of which is of a value equal to or more than one million Euros but lower than ten million Euro (€10,000,000) Euro;
  - (13) decide on the creation of any encumbrance on the assets, rights or interests of the Company, each of which is of a value equal to or more than one million Euros but lower than ten million Euro (€10,000,000) Euro; and
  - (14) exercise all the Company's rights at law.
- (iii) The Board of Directors shall exercise their powers subject to any of these Articles, to the provisions of the Companies Act and to such regulations being not inconsistent with the aforesaid Articles or provisions, as may be prescribed by the Company in general meeting; but no regulation made by the Company in general meeting shall invalidate any prior act of the Board of Directors which would have been valid if that regulation had not been made.
  - (iv) The Board of Directors shall cause minutes to be made in books provided for such purpose:
    - (a) of all appointments of officers made by the Board of Directors;
    - (b) of the names of Directors present at each meeting of the Board of Directors or committees of Directors;
    - (c) of all resolutions and proceedings at all meetings of the Company, and of the Board of Directors, and of committees of Directors.
  - (v) The Board of Directors on behalf of the Company may pay a gratuity or pension or allowance on retirement to any Director who has held any other salaried office or place of profit with the Company or to his widow or dependants and may make contributions to any fund and pay premiums for the purpose of provision of any such gratuity, pension or allowance.
  - (vi) The Directors shall hold office until such time as they resign or are otherwise removed. Any person who ceases to be a Director shall be eligible for re-appointment.
  - (vii) A Director shall declare his direct or indirect interest in any contract or arrangement which is being discussed by the Board of Directors or which is being or may be entered into by the Company at the first meeting of the Board after the relevant facts have come to his knowledge. After the disclosure has been recorded in the minutes of the Board, the said Director shall withdraw from any meeting at which such contract is discussed or decided on by the Board.

#### 14. **PROCEEDINGS AT BOARD OF DIRECTORS**

- (a) The business of the Company shall be managed by the Board of Directors who may exercise all such powers of the Company, and do on behalf of the Company all such acts as may be exercised and done by the Company, and as are not by the Act or by the Memorandum and Articles required to be exercised or done by the Company in General Meeting. In so acting, the Board of Directors shall in all cases conform to the provisions of the Act, the Memorandum, these Articles, and to such regulations as may from time to time be prescribed by the Company in General Meeting, but no regulation made by the Company in General Meeting shall operate retrospectively to invalidate any previous act of the Board of Directors. the reasonable travel and accommodation expenses incurred by the directors for attending the Board meetings shall be reimbursed to the directors by the Company.
- (b) Any resolution of the Board of Directors shall be valid if passed by the affirmative votes of a majority of the Directors attending the meeting, provided that at least one B Director needs to also vote in the affirmative in relation to the following matters:
- (i) the disposal of any asset of the Company having a value which is equal to or in excess of two million Euro (€2,000,000) or its equivalent in any other currency but lower than ten million Euro (€10,000,000);
  - (ii) the acquisition of any asset having a value which is equal to or in excess of two million Euro (€2,000,000) or its equivalent in any other currency but lower than ten million Euro (€10,000,000);
  - (iii) the granting of a loan to any person where such loan is equal to or in excess of two million Euro (€2,000,000) Euro or its equivalent in any other currency but lower than ten million Euro (€10,000,000);
  - (iv) the obtaining of a loan by the Company which is equal to or in excess of two million Euro (€2,000,000) or its equivalent in any other currency but lower than ten million Euro (€10,000,000);
  - (v) the granting of any security by the Company having a value which is equal to or in excess of two million Euro (€2,000,000) or its equivalent in any other currency but lower than ten million Euro (€10,000,000);
  - (vi) entry into any other transaction having a value which is equal to or in excess of two million Euro (€2,000,000) or its equivalent in any other currency but lower than ten million Euro (€10,000,000);
  - (vii) the issuance of new shares where the power to issue such shares has been delegated by the shareholders to the Board of Directors.
  - (viii) the approval of the audited financial statements and annual budgets of the Company;
  - (ix) to decide on the execution or termination of any agreement or contract having a value being equal to or more than two million Euro (€2,000,000) but lower than ten million Euro (€10,000,000), which are not covered by the prevailing annual budget of the Company;
  - (x) the organizational structure and the planning for human resources of the Company including the responsibility and power of Executive Officers; and
  - (xi) the proposal on distribution of dividends for submission to the General Meeting.

The Company's Chairman of the Board of Directors and each Director shall ensure that when they are given the power to represent the Company, they only exercise their legal representation power(s) in terms of the Memorandum of Association strictly in accordance with decisions of the Board taken in terms of this Article.

- (c) In case of equality of votes, the chairman shall not have a second or casting vote.

- (d) The chairman may call meetings of the Board on his own initiative or at the request of any two Directors.
- (e) The quorum necessary for the transaction of the business of the Board of Directors, shall be half the number of Directors for the time being constituting the Board present in person or by their Alternate Director. Provided that at least two of such Directors must be an "A" Director and a "B" Director.

If within half an hour from the time appointed for the meetings of the Board a quorum is not present, the meeting shall stand adjourned to the same day in the next week, at the same time and place and if at the adjourned meeting a quorum is not present within half an hour from the time appointed for the meeting, the Director or Directors present shall constitute a quorum.

- (f) The Chairman of the Company shall chair the meetings of the board of Directors. If at any meeting the chairman is not present within five (5) minutes after the time appointed for holding same, the "A" Directors present may choose one of their number to be chairman of the meeting.
- (g) The Board of Directors may delegate any of their powers to committees consisting of such member or members of their body as they think fit. Any committee so formed shall in the exercise of the powers so delegated conform to any regulations that may be imposed on it by the Board of Directors, and subject to any such regulations, it shall regulate its proceedings in like manner as if its meetings were meetings of the Board of Directors.
- (h) The Board of Directors may from time to time appoint a chief executive officer for such period and on such terms as they think fit, and, subject to the terms of any agreement entered into in any particular case, may revoke such appointment.
- (i) The chief executive officer shall receive such remuneration as the Board of Directors, subject to the approval of the Company in general meeting, may from time to time determine.
- (j) The Board of Directors may entrust to and confer upon a chief executive officer any of the powers exercisable by them upon such terms and conditions and with such restrictions as they may think fit, and either collaterally with or to the exclusion of their own powers and may from time to time revoke, withdraw, alter or vary all or any of such powers.

15. **SECRETARY**

- (a) The appointment or replacement of the Company Secretary and the remuneration and conditions of holding office shall be determined by the Board of Directors.
- (b) The Company Secretary shall be responsible for keeping:
  - (i) the minute book of General Meetings of the Company;
  - (ii) the minute book of meetings of the Board of Directors;
  - (iii) the register of members;
  - (iv) the register of debentures; and

- (v) such other registers and records as the Company Secretary may be required to keep by the Board of Directors.
- (c) The Company Secretary shall:
  - (i) ensure that proper notices are given of all meetings; and
  - (ii) ensure that all returns and other documents of the Company are prepared and delivered in accordance with the requirements of the Companies Act.

## 16. **DIVIDENDS AND RESERVES**

- (a) The Company in general meeting may declare dividends, but no dividends shall exceed the amount recommended by the Board of Directors.
- (b) The Board of Directors may from time to time pay to the members such interim dividends as appear to the Board of Directors to be justified by the profits of the Company.
- (c) No dividend shall be paid otherwise than out of profits.
- (d) The Board of Directors may, before recommending any dividend, set aside out of the profits of the Company such sums as they think proper as a reserve or reserves which shall, at the discretion of the Board of Directors, be applicable for any purpose to which the profits of the Company may be properly applied, and pending such application may, at the like discretion, either be employed in the business of the Company or be invested in such investments (other than shares of the Company) as the Board of Directors may from time to time think fit. The Board of Directors may also without placing the same to reserve carry forward any profits which they may think prudent not to distribute.
- (e) Subject to the rights of persons, if any, entitled to shares with special rights as to dividend, all dividends shall be declared and paid according to the amounts paid or credited as paid on the shares in respect whereof the dividend is paid, but no amount paid or credited as paid on the share in advance of calls shall be treated for the purposes of this Article as paid on the share. All dividends shall be apportioned and paid proportionately to the amounts paid or credited as paid on the shares during any portion or portions of the period in respect of which the dividend is paid; but if any share is issued on terms providing that it shall rank for dividend as from a particular date such share shall rank for dividend accordingly.
- (f) The Board of Directors may deduct from any dividend payable to any member all sums of money (if any) presently payable by him to the Company on account of calls or otherwise in relation to the shares of the Company.
- (g) No dividend shall bear interest against the Company.

## 17. **ACCOUNTS**

The Board of Directors shall from time to time determine whether and to what extent and at what times and places and under what conditions or regulations the accounts and books of the Company or any of them shall be open to the inspection of members not being Directors, and no member (not being a director) shall have any right of inspecting any account or book or document of the Company except as conferred by law or authorised by the Board of Directors or by the

Company in general meeting or in accordance with any shareholders or joint venture agreements to which the Company is also a party.

#### **18. CAPITALISATION OF PROFITS**

The Company in general meeting may upon the recommendation of the Board of Directors resolve that it is desirable to capitalise any part of the amount for the time being standing to the credit of any of the Company's reserve accounts or to the profit and loss account or otherwise available for distribution, and accordingly that such sum be set free for distribution amongst the members who would have been entitled thereto if distributed by way of dividend and in the same proportions on condition that the same be not paid in cash but be applied either in or towards paying up any amounts for the time being unpaid on any shares held by such members respectively or paying up in full unissued shares or debentures of the Company to be allotted and distributed credited as fully paid up to and amongst such members in the proportion aforesaid, or partly in the one way and partly in the other, and the Board of Directors shall give effect to such resolution:

Provided that a share premium account and a capital redemption reserve fund may, for the purposes of this Article, only be applied in the paying up of unissued shares to be issued to members of the Company as fully paid bonus shares:

Provided further that the Board of Directors may in giving effect to such resolution make such provision by payment in cash or otherwise as they think fit for the case of shares or debentures becoming distributable in fractions.

#### **19. EXTRAORDINARY RESOLUTIONS**

An extraordinary resolution is a resolution which is :

- (a) taken at a general meeting of which notice specifying the intention to propose the text of the resolution as an extraordinary resolution and the principal purpose thereof has been duly given;

and

- (b) Passed by a Member or Members having the right to attend and vote at the meeting holding in the aggregate not less than ninety-five per centum (95%) in nominal value of the shares represented and entitled to vote at the meeting and at least ninety-five per centum (95%) in nominal value of all the shares entitled to vote at the meeting. PROVIDED THAT should the holders of either Ordinary A shares or Ordinary B shares fail to attend a general meeting for no valid reason at law the second voting threshold shall be reduced to fifty-one per centum (51%) of in nominal value of all the issued shares entitled to vote at the meeting.

An extraordinary resolution shall be required for:

- (a) any amendment or change to the Memorandum and Articles of Association of the Company, including any change of name or of the objects of the Company; and
- (b) any increase or reduction of the issued share capital of the Company; and
- (c) the issuance of debentures by the Company; and

- (d) any changes to the rights attached to any shares of the Company; and
- (e) conversion of any shares into stock, or re-conversion of any stock into shares of any denomination; and
- (f) approval of the financial statements and annual reports of the Company; and
- (g) the distribution of dividends and utilisation of profit; and
- (h) any conversion, merger, consolidation, amalgamation or division involving the Company, or appointment of a liquidator or receiver of all or any part of its assets; and
- (i) the sale or disposal of any immovable property; and
- (j) the execution or termination of any agreement or contract having a value being equal to or more than ten million Euro (€10,000,000) ; and
- (k) the disposal of assets other than immovable property, or any other transaction having a value being equal to or more than ten million Euro (€10,000,000) ; and
- (l) creating any encumbrance on assets, rights or interests of the Company having a value being equal to or more than ten million Euro (€10,000,000); and
- (m) winding-up, liquidation or dissolution of the Company; and
- (n) delegating to the Board of Directors any of the powers of the General Meeting; and
- (o) pledging of any shares in the Company;
- (p) any other issues which shall be determined by the General Meeting in accordance with this Agreement, the Memorandum and Articles of Association of the Company, or any applicable laws;

Provided that an extraordinary resolution would not be required in case of paragraph (j) where the relevant agreement or contract thereunder is covered by the prevailing annual budget of the Company .

## 20. **DEADLOCK**

- (a) This Article shall apply in any case where no agreement has been reached between the Members on any of the matters referred to in Article 19 hereof. Any such case is hereinafter referred to as a "**Deadlock**".
- (b) In the event of Deadlock each Member (the "**Appointing Member**") shall appoint its own representative (not being a Director of the Company) (the "**Shareholder Representative**") and within 14 days of such Deadlock having arisen or become apparent each Shareholder Representative shall circulate to the other Member(s) a memorandum setting out the Appointing Member's position on the matter in dispute and reasons for adopting such position. Each such memorandum shall be considered by each respective Shareholder Representative who shall use their reasonable endeavours

to resolve such dispute in good faith. If the Shareholder Representative agree upon a resolution or disposition of the matter, they shall jointly execute a statement setting forth the terms of such resolution or disposition and the Members of the Company shall exercise the voting rights and other powers of control available to them in relation to the Company to procure that such resolution or disposition is fully and promptly carried into effect. If the Members of the Company (through their Shareholder Representative) do not agree on a resolution of the matter, the action which had given rise to the Deadlock shall not be taken.

**21. ALTERNATIVE DISPUTE RESOLUTION AND ARBITRATION**

- (a) If the Shareholder Representatives fail to agree on a resolution to the Deadlock any claim or controversy resulting in the Deadlock including a dispute on Article 20 and Article 21 hereof, shall be submitted to The London Court of International Arbitration (the "LCIA") in accordance with the rules of International Chamber of Commerce (the "ICC Rules") for the time being in force which rules are deemed to be incorporated by reference to this clause.
- (b) The number of arbitrators shall be three. The arbitrators shall be appointed in accordance with the Rules save that the procedure for appointing the third arbitrator shall be as follows: two arbitrators nominated by the parties shall together nominate the third arbitrator within thirty (30) days of the nomination of the second arbitrator. In the event the two arbitrators cannot agree on the third arbitrator, the ICC shall appoint the third arbitrator.
- (c) The place of arbitration shall be London, UK.
- (d) The language of the arbitration proceedings shall be English and all correspondence exchanged, including documents presented, shall be in English or shall be accompanied by a translation into English at the expense of the party producing the correspondence or documents.
- (e) For the avoidance of any doubt, these Memorandum and Articles of Association and the rights and obligations arising hereunder are governed by Maltese law shall remain in full force and effect pending the award in arbitration proceedings.

**22. WINDING UP**

- (a) The Company shall be wound up by an extraordinary resolution of the Company.
- (b) If the Company shall be wound up the liquidator may, with the sanction of an extraordinary resolution of the Company and any other sanction required by the Companies Act, divide amongst the members "in specie" or in kind the whole or any part of the assets of the Company (whether they shall consist of property of the same kind or not) and may, for such purpose, set such value as he deems fair upon any property to be divided as aforesaid and may determine how such division shall be carried out as between the numbers of different classes of members. The liquidator may, with like sanction, vest the whole or any part of such assets in trusts for the benefit of the beneficiaries as the liquidator, with the like sanction, shall think fit, but so that no member shall be compelled to accept any shares or other securities whereon there is any liability.



23. **NOTICES**

Notice under these Articles shall be given in accordance with this Article. Any notice must be served by registered post, telefax, e-mail message or electronic scan and shall be deemed to have been served in the case of registered post on the day immediately following that on which it was posted and in the case of a telefax, e-mail message or electronic scan on the day of transmission, and in providing such service it shall be sufficient to prove that the notice was addressed properly and posted or transmitted to such telefax number or e-mail address as may be notified by the shareholders and Board of Directors to the Company.

24. **MEETINGS BY TELEPHONE & VIDEO CONFERENCING**

A person is entitled to participate at a meeting of the Board of Directors or at any General Meeting by means of a telephone link, video conferencing or by any other similar means, provided the other Members or Directors agree to participation by such means. The chairman of the meeting, in such cases, shall sign the Minutes of the meeting on behalf of the person not being physically present at the meeting, and shall record the fact that all persons present at the meeting agreed to participation by such means.

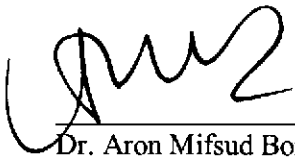
25. **INDEMNITY**

Every Managing Director, Director holding any other executive office or other Director, and every agent, or Company Secretary and in general any officer or auditor for the time being of the Company shall be indemnified out of the assets of the Company against any liability incurred by him in defending any proceedings in which judgement is given in his favour or in which he is acquitted.

26. **INSURANCE**

The Company may purchase and maintain Director's and officer's liability insurance from a reputable insurer covering any acts or omissions. Such insurance may be taken out on customary terms with an amount of coverage of such amount as may be determined by the Company from time to time.

**Certified True Copy:**

  
\_\_\_\_\_  
Dr. Aron Mifsud Bonnici  
Company Secretary

C6718413



**SEP (MALTA) HOLDING LTD**  
C 67784  
Whitehall Mansions, Level 4,  
Ta' Xbiex Seafront, Ta' Xbiex XBX 1026, Malta

**RD**  
29 SEP 2015

Extraordinary Resolution in writing of all the shareholders of the SEP (Malta) Holding Ltd entitled to receive notice and to attend and vote at any general meeting of the Company pursuant to article 5(3) of the articles of association of the Company and dated 28 August, 2015.

Date: 28 August, 2015

Change in  
Objects  
Clause

Having noted:

- A. that the Company shall commence provision of consulting services and training services to third parties;
- B. that the Company shall update its Memorandum and Articles of Association to reflect:
  - i. the change in registered address pursuant to the Board of Directors resolution dated 14th April, 2015, and;
  - ii. the change of activities to be undertaken by the Company in terms of the provision of consulting and training services;

It is hereby resolved that the object of the company be replaced as follows:

"The main object of the Company shall be the following:

To hold shares and other ownership interests in other companies, partnerships, joint ventures or enterprises, the ownership, management, administration, lease and disposition of property of any kind, whether belonging to the company or not, whether moveable or immovable, personal or real, including intellectual property, and wherever situated, as well as the receiving or granting of royalties, licences, rental rights or other property, and similar property of any kind, and to enter into agreements for the purpose.

## SEP (MALTA) HOLDING LTD

C 67784

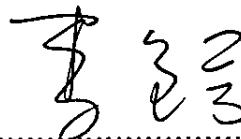
Whitehall Mansions, Level 4,  
Ta' Xbiex Seafront, Ta' Xbiex XBX 1026, Malta

Other subsidiary objects are:

The company shall carry on the business of providing training and consultancy services relevant to the establishment, operation and/or maintenance of power plants, interconnector links, distribution networks and other such facilities for electricity supply including internal management and, hereby reserves the right to carry out such activities as may be ancillary to the above or as may be necessary or desirable to achieve the above objects; whenever the context so permits this clause shall be construed as to permit the company to exercise its power without territorial restriction anywhere in the world."

Replacement  
of M&A

It is hereby further resolved that the Memorandum and Articles of Association of the company be replaced *in toto*.



.....  
E Li

Chinese Passport Number: PO1650340

28/08/2015

Date

Director of Shanghai  
Electric Power &  
Energy development  
limited

**Memorandum and Articles of Association of**  
**SEP (MALTA) HOLDING LTD**

C 67784

**A limited liability company**  
**registered at the Registry of Companies of the Republic of Malta**  
**under the Companies Act, 1995**

## MEMORANDUM OF ASSOCIATION

### SEP (MALTA) HOLDING LTD

#### 1. Name

The name of the company is **SEP (Malta) Holding Ltd**.

#### 2. Registered Office

The registered office of the Company shall be situated at **Whitehall Mansions, Level 4, Ta' Xbiex Seafront, Ta' Xbiex XBX 1026, Malta** or at any other address in Malta which may be determined from time to time by the Board of Directors.

#### 3. Private Company

The Company shall be a private exempt company in terms of section 211 of the Companies Act, 1995.

#### 4. Objects

The main object of the Company shall be the following:

To hold shares and other ownership interests in other companies, partnerships, joint ventures or enterprises, the ownership, management, administration, lease and disposition of property of any kind, whether belonging to the company or not, whether moveable or immoveable, personal or real, including intellectual property, and wherever situated, as well as the receiving or granting of royalties, licences, rental rights or other property, and similar property of any kind, and to enter into agreements for the purpose.

Other subsidiary objects are:

The company shall carry on the business of providing training and consultancy services relevant to the establishment, operation and/or maintenance of power plants, interconnector links, distribution networks and other such facilities for electricity supply including internal management and, hereby reserves the right to carry out such activities as may be ancillary to the above or as may be necessary or desirable to achieve the above objects; whenever the context so permits this clause shall be construed as to permit the company to exercise its power without territorial restriction anywhere in the world.

Nothing in the foregoing shall be construed as enabling or empowering the Company to carry on any activity, business or service which requires a license or is otherwise regulated under the Banking Act, Chapter 371 of the Laws of Malta, the Financial Institutions Act, Chapter 376 of the Laws of Malta, the Investment Services Act, Chapter 370 of the Laws of Malta, the Financial Market Act, Chapter 345 of the Laws of Malta, the Insurance Business Act, Chapter 403 of the Laws of Malta, the Insurance Intermediaries Act, Chapter 487 of the Laws of Malta nor the Special Funds (Regulation) Act, Chapter 450 of the Laws of Malta or the Trusts and Trustees Act, Chapter 331 of the Laws of Malta and the Company Services Providers Act, Chapter 529 of the Laws of Malta without a license or other necessary authorizations from the respective competent authority.

The exercise by the company of the foregoing objects and powers is subject to such prohibitions and restrictions as are provided by and under the mandatory provisions of any law in force for the time being including the Companies Act, Chapter 386 of the Laws of Malta, the Investment Services Act, Chapter 370 of the Laws of Malta, the Insurance Business Act, Chapter 403 of the Laws of Malta, the Insurance Intermediaries Act, Chapter 487 of the Laws of Malta, the Banking Act, Chapter 371 of the Laws of Malta, the Financial Institutions Act, Chapter 376 of the Laws of Malta, the Financial Markets Act, Chapter 345 of the Laws of Malta, the Special Funds (Regulation) Act, Chapter 450 of the Laws of Malta, the Trusts and

Trustees Act, Chapter 331 of the Laws of Malta and the Company Services Providers Act, Chapter 529 of the Laws of Malta and of any regulations or rules issued thereunder and any amendment, modification or substitution of any such laws, regulations or rules”

## **5. Powers**

In attaining its objects, the company shall have the following powers:

1. To take property on lease, to transfer any such property or right of lease and to grant rights over property acquired by the Company;
2. To acquire, sell, rent, lease and sub-lease, licence and sub-licence in all parts of the world, all types of industrial, artistic and similar rights, including but not limited to copyrights, patents, design, trademarks and other similar or analogous rights and assets;
3. To license intellectual property of all kinds to enable the use of Malta as a base for international business activities;
4. To work, improve, manage, develop, exchange, hypothecate, charge, pledge, sell, dispose of, turn into account, grant options, rights and privileges over or otherwise deal with any assets of the Company;
5. To employ, engage, appoint and dismiss employees, agents, contractors, and sub-contractors engaged for the purposes of the Company's operations;
6. To invest the Company's financial and other resources in such manner as the Company may determine from time to time;
7. To borrow and raise money in such manner as the Company shall deem fit including by the issue of bonds, debentures and debenture stock, and to secure the repayment of any money borrowed or raised or the performance of any obligation undertaken by the Company, by granting hypothecs, privileges, guarantees, pledges and other similar charges over its assets, present and future, including its uncalled capital;
8. To stand surety in favour of third parties and for the purpose to charge its assets as security for the obligations undertaken by such third parties;
9. To enter into any arrangements with Governmental authorities and agencies, companies and persons, and to obtain rights, contracts, options, licences and permits from the said authorities, agencies, companies and persons;
10. To receive dividends, capital gains, royalties and similar income, rents, interest, any other income or gains derived from investments (including income or gains on the disposal of such investments, and profits or gains attributable to a permanent establishment (including a branch).

## **6. Limited Liability**

The members' liability is limited to the amount, if any, unpaid on the share(s) respectively held by each member.

## **7. Capital**

The Authorized and Issued Share Capital of the Company is of €2,000 (two thousand euro), divided into 2,000 (two thousand) Ordinary Shares of one € 1 (one euro) each, which have all been subscribed, allotted and taken up, 100% paid up, as follows:

**8. Subscribers**

The Company's share capital is subscribed to as follows:

<b>Shanghai Electric Power &amp; Energy Development Limited</b>	2,000 shares
FLAT/RM 1501(153) 15/F SPA CENTRE 53-55 LOCKHART	(no. 1 to 2,000)
ROAD WANCHAI HK	
Company Registration No 1359631	

**9. Management**

1. The management and administration of the Company's affairs shall be entrusted to a Board of Directors consisting of not less than 1 (one) and not more than 3 (three) directors.

2. The first Director of the Company shall be:

**Mr. SUN JI**

Apartment 601, No.1 Lane 866, LiYuan Road, LuWan District, Shanghai, China.  
Chinese Passport Number: P01746698

3. The Directors mentioned in the Memorandum and other Directors who may from time to time be elected or appointed under the preceding paragraph shall be so elected or appointed until such time as they may resign or be removed from office by the shareholders in General Meeting.

4. A Director is empowered to appoint another person in his stead as an alternate director by means of a written instrument and such person so appointed shall enjoy all the powers and rights of the said Director including the right to attend and vote at meetings of the Board of Directors. Such alternate Director shall have a vote or votes in addition to his own vote, if any. Written instrument includes telefax or email communication.

**10. Representation**

1. The legal and judicial representation of the Company shall be vested in any one Director. Any one Director shall be empowered to enter into any agreement, contract or obligation whether by public deed or by private writing including those creating real security over the assets of the Company such as a hypothec or a mortgage, to open bank accounts and to sign bills of exchange, promissory notes and other documentary credits on behalf of the Company.

2. Provided that in addition and without prejudice to the aforesaid, the Board of Directors of the Company may from time to time appoint any person or persons to represent the Company in a specific case or cases and to bind the Company as so specifically authorised in a Power of Attorney issued to such person or persons. Any Power of Attorney issued by the Company shall be executed by any Director or any person authorised by the Board of Directors for the purpose and such Power of Attorney shall be considered as executed by the Company.

**11. Company Secretary**

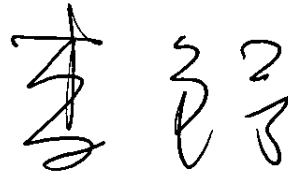
The Secretary of the Company shall be:

**Ms. SUN LAN**

Room 401, No.29, Ziwei Village, Min Hang District, Shanghai, China.  
Chinese Passport Number: P01755344

**SEP (Malta) Holding Ltd**

The undersigned persons hereby agree to constitute this Company in terms of the Companies Act 1995 and in pursuance of this Memorandum and Articles of Association and to subscribe to the number of shares in the capital of the Company as indicated above.

A handwritten signature in black ink, appearing to be 'Li E', written above a horizontal line.

Mr E Li

Chinese Passport Number. PO1650340

Director of **Shanghai Electric Power & Energy  
Development Limited**

1359631



## ARTICLES OF ASSOCIATION

### SEP (MALTA) HOLDING LTD

#### 1. Preliminary

The regulations contained in Part I of the First Schedule of the Companies Act, 1995 shall apply to the Company in the same manner and to the same extent save in so far as they are excluded or modified hereby.

#### 2. Regulations for the Management of a Private Company

1. The Company is a private company and accordingly:
  - a. The right to transfer shares is restricted in the manner hereinafter prescribed;
  - b. The number of members of the Company is limited to fifty (50) provided that where two or more persons hold one or more shares in the Company jointly, they shall for the purpose of this regulation be treated as a single member;
  - c. Any invitation to the public to subscribe for any shares or debentures of the Company is prohibited; and
  - d. The Company shall not have the power to issue share warrants to bearer.
2. Regulations 2 and 4 of Part II of the First Schedule relating to the management of a Private Company shall apply to the Company save in so far as they are excluded or modified hereby. Regulations 1 and 3 of Part II of the First Schedule to the Companies Act shall not apply.
3. The Company shall have the status of an Exempt company and in accordance with Section 211(2) of the Companies Act:
  - a. the number of persons holding debentures of the Company shall not be more than fifty;
  - b. no body corporate shall be a director of the Company;
  - c. neither the Company nor any of its directors shall be party to an arrangement whereby the policy of the Company is capable of being determined by persons other than by its directors, by its members or by its debenture holders.

#### 3. Issue of Shares

1. Without prejudice to any special rights previously conferred on the holders of any existing shares, any share in the Company may be issued with such preferred, deferred or other special rights or such restrictions, whether in regard to dividend, voting, return of capital or otherwise as the Company may from time to time by ordinary resolution determine.
2. The directors shall not have the authority to issue shares unless the maximum amount to be issued and the terms of the issue are authorised by an extraordinary resolution of the members and the board shall not have the authority to restrict or withdraw the right of pre-emption unless authorised by the said extraordinary resolution.

3. On an issue of Ordinary Shares (whether part of the original capital or any increase in capital) such shares shall be offered in the first place to the existing members of the Company as closely as possible in the same proportion as the number of shares already held by them respectively. The offer shall be made by notice in writing specifying the number of shares offered and their value and stating a time, being not less than twenty eight (28) running days, within which the offer, if not accepted, shall be deemed to have been declined.
4. Any shares not taken up by a member to whom they were initially offered shall then be offered as aforesaid to the other members who shall have taken up their respective offer and, if the requests for shares from such other members shall exceed the number of shares on offer and not taken up, they shall be allotted as closely as possible in proportion to the number of shares held by them respectively prior to the said fresh issue of shares.
5. Any remaining shares may then be offered to non-members on terms and conditions which shall not be more favourable than the offer made to the members.

**4. Transfer and Transmission of Shares**

1. The right to transfer shares in the Company is restricted in the manner and to the extent prescribed in these Articles.
2. In particular:
  - a. If any member (hereinafter referred to as the Transferring Member) wishes to transfer his shares or any part thereof, he shall inform the directors by a notice in writing (hereinafter referred to as the Transfer Notice) specifying the number of shares to be transferred, the name of the proposed transferee and his estimated valuation of each share. The Transferring Member shall not be entitled to revoke a Transfer Notice without the consent in writing of the directors.
  - b. The receipt by the directors of a Transfer Notice shall constitute an authority to them to offer for sale the shares specified therein at a fair valuation to be ascertained as follows:-
    - [i.] At the member's estimated valuation, if considered by the directors to be a fair one.
    - [ii.] At a value placed on them by the auditors where the member's valuation is not considered by the directors to be a fair one.
    - [iii.] At a valuation placed on them by any other person whom the directors, with the consent in writing of the Transferring Member, shall appoint where for any reason the auditors shall not make the said valuation.
3. When a fair value of the shares had been determined in the manner prescribed in the immediately preceding sub-clause, the directors shall, within thirty (30) days from receipt of such Transfer Notice, by notice in writing inform the Transferring Member and shall cause a notice to be sent to every other holder of Ordinary Shares in the Company stating the number and the fair value of the shares for sale and inviting them to state, in writing within thirty (30) days, what number of shares, if any, they are willing to purchase.
4. Any holder of Ordinary Shares not replying to the offer by registered mail within the specific period shall be considered to have declined the said offer.
5. On the expiration of the said thirty (30) days, the Board of Directors shall allocate the said shares to the holders of Ordinary Shares willing to purchase provided that such members of the Company are willing to purchase all the shares on offer. If the requests for shares exceeds the number for sale, the Directors shall apportion the shares to the members in proportion to the purchasing members' existing ordinary share holdings.

6. The Transferring Member shall complete and execute transfers of the said shares in accordance with the allocation by the Directors and shall surrender to the Company his Share Certificate.
7. In the event that all the shares on offer not being taken up by the holders of Ordinary Shares of the Company under the preceding sub-articles of this Article, the offer for all the shares to the existing holder of Ordinary Shares shall lapse, and the proposing transferor may at any time within three (3) calendar months beginning after the expiration of the 30 days beginning on the date of the Transfer Notice, sell all the shares to any person, at any price with last call for original shareholders.
8. No restriction on the transfer of shares shall apply and shares may be freely transferred in the following three cases:
  - a. where a member intends to transfer shares to his/her spouse or descendants in the direct line;
  - b. where the proposed transfer of shares is approved in writing by all the other members; or
  - c. where a member being a limited liability company (hereinafter the "Corporate Member") registered under the laws of Malta, intends to transfer or otherwise dispose of any share held by the Corporate Member in the Company to an associated company, provided however that such shares shall forthwith be re-transferred to the Corporate Member if the transferee ceases to be an associated company. For the purpose of this clause "associated company" means a company in which any Corporate Member holds shares conferring in excess of fifty per centum (50%) of the votes which may be cast on a poll at a General Meeting of such associated company or a company holding in excess of fifty per centum (50%) of the votes as aforesaid in such Corporate Member.
9. The Directors may in their absolute discretion and without assigning any reason therefor, decline to register any transfer of any share, whether or not it is a fully paid-up share, except for such transfers as are referred to in Section 8(a), (b) and (c). If they refuse to register a transfer of shares they shall, within two months after the date on which the transfer was lodged with the Company, send to the transferee notice of refusal together with a copy of the board resolution declining the approval of the registration of such share transfer. If no such communication is made by the directors to the transferee within the two-month period as aforesaid it shall be deemed that there is no objection to the registration of the share transfer, which shall then become effective.
10. Regulation 14 of Part I of the First Schedule to the Companies Act shall not apply.
11. The names, addresses of members and a statement of the shares held by each of them, the amount paid up, and the date at which each person became and ceased to be a member shall be entered in a register to be kept at the Office of the Company and certificates of shares held by each shareholder shall be issued by the Directors.
12. Where two or more persons hold one or more shares in the Company jointly, they shall, be treated as a single member and the name of only one of such persons shall be entered in the register of members, such person shall be elected by the joint holders and shall for all intents and purposes be deemed to be the holder of the shares so held.
13. The Company shall not register a transfer of shares in the Company unless a proper instrument of transfer or an authentic copy thereof has been delivered to the Company, which instrument shall be in writing in any usual or common form or any other form which the directors may approve.
14. The instrument of transfer of any share shall be executed by or on behalf of the transferor and transferee and the transferor shall be deemed to remain a holder of the share until the name of the transferee is entered in the register of members in respect thereof.

15. The Company shall not recognise any nominee relationship or trust in respect of any share issued by it and the Company shall not recognise, even when having notice, thereof any interest or other right in such share, but shall only recognise the registered holder thereof. Notwithstanding the above, no restriction shall apply if a member wishes to change the name of the registered holder of his shares or any of them to a person whose nominee he was at the time when the shares were issued or allotted and whose nominee he has been at all times since.
16. Should any deceased shareholder bequeath shares in usufruct to an heir or legatee, then the voting rights in respect of such shares shall be vested in the usufructuary.
17. A person becoming entitled to a share by reason of the death of the registered holder thereof shall be entitled to the same dividends and other advantages to which he would be entitled if he were the registered holder of the share, except that he shall not, before being registered as a member in respect of the share, be entitled to exercise any right conferred by membership in relation to the meetings of the Company.

**5. Ordinary and Extraordinary Resolutions**

1. An ordinary resolution shall be passed by a vote taken at a General Meeting of the Company and supported by a member or members having the right to attend and vote thereat, holding in the aggregate more than 50% of the voting shares represented at the meeting.
2. A resolution shall be an extraordinary resolution where -
  - a. it has been taken at a general meeting of which notice specifying the intention to propose the text of the resolution as an Extraordinary Resolution and the principal purpose thereof has been duly given; and
  - b. it has been passed by a number of members having the right to attend and vote at any such meeting holding in the aggregate not less than 51% in nominal value of the shares conferring that right.
3. Subject to the provisions of the Companies Act, an ordinary or extraordinary resolution in writing signed by all the members for the time being entitled to receive notice of and to attend and vote at a general meeting shall be as valid and effective as if the same had been passed at a general meeting of the Company duly convened and held. Annual general meetings of the Company may be held in accordance with this section.

**6. General Meetings**

1. The Company shall hold a general meeting once in every year as its annual general meeting in addition to any other meetings in that year and shall specify the meeting as such in the notices calling it.
2. All general meetings other than annual general meetings shall be extraordinary general meetings.
3. Decisions upon the following matters shall be taken at a General Meeting of the Company:
  - a. approval of the Annual Balance Sheet and Profit and Loss Account and of the Directors Report and of the Auditor Report;
  - b. declaration of Dividends which, however, must in no case exceed the amount, if any, recommended by the Board of Directors;
  - c. alterations, revocations and additions to the Memorandum of Association of the Company;
  - d. increase or reduction of the authorised capital;

- e. the appointment and removal of the Directors and of the Auditors of the Company, provided that the first Auditors of the Company shall be appointed by the Board of Directors;
  - f. fixing the remuneration payable to the Auditors of the Company, provided that the remuneration of the First Auditors of the Company shall be fixed by the Board of Directors.
- 4. Without prejudice to the provisions of the Companies Act and to these Regulations in general, decisions on all questions which in terms of this agreement are reserved to the General Meeting of the Company or which the Board of Directors may place before the said General Meeting, shall be passed by an ordinary resolution.
  - 5. Subject to the provisions of the Companies Act the general meetings shall be held at such time and place as the Directors shall determine.
  - 6. The directors may, whenever they deem fit, convene an Extraordinary General meeting.
  - 7. The Directors shall, on the requisition of a member or members of the Company holding at the date of the deposit of the requisition not less than one-tenth of such of the paid-up share capital of the Company as at the date of the deposit carried the right of voting at general meetings of the Company, forthwith proceed duly to convene an Extraordinary General Meeting of the Company as provided by Section 129 of the Companies Act.
  - 8. If at any time there are not in Malta sufficient directors capable of acting to form a quorum, any director or any two members of the Company may convene an Extraordinary General Meeting in the same manner, as nearly as possible, as that in which meetings may be convened by the directors.
- 7. Notice of General Meetings**
- 1. A general meeting shall be deemed not to be duly convened unless at least fourteen (14) days notice has been given in writing.
  - 2. Provided that a meeting of the Company shall notwithstanding that it is called by a shorter notice, be deemed to have been duly convened if it is so agreed by all the members entitled to attend and vote thereat. Such notice shall be given to every member of the Company and to any other person entitled to receive it under the provisions of the Companies Act.
  - 3. The accidental omission to give notice of a meeting to, or the non-receipt of notice of a meeting by any member entitled to receive notice shall not invalidate the proceedings at that meeting in the event that such member attends the meeting in person or by proxy or waives his right to be given notice of the meeting.
  - 4. Every member of the Company shall specify his address in Malta or elsewhere. The posting by the Company of a registered letter to that address will be deemed sufficient notice to him for all intents and purposes.
- 8. Proceedings at General Meetings**
- 1. All business shall be special that is transacted at an Extraordinary General Meeting, and also that is transacted at an annual general meeting with the exception of:
    - a. declaring a dividend;
    - b. the consideration of the accounts and the reports of the directors and auditors;
    - c. the election of directors in the place of those retiring or resigning; and
    - d. the appointment of and the fixing of the remuneration of the auditors.

2. No business shall be transacted at any general meeting other than that stated in the notice convening it and unless a quorum of members is present when the meeting proceeds to business. The **quorum** necessary for the transaction of business at a general meeting shall be a member or members in person or by proxy holding not less than fifty one per centum (51%) of the issued and paid-up capital of the Company. Regulation 36 of Part 1 of the First Schedule to the Companies Act shall not apply.
  3. If within one hour from the time appointed for the meeting a quorum is not present, the meeting shall stand adjourned to the same day in the next week, at the same time and place or to such other day and at such other time and place as the directors may determine. Notice of such adjournment shall be sent to the persons entitled to receive notice of adjournment. If at the adjourned meeting a quorum is not present within one hour from the time appointed for the meeting the member or members present shall be a quorum.
  4. Any member entitled to attend and vote at a meeting of the Company or at a meeting of any class of members of the Company shall be entitled to appoint another person, whether a member or not as his proxy to attend and vote instead of him, and a proxy so appointed shall have the same rights as the member to speak at the meeting, demand a poll or vote.
  5. The instrument appointing a proxy shall be in writing and shall be presented to the Chairman at a meeting at which it is to be used.
  6. A proxy need not be a member of the Company and in no case may a member of the Company appoint more than one proxy.
  7. The Chairman, if any, of the Board of Directors shall preside as Chairman at every general meeting of the Company, or if there is no such Chairman, or if he shall not be present within fifteen minutes after the time appointed for the holding of the meeting or is unwilling to act, the directors present shall elect one of their numbers to be Chairman of the meeting.
  8. If at any meeting no director is willing to act as Chairman or if no director is present, within fifteen minutes after the time appointed for holding the meeting, the members present shall choose one of their numbers to be Chairman of the meeting.
  9. Regulations 41, 43, 45 and 48 of Part I of the First Schedule to the Companies Act shall not apply.
9. **Votes of Members**
1. A poll shall be held if demanded by any member of the Company.
  2. Unless otherwise provided in the terms of issue each Ordinary Share in the Company shall give the right to one (1) vote at any General Meeting of the Company, provided that no member shall be entitled to vote at any general meeting unless all calls or other sums presently payable by him in respect of shares in the Company have been paid.
  3. No objection shall be raised to the qualification of any voter except at the meeting or adjourned meeting at which the vote objected to is given or tendered, and every vote not disallowed at such meeting shall be valid for all purposes. Any such objection made in due time shall be referred to the Chairman of the Meeting, whose decision shall be final and conclusive.
10. **Representation of the Company**
1. Where for any reason the representation of a company ceases to be vested in any person or persons, the Company shall appoint another person or persons to exercise such function. The appointment shall be made by ordinary resolution taken at a general meeting, notice of which shall be issued within fourteen days from the date when the vacancy occurred.

2. The Company may by ordinary resolution replace any person or persons vested with the representation of the Company.

**11. Directors**

1. The remuneration of the Directors shall from time to time be determined by the Company in General Meeting.
2. A Director may hold any other office or place of profit under the Company (other than a place or office prohibited by the Companies Act) on such terms as to remuneration and otherwise as the Board may determine.
3. A director need not be a member of the Company.
4. Regulation 51 of Part I of the First Schedule to the Companies Act shall not apply.

**12. Appointment, Retirement and Removal of Directors**

1. Subject to the provisions of the Memorandum and Articles, the directors of the Company shall be appointed by ordinary resolution of the Company in general meeting.
2. A director may be removed before the expiration of his period of office by a resolution taken at a general meeting of the Company and passed by a member or members having the right to attend and vote holding in aggregate more than 50% in nominal value of the shares represented and entitled to vote at the meeting.
3. Regulations 57 to 61 of Part I of the First Schedule to the Companies Act shall not apply.

**13. Proceedings of Directors**

1. The Directors may meet together for the dispatch of business, adjourn and otherwise regulate their meetings as they think fit. Questions arising at any meeting shall be decided by a majority of votes. In case of an equality of votes, the chairman shall have a second or casting vote. A director may, and the Company Secretary on the requisition of a director shall at any time summon a meeting of the directors. Regulation 62 of Part I of the First Schedule to the companies act shall not apply.
2. Every Director of the Board shall specify his address in Malta or elsewhere. The posting of a registered letter to that address will be deemed sufficient notice to him for all intents and purposes.
3. No business shall be transacted at any Board Meeting unless a quorum of directors is present when the meeting proceeds to business. The quorum necessary for the transaction of the business of directors shall, where the directors are more than one in number, be two. Regulation 63 of Part I of the First Schedule to the Companies Act shall not apply.
4. The continuing directors may act notwithstanding any vacancy in their body, but, if and so long as their number is reduced below the number fixed by or pursuant to the regulations of the Company as the necessary quorum of directors, the continuing directors or director may act for the purpose of increasing the number of directors to that number of directors, or of summoning a general meeting but for no other purpose.
5. Unless a particular director is designated as Chairman under the Memorandum and Articles of Association, the directors may elect a Chairman of their meetings and determine the period for which he is to hold office; but if no such chairman is elected, or if at any meeting the Chairman is not present within five minutes after the time appointed for holding the same, the directors present may choose one of their number to be Chairman of the meeting.

6. A director may at any time authorise generally or for a specified time any other person to act as alternate Director and such person shall have a vote for each director by whom he is so authorised. Any such authority shall be in writing and shall be delivered and deposited at the registered office of the Company before the time appointed for the holding of the first meeting at which it intended to be acted upon.
7. A resolution in writing, signed by all the directors for the time being entitled to receive notice of a meeting of the directors, shall be as valid and effectual as if it had been passed at a meeting of the directors duly convened and held.

#### **14. Borrowing Powers**

The Company shall have the power to borrow money and to hypothecate or charge its undertaking, property and uncalled capital or any part thereof including as security for its obligations and to issue debentures, debenture stock and other securities whether outright or as security for its liabilities or obligations or for those of any third party.

#### **15. Power and Duties of Directors**

1. The business of the Company shall be managed by the directors who may exercise all such powers of the Company which are not required, by the Companies Act or by these memorandum and articles to be exercised by the Company in general meeting.
2. The directors shall exercise their powers subject to any of these regulations, to the provisions of the Act and to such regulations, being not inconsistent with the aforesaid regulations or provisions, as may be prescribed by the Company in general meeting; but no regulation made by the Company in general meeting shall invalidate any prior act of the directors which would have been valid if that regulation had not been made.
3. The Board of Directors shall have the power:-
  - a. to bind the Company in favour of third parties and third parties in favour of the Company in all matters not expressly reserved for the decision of the General Meeting
  - b. to call upon the members of the Company for the payment of moneys on their shares
  - c. to convene at any time a General Meeting of the Company;
  - d. to recommend the payment of dividends;
  - e. to borrow or raise money and to secure the payment of such money and in conjunction with or independently of, to hypothecate or charge the property of the Company or any part thereof, for any debt, liability or obligation of the Company.
4. The directors shall have power to appoint any person to be the attorney of the Company for such purposes and with such powers, authorities and discretion (not exceeding those vested in or exercisable by the directors under these regulations) and for such period and subject to such conditions as they may think fit, and any such powers of attorney may contain such provisions for the protection and convenience of persons dealing with any such attorney as the directors think fit, and may also authorise any such attorney to delegate all or any of the powers, authorities and discretion vested in him.
5. The directors shall have the power to remove the Company Secretary provided they shall appoint another individual in his stead within fourteen days from the date of his removal.



6. No director of the Company shall, in competition with the Company and without the approval of the Company in general meeting, carry on a business on his own account or on account of others, nor may he be a partner with unlimited liability in another partnership or a director of a company which is in competition with the Company.
7. It shall be the duty of any director of the Company who is in any way, whether directly or indirectly interested in a contract or proposed contract with the Company to declare the nature of his interest to the other directors either at the meeting of the directors at which the question of entering into the contract is first taken into consideration, or, if the director was not at the date of the meeting interested in the contract or proposed contract, at the next meeting of the directors held after he became so interested.
8. Without prejudice to the provisions of Section 145 of the Companies Act, no Director shall be disqualified by his position as Director, from entering into any contract or arrangement with the Company.
9. A director may vote and be taken into account for the purpose of constituting a quorum at meetings in which any contract or arrangement in which he may in any way be interested is due to be discussed and he shall be entitled to retain for his own use and benefit all profits and advantages accruing to him therefrom. Regulation 54 of Part I of the first Schedule to the Companies Act shall not apply.
10. The directors on behalf of the Company may pay a gratuity or pension or allowance on retirement to any director who has held any other salaried office or place of profit with the Company or to his widow or dependants and make contributions to any fund and pay premiums for the purchase or provisions of any such gratuity, pension or allowance.
11. The Company shall cause proper accounting records to be kept in accordance with Section 163 of the Companies Act. The books of account shall be kept at the registered office of the Company or at such other place or places in Malta as the Directors may decide from time to time.
12. The directors of the Company shall prepare for each accounting period individual accounts comprising the balance sheet as at the last day of the accounting period to which they refer, the profit and loss account for that period, the notes to the accounts and any other financial statements which may be required under Chapter X of Part V to the Companies Act. The Company's annual accounts shall be approved by the Board of directors and the balance sheet shall be dated and signed on behalf of the Board by one director of the Company. A copy of the annual accounts of the Company shall, not less than fourteen days before the date of the general meeting at which they are to be laid, be sent to every member and to every other person entitled to receive notice of the meeting.
13. In respect of each accounting period the directors shall lay before the Company in general meeting for its approval copies of the annual accounts of the Company for that period. There shall be annexed to the annual accounts, the auditors' report as specified in section 179 of Companies Act and the director's report as specified in section 177 of the Companies Act. Such annual accounts shall be laid and approved by the Company in general meeting within ten months after the end of the accounting reference period subject to the provisions of S 132 of the Companies Act.

**16. Minutes of Proceedings**

1. The Company shall cause minutes of all proceedings of general meetings and all proceedings at meetings of its directors to be entered in a book kept for that purpose.
2. The directors shall cause minutes to be made in books provided for the purpose:-
  - a. of all appointments of officers made by the directors;

- b. of the names of the directors present at each meeting of the directors and of any committee of the directors;
  - c. of all resolutions and proceedings at all meetings of the Company, and of the directors, and of committees of directors.
3. Any such minutes, if purporting to be signed by the Chairman of the meeting at which the proceedings were held or by the Chairman of the next succeeding meeting, shall be evidence of the proceedings.
4. The books containing the minutes of proceedings of any general meeting of the Company shall be kept at the registered office of the Company and shall during business hours be subject to such reasonable restrictions as the Company may by its articles or in general meeting impose, be open to the inspection of any member of the Company without charge.

**17. Secretary**

1. A document or proceeding requiring authentication by a Company may be signed by a director, the Company Secretary or other authorised officer of the Company.
2. Without prejudice to the provisions of the Act regulating the appointment and functions of the Company Secretary, the appointment or replacement of the Company Secretary and the conditions of holding office shall be determined by the directors. The Company Secretary shall be responsible for keeping:
- a. the minute book of general meetings of the Company;
  - b. the minute book of meetings of the board of directors;
  - c. the register of members;
  - d. the register of debentures; and
  - e. such other registers and records as the Company Secretary may be required to keep by the board of directors.
3. The Company Secretary shall:
- a. ensure that proper notices are given of all meetings; and
  - b. ensure that all returns and other documents of the Company are prepared and delivered in accordance with the requirements of the Act.
4. Anything required or authorised to be done by or to the Company Secretary may, if the office is vacant, or if there is for any other reason no Company Secretary capable of acting, be done by or to any officer of the Company authorised generally or specifically in that behalf by the directors.

**18. Dividends and Reserve**

1. Regulation 73 of Part I of the First Schedule to the Companies Act shall not apply.
2. The directors may from time to time pay the members such interim dividends as appear to the directors to be justified by the profits of the Company.

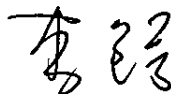
**19. Notice**

1. Every member shall specify his address to the Company.

2. Regulation 82 of Part I of the First Schedule to the Companies Act shall not apply.

20. **Indemnity**

Every managing director, director holding any other executive office or other director, and every agent, auditor or Company Secretary and in general any officer for the time being of the Company shall be indemnified out of the assets of the company against any liability incurred by him in his capacity as such in defending any proceedings in which judgement is given in his favour or in which he is acquitted.



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Mr E Li

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Director of Shanghai Electric  
Power & Energy Development  
Limited

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