



Defence Materiel Organisation  
*Ministry of Defence*

## **Market Consultation**

### **Mobile Energy Supply**

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## **Colophon**

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## **1. Introduction**

### **1.1 Reason and purpose market consultation**

The Defence Materiel Organisation (DMO), on behalf of the Netherlands Armed Forces is preparing a tender for a possible agreement for mobile energy supply. Before publishing this tender, the DMO has decided to consult the market first.

The information gathered in this market consultation will primarily be used to determine whether the functional and/or other requirements for the mobile energy supply program can be met, if improvements are possible, if the program can be realized with the available budget and, therefore, if this program can be carried out in the way it was intended. As the list of requirements will usually not have been completed at this stage, the information of the respondents could lead to adjustments in the functional and/or other requirements. The information obtained will **not** be used to draw up a shortlist.

Furthermore, the results from this market consultation will be used by the DMO to determine a suitable procurement strategy.

The procurement will be conducted according to EU directive 2004/18 procurement contracts for public works, public supply and public service and the "Aanbestedingswet 2012", which was implemented on 01-04-2013.

### **1.2 Description organisation**

#### **Defence Materiel Organisation**

The Defence Materiel Organisation ensures that military personnel have modern, robust and safe materiel to work with. The DMO is involved in the procurement, maintenance and sale of materiel.

The DMO maintains Defence materiel throughout its entire life-cycle, from purchase via sustainment to disposal, whether ships, aircraft, helicopters, vehicles, fuel, ammunition, clothing, computer systems or weapons are involved.

After procurement, the DMO hands over the purchased materiel to the relevant armed forces Service, which is then responsible for its sustainment. The logistics divisions of the Service then ensure maintenance and further distribution of the materiel.

#### **Participating Armed Forces**

At this moment the Netherlands Armed Forces have a total amount of approximately 1790 mobile energy supply systems. These mobile energy supply systems have reached their End Life Of Type (ELOT) and need to be replaced. Because in the past the Army, Airforce and Marine procured their own mobile energy supply systems separately, there is a large variety of different systems in place.

The upcoming tender comprises the replacement of Mobile Energy Supply of the three as aforesaid Armed Forces. The aim is to bring back the diversity in in systems from the current 32 to 6 new systems. The mobile energy supply systems will not committed to a certain (weapon)system. From the new mobile energy supply systems approximately 70% will be fixed divided to different units of the Airforce, Marine and/or Army and the other 30% will be divided in to a pool.

## 2. Systems

### 2.1 User profile

The mobile energy supply systems will be used for military operations, training and other operations in the following way:

Power	Use	Yearly operating hours
4,5kW	Portable, operational use in the field by marines and commandos	660
6 kW	Air transportable serving CSS (Combat Service Support), transportable underneath a helicopter (underslung)	1250
6~20kW	At vehicles, temporary energy supply at temporary bases	1250
20kW	At vehicles, temporary energy supply at temporary bases	1250
50kW	Static at airbases	6000
100kW	Static at airbases	6000
200kW	Emergency energy supply, suitable for high mobility operations on a trailer	3000

### 2.2 Number of systems

At this point in time, the scope of delivery has been divided over the following lots, all MOTS products:

Power	Amount
4,5kW	318 pieces
6 kW	48 pieces
6~20kW	520 pieces
20kW	520 pieces
50kW	24 pieces
100kW	18 pieces
200kW	20 pieces

In the questionnaire in tab 2 "meeting the requirements", the exact kW output as determined in the current program is stated. If it is not possible to meet these requirements, the respondent is required to use tab 3 "range of kW's" where it is possible to add MOTS systems within the specified range of kW's.

The units should be delivered in the period 2016/2017 in the Netherlands.

### 2.3 Program of requirements

*Mobile energy supply of 4,5 kW, 6 kW, 6~20 kW and 20 kW*

Requirement	Portable 4,5 kW	6 kW	Variable Speed Constant Frequency (VSCF) range 6 ~ 20 kW	20 kW
Dimensions (length, width, height in mm)	max 1000 x 600 x 500	max 1420 x 885 x 1500	max 2400 x 750 x 1500	max 2400 x 750 x 1500

Total weight (in kg). This includes fuel and all fittings.	max 60	max 120	max 1000	max 1000
Air transportable <sup>1</sup> (stanag 3542)		✓		
Consumables: Single Fuel / Diesel (F34, F54, F63) acc. Stanag 1414	✓	✓	✓	✓
Voltage requirements AC	1-phase 230V, 50Hz	1-Phase 230V, 50 Hz	1-phase 230V, 3-phase 400V, 50HZ	1-phase 230V, 3-phase 400V, 50HZ
Voltage requirements DC	24 – 29V (0,5kW)	24 – 29V (2kW)	24 – 29V (2kW)	24 – 29V (2kW)
Temperature range acc. stanag 2895 (C1)-32C - (A1)+49C at 900 meters	✓	✓	✓	✓
Noice level at max load/speed less than 67 dB(A) (7m) (measurement method conform 2000/14/EG)	✓	✓	✓	✓
Hours full load with one full tank	Min 2	Min 3	Min 4	Min 4
Liftable: equipped with handles or lift accesoires	carriable by 2 people	Carriable by 4 people		
Possible to fix onto a vehicle or trailer by twistlocks	-	✓	✓	✓
Connectable <sup>2</sup>	-	✓	✓	✓

*Mobile energy supply of 50 kW, 100 kW and 200 kW*

<b>Requirement</b>	<b>50 kW</b>	<b>100 kW</b>	<b>200 kW</b>
Dimensions	Fit on a flatrack	Fit on a flatrack	Fit on a flatrack
Consumables: Single Fuel / Diesel (F34, F54, F63) acc. Stanag 1414	✓	✓	✓

1 Air transportable refers to the low weight and relatively small dimensions. The system will be transportable underneath a helicopter (underslung).

2 Connectable refers to the possibilities to connect the systems technically, to combine the power of the systems and to create a power plant. Both a series and a parallel connection should be possible.

Temperature range acc. stanag 2895 (C1)-32C - (A1)+49C at 900 meters	✓	✓	✓
Noice level at max load/speed less than 67 dB(A) (7m) (measurement method conform 2000/14/EG)	✓	✓	✓
Connectable	✓	✓	✓
3-phase 400V	✓	✓	✓

### 3. Maintenance concept

#### 3.1 Overview of the concepts

Three concepts are considered. These concepts all contain the following tasks:

- Delivery of the systems,
- Maintenance,
- Inspections,
- Managing of spare parts,
- Documentation,
- Training and
- Delivery of data.

The concepts differ in the extent at which maintenance is included, either by the supplier or the Armed Force. Figure 1 gives an overview of the concepts. A concept will usually be contracted for the Life Of Type.

		<b>Concept 1: Maintenance excluded</b>		<b>Concept 2: DLM only</b>		<b>Concept 3: ILM &amp; DLM</b>	
		Supplier	MoD	Supplier	MoD	Supplier	MoD
<b>Maintenance</b>	Maintenance at OLM level (always)		■		■		■
	Maintenance at ILM level (except for military operations)		■		■	■	
	Maintenance at ILM level (during military operations)		■		■		■
	Maintenance at DLM level (except for military operations)*		■	■		■	
	Inspections	■		■		■	
<b>Support</b>	Delivery of spare parts and tool sets	■		■		■	
	Documentation	■		■		■	
	Training	■		■		■	
	Delivery of data	■		■		■	

\* Maintenance at DLM level will not be performed during military operations

Figure 1: Maintenance concepts 3

The three concepts are:

1. *Concept 1 - delivery of the systems, support, maintenance only as fallback option:*  
In this concept the supplier delivers the systems, the training, the documentation, the spare parts and data. The State executes all maintenance activities based upon the training delivered by the supplier. A fallback option will be contracted for ILM and DLM maintenance such that the tasks can be performed by the supplier on request of the State.
2. *Concept 2 - delivery of the systems, support, DLM maintenance included, ILM as fallback option:*  
In this concept the supplier delivers the same amount as as described in concept 1, but the supplier also executes the DLM maintenance. A fallback option will be contracted for ILM maintenance such that the tasks can be performed by the supplier on request of the State.
3. *Concept 3 - delivery of the systems, support, ILM & DLM maintenance included:*  
In this concept the supplier delivers/performs the same amount as described in concept 2, and in addition also executes the ILM maintenance.

### 3.2 Description of maintenance levels

This paragraph elaborates on the maintenance levels and the requirements the supplier has to fulfill. It describes the way the State defines the maintenance levels. However, the maintenance activities depend on the systems of the supplier. The maintenance activities required for the systems of the supplier can be clarified in the questionnaire of this market consultation (tab 5).

#### Maintenance at OLM level

Organic Level Maintenance (OLM) will be performed by the State.

Organic Level Maintenance (OLM) will be executed by the user of the system. The primary task of the user is to carry out a particular military task. Maintenance is for preparing for deployment and is, therefore, a secondary task.

The following applies to OLM maintenance:

- The user is usually not technically trained.
- It should be possible to carry out OLM maintenance in operational conditions ('in the field'), without the availability of maintenance facilities.

Expected OLM tasks:

- Cleaning and completing the material and keeping it clean and complete.
- Preventive maintenance before, during and directly after use ('daily' maintenance).
- Periodic preventive maintenance.
- Simple corrective maintenance, like replacing lamps and fuses.

Requirement

- The supplier will be requested to define the tasks that the State should perform.

#### Maintenance at ILM level (except for military operations)

Intermediate Level Maintenance (ILM) will be performed either by the State (Concept 1 and 2) or by the supplier (Concept 3). In case ILM will be performed by the State (Concept 1 and 2), a fallback option will be contracted such that the tasks can be performed by the supplier at request of the State.

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3 OLM: Organic Level Maintenance  
ILM: Integrated Level Maintenance  
DLM: Depot Level Maintenance

The following applies to ILM maintenance:

- ILM maintenance staff is usually technically trained.
- It should be possible to trace back any technical malfunction to the failing component.
- It should be possible to carry out ILM maintenance in operational conditions ('in the field'), with limited maintenance facilities (mobile workplaces).
- If special tools and spare parts are needed, the limited space in the mobile workplaces should be taken into account.

Expected ILM tasks:

- Periodic preventive maintenance.
- Corrective maintenance by replacement of components and simple repairs. This includes the replacement of separate replaceable components, like an entire starter, an entire gear box and an entire engine.
- Repairs because of damage.

Requirements for concept 1 and 2:

- The supplier will be requested to define the tasks that the State should perform.

In case of the fallback option (concept 1 and 2):

- The ILM maintenance will be performed within Europe in workshops of the supplier.
- The supplier will be responsible for the transfer of the mobile energy supply systems between the location of the State and the workshop of the supplier.
- The corrective maintenance will be performed by the supplier within 1 week after the failure has been reported to the supplier.
- Costs will be calculated based upon fixed rates and subsequent calculation of hours.

Requirements for concept 3:

- The ILM maintenance will be performed within Europe in workshops of the supplier.
- The supplier will be responsible for the transfer of the mobile energy supply systems between the location of the State and the workshop of the supplier.
- The corrective maintenance will be performed by the supplier within 1 week after the failure has been reported to the supplier.
- The supplier is responsible for preventive and corrective maintenance and the State will be charged a yearly fee for this responsibility. The yearly fee will be based on the actual number of operating hours.
- The costs for damage repair will be billed on the basis of subsequent calculation.

### **Maintenance at ILM level (during military operations)**

During military operations, maintenance at ILM level will be performed by the State.

### **Maintenance at DLM level**

Depot Level Maintenance (DLM) will be performed either by the State (Concept 1) or by the supplier (Concept 2 and 3). In case DLM will be performed by the State (Concept 1), a fallback option will be contracted such that the tasks can be performed by the supplier on request of the State.

The following applies to DLM maintenance:

- DLM maintenance staff is technically trained.
- DLM maintenance will be executed in special static workplaces.
- Advanced tools and measuring and testing equipment can be used.

Expected DLM tasks:

- Corrective complex maintenance that cannot be performed at ILM level
- Repairing of components ('repairables').
- Damage repair.
- Revisions.

Requirements for concept 1:

- The supplier will be requested to define the tasks that the State should perform.

In case of the fallback option (concept 1):

- The DLM maintenance will be performed within Europe in workshops of the supplier.
- The supplier will be responsible for the transfer of the mobile energy supply systems between the location of the State and the workshop of the supplier.
- The corrective maintenance will be performed by the supplier within 30 days after the failure has been reported to the supplier.
- Costs will be calculated based upon fixed rates and subsequent calculation of hours.

Requirements for concepts 2 and 3

- The DLM maintenance will be performed within Europe in workshops of the supplier.
- The supplier will be responsible for the transfer of the mobile energy supply systems between the location of the MoD and the workshop of the supplier.
- The corrective maintenance will be performed by the supplier within 30 days after the failure has been reported to the supplier.
- The supplier is responsible for preventive and corrective maintenance and the MoD will be charged a yearly fee for this responsibility. The yearly fee will be based on the actual number of operating hours.
- Costs will be calculated based upon fixed rates and subsequent calculation of hours.

## **4. Procedures and planning**

### **4.1 Procedures**

The market consultation will be conducted in writing in the English language.

Respondents are requested to use either the English or the Dutch language.

With this document respondents are able to obtain a global view of the project and some specific items which the DMO would like to investigate.

Respondents should bear in mind that it is the DMO's decision whether or not to commence with the next phase and in what way. Therefore, it should be noted that:

- with receipt of this market consultation, it may not be inferred that (pre)contractual contacts with the DMO have arisen, nor that a contract will be placed, nor that the project will be executed as currently envisioned, nor that the company of the respondent will automatically appear on the tender list;
- the DMO retains the right to change the contents of the program and/or to end the program, without being obliged to pay any form of compensation.
- all costs with regard to the completion of this market consultation must be borne by the respondents and will not in any way be reimbursed by the DMO.

By responding to this RFI the respondent agrees to the above mentioned conditions.

The DMO has the right to use any information provided by respondents for the future tender, for example to draw up the requirements and/or to determine a suitable procurement strategy. The information will however be processed anonymously and all price information will be treated as commercial in confidence. If certain other information is commercial and/or technical in confidence, this must be explicitly marked by the respondent.

If necessary, the DMO can decide, based upon the information gathered from the market consultation, to invite or visit respondents to obtain more specified information. Before any visit, a written questionnaire will be sent to the respondent.

All correspondence regarding this market consultation must be sent to:

[cgp.andreoli@mindef.nl](mailto:cgp.andreoli@mindef.nl)

Please refer to : "market consultation mobile energy supply"

The respondent is kindly requested provide the point of contact (name, address) when participating in this market consultation. All communication regarding this market consultation will be conducted by e-mail.

The following planning will be applicable:

Step	Action	Date
1	Publishing of market consultation on Tendered	10-03-2015
2	Period for issuing questions	Publishing date - 07-04-2015 14h00 (CET)
4	Replying of questions/answers to all participants (respondents)	14-04-2015
5	Closure date market consultation	21-04-2015 14h00 (CET)
6	Sending of the final report to all respondents (this report will also be added as an annex to the tender)	When available

#### 4.2 Planning

Depending upon, among others, the results of this market consultation, the DMO is planning a tender (Request for Quotation) in the second half of 2015.

#### 4.3 Instructions

The questions in the Annex are the essence of this market consultation. You are requested to answer them as completely as possible. The questions should be regarded together with the context which is described in the following chapters.

Your remarks and/or supplements are highly appreciated and can relate to various aspects such as: financial, organizational, practical, technical and/or legal aspects but can also relate to the planning.

If you have any questions about this market consultation please feel free to contact the e-mail address as mentioned in paragraph 4.1.

Finally the Netherlands Armed Forces and the Defence Materiel Organisation would like to thank you in advance for the effort you will make by participating in this market consultation.

#### Annex:

The Excel file '20150121 Questionnaire market consultation mobile energy supply.xlsx'