Consultation Forum for Sustainable Energy in the Defence and Security Sector
Phase III (CF SEDSS III)
2019-2023

CF SEDSS III Handbook

Version 5.0

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EXECUTIVE SUMMARY

The Consultation Forum for Sustainable Energy in the Defence and Security Sector (CF SEDSS) is a European Commission funded initiative managed by the European Defence Agency (EDA). This Forum was established from the scratch with the primary scope to create a defence energy-related community to share information, knowledge and best practices on improving energy management, increasing energy efficiency and buildings performance, utilising renewable energy sources in the defence sector and enhancing the resilience of defence-related critical energy infrastructure. To address these objectives, and with the support of the European Commission, EDA has implemented two phases: the first phase took place from October 2015 to October 2017 and the second one held from October 2017 to August 2019. Building on the successful outcome of these two phases, and to address emerging and future challenges in the field of energy, EDA and the European Commission launched on 1st October 2019 the third phase which will run over a period of four years until 30 September 2023. CF SEDSS phase III is funded by the European Union's (EU) horizon 2020 research and innovation programme under the grant agreement No. 882171.

Overall, the CF SEDSS proved to be an appropriate mechanism to boost energy efficiency and renewable energy initiatives as well as to enhance the resilience of defence-related critical energy infrastructure. Firmly rooted in a collaborative approach the success of this Forum, and thus the realisation of many tangible solutions, continues to rely upon the support and engagement from MoDs and other defence energy-related stakeholders. The new programme of activities presents an opportunity to maximise synergies and ensure a comprehensive approach to transit to a cleaner, safer and more sustainable energy models. The present handbook aims to support the CF SEDSS community to understand the level of ambition of phase III, its scope and objectives in order to support their participation and enable their contribution in the relevant activities and events and to ensure the delivery of high-quality deliverables.

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PART A – AN OVERVIEW OF THE CF SEDSS III

1. Introduction

The progress of the Consultation Forum was acknowledged in the June 2019 Council Conclusions on Security and Defence in the context of the EU Global Strategy where the Council of the EU (Ministers of Foreign Affairs and Ministers of Defence) welcomed all progress achieved in the context of the Consultation Forum and expressed expectations for the next phase. The Council also invited the EU Member States, the European External Action Service (EEAS), the European Commission and the European Defence Agency (EDA) "*to develop concrete solutions within the defence sector for safe and sustainable energy models…*" and call "*for strengthening cooperation in tackling energy security challenges, including via energy efficiency, renewable energy solutions and the protection of critical energy infrastructure*". On 19 September 2019, the Chief Executive of EDA and the European Commissioner for Energy and Climate Action, Miguel Arias Cañete, announced the launch of the third phase. The project received funding from the European Union's Horizon 2020 research and innovation programme. The grant agreement is between EASME and EDA.

On 1 October 2019, the third phase of the CF SEDSS was launched with the project being funded by the EU's Horizon 2020 research and innovation programme under grant agreement No. 882171. It has a duration of 48 months (until 30 September 2023) with an EU contribution of EUR 3 200 000 to cover eligible activities. The Consultation Forum will continue pursuing in Phase III the implementation of the EU legal framework on energy and will reaffirm the Consultation Forum as the appropriate vehicle to share information and best practices on improving **energy efficiency** and **buildings performance**, utilising **renewable energy sources** in the defence sector and increasing the resilience of **defence-related critical energy infrastructure**. It will also address the **cross-cutting thematic areas** on **energy management and policy**, **energy innovative technologies** and will identify the applicable **funding or financing instruments** for defence energy-related topics. Furthermore, the Forum will enable the **generation of defence energy-related project ideas,** leading to further collaborative projects among Member States.

While EDA's remit does not include enforcing action of Ministries of Defence (MoDs), the Consultation Forum will work in a way to facilitate and enable them to develop or adopt the necessary energy-related measures or plans to reduce energy footprint and costs. In this context, EDA, with the support of the European Commission's Directorate-General for Energy (DG ENER) and the Executive Agency for Small and Medium-sized Enterprises (EASME) provides technical advice and guidance to EU MoDs and other defence-related stakeholders to reach sustainable energy objectives.

2. Scope

The **scope of phase III** of the Consultation Forum is to support the MoDs decision-shaping and making to undertake the required measures to reduce energy footprint, save costs and increase energy resilience by exploring the benefits that could be enabled in the defence and security sector from the implementation of the European Commission's:

- Energy Efficiency Directive (EED);
- Renewable Energy Directive (RED);
- Energy Performance of Buildings Directive (EPBD);
- Directive on European Critical Infrastructures (ECI),
- Regulation on security of gas supply;
- Regulation of risk preparedness in the electricity sector, and when relevant, the
- Regulation on the Governance of the Energy Union and Climate Action.

The **third phase is highly** relevant to the **2018-2020 Horizon 2020 Work Programme on Secure, Clean and Efficient Energy**[1], given the focus of the work on:

- energy efficiency, particularly in buildings;
- renewable energy and alternative fuels;
- protection of defence-related critical energy infrastructure (PCEI); and
- cross-cutting energy-related topics (energy management policies and strategies, innovative energy technologies, and identification of financing mechanisms and other eligible funding instruments).

Innovation work-strand

To address the emerging and future challenges in the field of energy as well as to meet the expectations of the Council of the EU and the MoDs, Phase III will identify innovative and smart energy technologies such as intelligent metering system, blockchain, artificial intelligence, digitalisation, big data, sensors, energy management networks, cybersecurity which could help lower the carbon footprint and increase the energy autonomy and operational resilience of the armed forces. Furthermore, emphasis will be given on bringing closer the energy and defence communities, and when appropriate, industry, research technology organisation, and academia. Thematic workshops will be organised to enable more in-depth consideration of project development and upscaling in defence. Particularly, Phase III will introduce a novel model of activities ranging from plenary conferences, including energy technology events and joint defence-energy meetings, to thematic or regional workshops and table-top exercises. *Overall, Phase III is expected to present the defence and security sector with an economic, operational, and strategic opportunity to reduce reliance on fossil fuels and natural gas, progressively minimise energy costs and defence carbon footprint and enhance the operational effectiveness and energy resilience.*

[1] Horizon 2020, Work Programme 2018-2020, 10. Secure, clean and efficient energy, chapter 5. Support to the initiative on sustainable energy in the defence and security sector, pp 163-164, see, https://www.ffg.at/sites/default/files/h2020-wp1820-energy_en.pdf

3. Objectives

The **CF SEDSS phase III** will pursue the following **eight key objectives**:

1. enhance **energy efficiency** and improve the **energy performance of building stocks and fixed infrastructures** (including through the development or acceleration of renovation plans, and address the requirements concerning electro-mobility);

2. promote further the **usability of renewable energy or other alternative sources** in the defence sector (including wind, solar, wave, tidal, biomass, geothermal and renewable energy applicability in military transport);

3. strengthen the **protection and resilience of defence-related critical energy infrastructures** from emerging and future challenges ranging from man-made and natural disasters to hybrid threats, terrorist, and cyber-attacks;

4. identify and evaluate the **implications of the current EU regulatory framework implementation on the defence sector**, in particular with regard to the *Energy Efficiency Directive (EED); Energy Performance of Buildings Directive (EPBD); Renewable Energy Directive (RED); Directive on European Critical Infrastructures (ECI); and the Regulation on security of gas supply; risk preparedness in the electricity sector; and whenever relevant, the Regulation on the Governance of the Energy Union and Climate Action.*

5. develop **defence energy-related policy tools and methodologies** to address common considerations and promote the **implementation of energy management systems** to be applied to defence-related infrastructures and buildings;

6. identify **innovative and smart energy technologies** that could help lower the carbon footprint and, at the same time, increase the energy autonomy and operational resilience of the armed forces;

7. enable the **description and generation of defence-energy related project ideas** (including dual-use synergies within the defence and civilian markets) that can:
    - *act as enablers of military operational capabilities;*
    - *support the MoDs to address common energy challenges or shortfalls at multi-national, regional or cross-border level;*
    - *assist the EU to achieve its strategic objectives on energy sustainability and energy security.*

8. identify and present **existing or new financing mechanisms of defence energy-related topics** as well as EU or other related and applicable **funding instruments** according to the legislative and administrative frameworks that can assist the MoDs and other defence-related stakeholders to **realise their defence-energy related planning** either at the national or multinational level.

4. Structure

Learning from past experiences, and to be able to address the above objectives better as well as to adapt to future energy dynamics, Phase III will introduce a **novel model of activities** ranging from plenary conferences, including energy technology events and joint defence-energy meetings, to thematic or regional workshops and table-top exercises. To **enhance the strategic and operational output of Phase III**, the thematic energy management and finance areas will be covered along with the novel technology category under a new **transversal working group (TWG)**. In this respect, CF SEDSS III will be restructured into the following **four working groups** (see diagrams 1 and 2)[2]:

a) **Working Group 1 – 'Energy Efficiency & Buildings Performance'**, aiming to improve the energy efficiency of the military building stock and fixed infrastructure;

b) **Working Group 2 – 'Renewable Energy Sources'**, aiming to enhance the integration of renewable energy sources in the defence sector (wind, solar, wave, tidal, biomass, geothermal, hydrogen, etc.);

c) **Working Group 3 – 'Protection of Critical Energy Infrastructures'**, aiming to increase the protection and resilience of defence-related critical energy infrastructure using different tools, guidelines, methodologies, vulnerability measurements, risk assessment plans, etc.;

d) **Transversal Working Group** with a primary focus on addressing cross-cutting defence energy-related areas, which are of interest to the other three working groups. To better address these transversal areas, the following sub-themes will be established:

   i. **Policy & Management Observatory** to focus primarily on the energy management policy dimension aiming at helping the MoDs in establishing policies, strategies, processes, roadmaps, methodologies and tools to improve energy management and performance as well as cultivating a green defence energy culture;

   ii. **Technology, Research & Innovation Hub** to address issues, coordinate activities, collect best practices and raise awareness on innovative and smart energy technologies such as intelligent metering system, blockchain, artificial intelligence, digitalisation, big data, sensors, energy management networks, cybersecurity, etc.;

[2] CF SEDSS II (2017-2019) was structured in three main working groups: WG 1: Energy Management including Energy Efficiency (Sub-WG1: Energy Management and Sub-WG2: Energy Efficiency); WG 2: Renewable Energy Sources and Technologies; WG 3: Protection of Critical Energy Infrastructure, and one cross-cutting theme: Finance.

iii. **Financing & Funding Gateway Cell** where the Agency will apply its internal methodology **'IdentiFunding for Energy in Defence'** to review or identify existing and new financing mechanisms or other funding instruments to support the implementation of defence-energy related topics.

Diagram 1. Structure of CF SEDSS

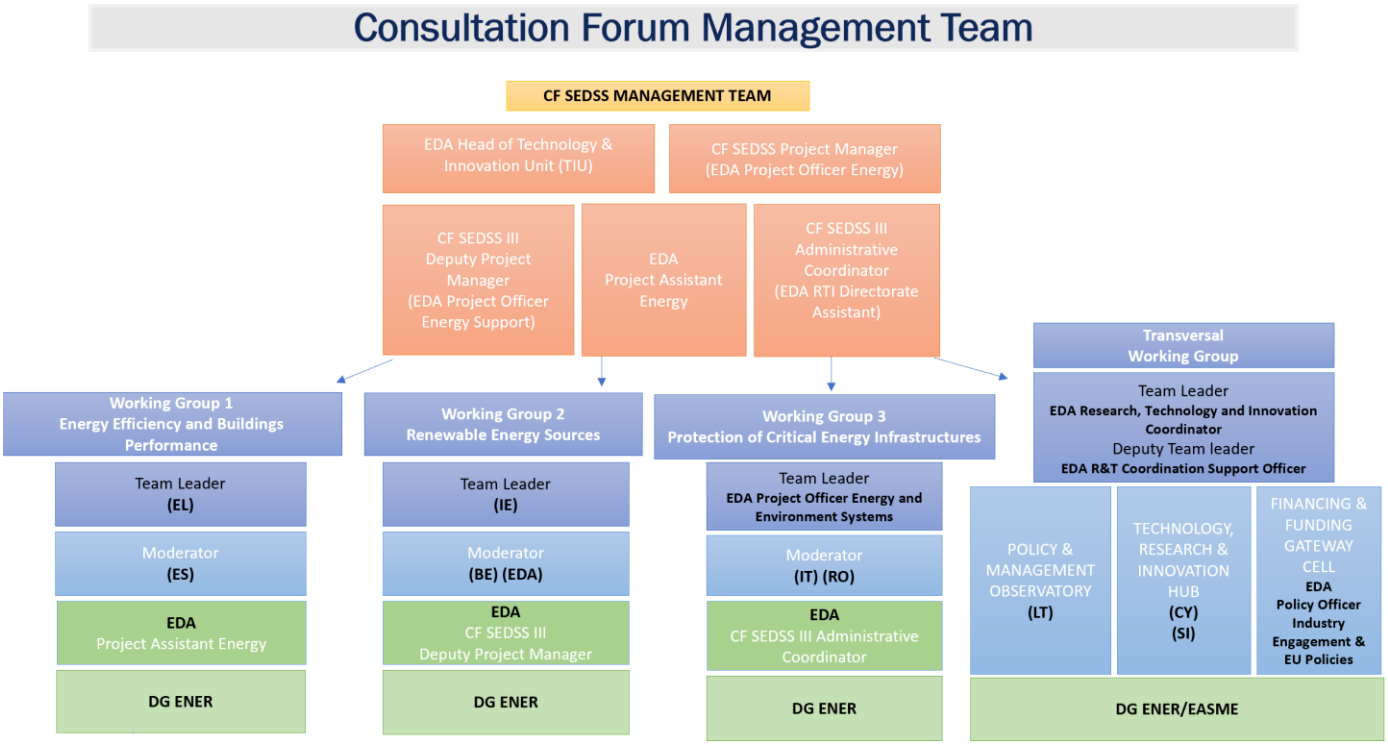
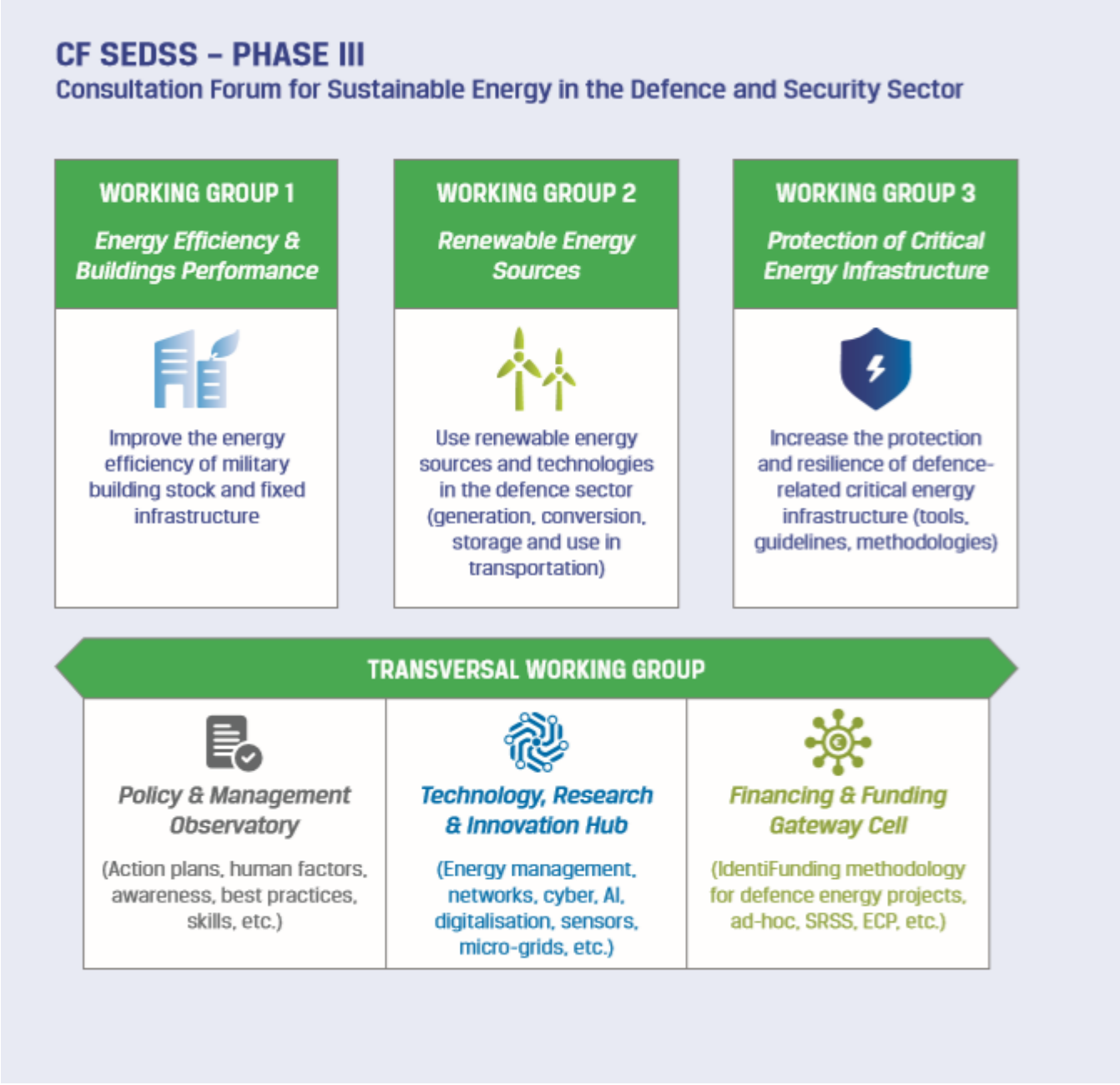


Diagram 2. Structure of CF SEDSS III Working Groups



5. Deliverables

During Phase III, the Consultation Forum **will support the MoDs decision-shaping and making to develop or implement national defence energy strategies** and **undertake the required measures to reduce energy footprint, save costs and increase energy resilience**. In this respect, the Forum, as indicated in the **scope** and the **objectives** aims at **bringing together experts from the defence and energy sectors to share information and best practices to address common defence related energy considerations** as well as to **explore the benefits that could be enabled in support of the European Commission's energy legislation implementation**. As in the past (see deliverables[3] of phases I and II), Phase III will work with the support of the national experts as well as other defence energy-related experts to:

- **develop a guidance on the implementation of EU energy legislation in the defence sector** aiming at supporting the MoDs to:

  i. **identify the implications and benefits** of applying the energy-related legislation in the defence and security sectors and **recommend** good practices enabling the MoDs to implement the defence-related EU energy legislation within the armed forces and the broader defence and security sector;

  ii. identify **possible areas of action** as well as **measures** at the EU level (to be undertaken in the short, medium and long-term) to **assist the EU MoDs** to gradually apply affordable, sustainable and greener sustainable energy models within the armed forces and the broader defence and security sector. In this respect, proposed actions and measures will be provided in the areas of **energy efficiency and buildings performance, RES and PCEI**;

  iii. **address cross-cutting themes** such as **energy management and policy**, **funding and financing instruments** and **innovative energy technologies** (cyber-security, hybrid threats, artificial intelligence, smart energy consumers, digitalisation, sensors, circular economy in defence, threats to the security situation arising from global climate change and environmental risks, etc), in complementarity, whenever relevant, with EDA's related subject working groups (Capability Technology Areas -CapTechs and project teams);

- **develop information sheets on defence energy-related project ideas**, which could be possibly funded by EU's related and applicable funding instruments according to the legislative and administrative rules in force at the specific time or other financing mechanisms including private ones. This deliverable will also consider the tools and methodologies that **could facilitate or lead to the implementation of the legislative energy framework**;

[3] See the deliverables of phase I and II of the Consultation Forum, available at: EDA EDEN web-page: https://www.eda.europa.eu/european-defence-energy-network/phase-i/deliverables and https://www.eda.europa.eu/european-defence-energy-network/phase-ii/deliverables---phase-ii

- **identify existing and new financing mechanisms for defence-energy related topics as well as other eligible and innovative instruments for funding sources** at European level that can lead to the **realisation of the collected project ideas** either at national or multi-national level. Similarly, these options should facilitate the regional or other multi-national collaborations at European level and stimulate investments in defence energy-related topics. In this context, the Agency, with the support of the European Commission, will encourage those MoDs that have not so far included the defence dimension in the **integrated national energy and climate plans (NECPs)** to do so, as this will open the window of further funding/funding opportunities of defence energy-related projects and studies at the national level. EDA will continue supporting interested MoDs to **prepare applications for funding to realise defence energy-related projects**. Currently, EDA supports five projects:
  - ***i.*** *SPEEDUS – Formulation of Standard Procedure to Estimate the Dependency of Large and Complex Civilian & Military Assets with Respect to Public Services;*
  - ***ii.*** *RESHUB - Defence RESilience Hub Network in Europe;*
  - ***iii.*** *Building on the NZEB Concept in the EU Defence Sector,*
  - ***iv.*** *ENSSURE - ENergy Self-Sufficient REsilient military base, and*
  - ***v.*** *Energy Data Analysis.*

- **develop through sub-contracting specific defence energy-related studies** (policy, action plans, guidelines, roadmaps, templates, etc.) to **assist or enable the MoDs to promote sustainable energy in the defence and security actors**. In this respect, the Agency will subcontract specific studies to external experts to address subject areas and priorities of the project such as energy efficiency and performance buildings, RES, PCEI and energy management and policy tools as well as innovative energy technologies. The scope of these studies will be also extended to address regional, cross-border or other multinational (climate security, environmental risks, etc.) specificities. The CF SEDSS management will recommend the working groups to identify the thematic project areas for which they consider that external support is required. To support their work, the **CF SEDSS management presents the following indicative thematic areas** to be considered by the working groups:

  i. Develop **templates** that can be used by the MoDs for addressing/implementing defence-related articles from the **EU directives on energy**. This should give a more realistic/pragmatic view of the full potential of the defence sector to contribute to EU energy and decarbonization targets.

  ii. Develop a **deep analysis of each relevant article of the directives** in order to identify projects aimed at their implementation.

  iii. Provide a **template to the MoDs** based on best practices to establish within the **ministries defence energy tasks with a view of developing national defence strategies, policy or actions plans** to enable them to move towards more affordable end sustainable energy models.

iv. Produce an **assessment on the future consequences of cutting-edge technologies** on the **defence sector** such as e-mobility, artificial intelligence, smart grids, digitalisation, sensors etc.

v. Develop a proposal based on analysis to support the MoDs to **improve the energy efficiency of buildings based on the EPBD** and in a way that will help them to implement energy transition that fits with the wider national planning.

vi. Provide an **evaluation of the operational energy performance of buildings** at the design stage.

vii. Implement analysis and share best practices and practicalities to support **electromobility in the defence sector infrastructure**.

viii. Provide a **thorough technology assessment and investment tools for renewable energy** in defence infrastructure as well as optimum design according to environmental variables.

ix. Develop **templates** that can support the MoDs to **measure and improve the vulnerabilities of defence-related CEI** against terrorist attacks, man-made or natural disasters or hybrid threats;

x. Develop a **decision support system (DSS)** based on constant monitoring and data collection for resilience enhancement and risk.

xi. Support interested MoDs to **develop regional collaboration projects** to address common energy challenges.

xii. Provide analysis and best practices for the **incorporation of green procurement in defence context.**

xiii. Develop an **in-depth regional analysis for the consequences of climate change and environmental risks** in the defence and security sector and providing suggestions for enhancing the resilience of defence-related infrastructures and installations.

xiv. **Develop state-of-the-art report on innovative energy technologies** (i.e. cybersecurity, hybrid threats, artificial intelligence, smart energy consumers, digitalisation, sensors).

xv. Identify the mechanisms that could enable the MoDs **to remove the barriers** (i.e. internal funding, expertise, awareness of decision-makers and defence personnel, energy management information and criteria for external funding) **to achieve the implementation of CF SEDSS III objectives.**

Table 1. Working group key deliverables (2019-2023)

Table 2. Working group key deliverables & indicative timelines (2019-2023)

TYPE	WG1	WG2	WG3	T-WG	Timelines	CF Management	Timelines	Total
1st Cycle: June 2020 – September 2021								
Information Sheet –defence energy project ideas **(Part I)**	4	4	4	3	**By end of September 2021**	Review	By end October 2021	15
Studies –subcontracting **(Part I)**	1	1	1	1	**By end of September 2021**	1	By end October 2021	5
Guidance on the implementation **(Part I)**	Inputs	Inputs	Inputs	Inputs	**By end of September 2021**	Review	By end October 2021	-
2nd Cycle: October 2021 – February 2023 *								
Information Sheet –defence energy project ideas **(Part II)**	4	4	4	3	**By end of February 2023**	Review	By end of February 2023	15
Studies –subcontracting **(Part II)**	1	1	1	2	**By end of February 2023**	2	By end of February 2023	7
Guidance on the implementation **(Part II)**	Inputs	Inputs	Inputs	Inputs	**By end of February 2023**	Review	By end of February 2023	-
* Timelines of second cycle could change if the project will be extended								

6. Events, invitations & reimbursements

Having learned from the past experiences, and in order to better address the above objectives while adapting to the future energy dynamics, the Phase III will introduce novel formations of meetings and activities ranging from plenary conferences, including energy technology events and joint defence and energy meetings, to thematic or regional workshops and table-top exercises. To ensure the timely and effective implementation of the required actions of Phase III, the Forum will **develop a comprehensive events organisation guideline** and will organise regular moderators coordination and managements meetings as well as other ad-hoc expert meetings. To support the CF SEDSS III working groups to accomplish their objectives, elaborate and conclude their deliverables, as well as enhance the interaction of the defence community with related energy communities, including research technology organisations, industry and academia, **the Agency intends to organise** approximately **46 meetings and events, as presented in diagram 2. The key events are the following:**

- Up to **7 plenary conferences** including **2** back-to-back **energy technology conferences**;
- Up to **2 joint defence energy expert meetings**.
- Up to **8 thematic workshops** (2 per working group).

Diagram 2 – CF SEDSS III key events

6.1. Meetings & invitations

Plenary conferences & back-to-back energy technology events

- Each MoD will be invited to **designate up to four experts –** one for each working group **–** when attending the plenary conferences. The experts can be either **military or civilian staff of the MoDs or experts from the academia or think tanks associated with the MoDs** or other **national governmental departments** (i.e. energy, interior, environment, climate, finance etc.) dealing with energy topics. Team leaders and moderators are not counted as part of the four delegates to be designated to the four WGs. MoDs are encouraged to **designate the same experts for all the CF SEDSS Phase III events** to ensure business continuity.

- To ensure that the defence sector will be able to adapt to the dynamics of energy, the Agency will organise up to two **energy technology solutions** events **back to back to the two of the seven plenary conferences**. This will be an opportunity to engage the CF SEDSS III community with industry, academia and other RTOs.

Joint defence energy expert group meetings

- The scope of the **joint defence energy experts meetings** is to bring closer the defence and energy communities of the EU Member States to share best practices, experience and knowledge on how to better apply sustainable energy in the defence and security sector. This will be the **first joint meeting that has ever been organised** in the context of the EU and the support of the EU Member States is vital in enabling the two communities to establish contacts and create synergies.

- EU MoDs will be invited to attend this meeting with one delegate, preferably the national contact point (NCP) to the CF SEDSS or any other (senior) representative dealing with defence-energy related topics. This invitation will be also extended to the CF SEDSS III team leaders and moderators as well as to the national competent authorities (NCAs) coming from the Ministries of Energy, Interior, Finance etc on a cases by case assessment.

Thematic working group workshops

- These separate WG thematic workshops will be organised to ensure continuity among the plenary conferences and to bring closer the MoDs to relevant experts from industry, academia and RTOs. The workshops will focus on the scope of each working group and promote the multinational sharing of best practices and experiences that can be reduplicated (i.e. the development of national strategy in energy, an integrated energy management tool, etc.). During these workshops, the WG members will have the opportunity to explore potential cross-border or regional collaboration to address better common energy challenges or to organise a table-top exercise (i.e. to explore how to better protect defence-related critical energy infrastructures against hybrid

threats or other malicious risks. The JRC has already offered to support EDA in organising this kind of exercise).

- EU MoDs will be invited to participate in these workshops with the delegate that participates in the respective WG. Interested MoDs can host the workshop and arrange for instance an on-site visit to an energy installation or support the co-organisation of a table-top exercise.

6.2. Invitations to third states & other defence energy-related stakeholders

- Further to the approval of EDA's participating Member States (pMS), the Agency will extend invitations (on case by case assessment) to other EU non-EDA pMS, third countries and entities that are related to the CF SEDSS III activities. EDA will cover the expenses of the participants from each third country or organisation based on budget availability and relevance to the specific event to which they will be invited.

- While priority will be given to national delegations, there may be several places available for industry, small and medium enterprises (SMEs), research and technology organizations (RTOs), and academy representatives. Nevertheless, their travel and accommodation costs will not be covered by the Consultation Forum budget, unless individuals are invited to present at CF III events or contribute to the working group's deliverables or other associated tasks due to their expertise.

6.3. Reimbursements

Participants in the activities (conferences, meetings, workshops, etc.) of the third phase of the CF SEDSS will be reimbursed from the budget of the European Union's Horizon 2020 research and innovation programme under grant agreement No 882171 in line with EDA's reimbursement procedures.

- In general, delegates who participate in CF SEDSS III-related events (conferences, meetings, workshops, etc.) are asked to **submit their claim for reimbursement of travel and accommodation expenses** after the events.

- The **reimbursement forms** are available on the **EDEN EDA Collaboration Platform (EC ECP**) via this link (click "**Phase III**", folder: **1. Reimbursement forms in the workspace**).

- The relevant forms must be filled in and submitted to the Admin Support staff (email eden@eda.europa.eu) together with receipts and tickets. Kindly note that in order for the forms to be valid, they need to be hand signed.

7. Profiles of CF SEDSS III members

Member States (MoDs/Armed Forces) are invited to attend the CF SEDSS III activities (conference, meetings, workshops, etc.) with the suitable experts per the thematic areas and subjects of the working groups of the Consultation Forum. MoDs are also encouraged to designate the same experts, as the primary objective of the Forum is to establish a defence energy-related community. When selecting the delegates, the proposed profiles in table 3 should be taken into account.

Table 3. Profiles of Suitable Experts/Representatives for the CF SEDSS III.

Working groups	WG 1 Energy Efficiency & Buildings Performance	WG 2 Renewable Energy Sources	WG 3 Protection of Critical Energy Infrastructure
Target audience per field **Profiles**	Engineers, designers, project managers, planners, and others who have the expertise to improve the efficiency of energy-using systems including building stock and fixed infrastructure.	Engineers, designers, project managers, planners, and others who have the expertise to explore the potential of renewable energy in the defence sector (generation, conversion, storage and use in transportation).	Engineers, designers, project managers, planners and practitioners from the defence and the relevant civil sectors (academia & industry) who have the expertise to enhance the resilience of defence-related critical energy infrastructures.
Transversal Working Group (TWG)			
Policy & Management Observatory	**Technology, Research & Innovation Hub**		**Financing & Funding Gateway Cell**
Target audience per field **Profiles**	• The above subject areas of this group are cross-cutting and therefore are related with the other three working groups (WG-1, WG-2 and WG-3). • The delegate to the Transversal group should be the one that has an **overview of the defence energy-related activities** within the Ministry and in principle he/she will be the one to coordinate the national experts attending the other three working groups. • It is recommended that this **group is attended by a policy-maker, strategist, or other (senior) delegate (for instance the MoD national contact point to the CF SEDSS), who has a holistic view of energy within their organisation** and is involved in energy management, energy technologies & research and funding instruments & financing mechanisms.		

PART B - WORKING GROUPS (RESPONSIBILITIES & ACTIVITIES)

8. Working Group 1 "Energy Efficiency and Building Performance"

8.1. Scope

The scope of this WG 1 **on Energy Efficiency and Building Performance** is to explore how to better assist the MoDs to **improve the energy efficiency of military building stock and fixed infrastructure**. The mechanism to achieve this task is through developing sub-themes based on experience, outcomes, and shortfalls identification from CF SEDSS phases I and II and which will address primarily the annotated articles from the cast Energy Efficiency Directive (EED) – EU 2018/2002 – and applicable articles from the cast Energy Performance in Buildings Directive (EPBD) – EU 2018/844 in relation to broader energy challenges and opportunities.

8.2. Objectives

The **CF SEDSS Working Group 1** is proposed to pursue the following **ten (10) objectives**:

1) examine energy efficiency in relation to infrastructure primarily, as energy in buildings and fixed infrastructure constitutes a considerable portion of energy used by the armed forces and in the EU as a whole;

2) explore the applicability of energy efficiency in military sites and camps on EU territory and seek to learn lessons from EU-led military overseas operational deployments;

3) explore in line with the EPBD the electro-mobility requirements for new buildings and those undergoing major renovations;

4) share best practices, knowledge and information about the appropriate measures that could accelerate the rate of building renovation of military sites towards more energy efficient systems and strengthening the energy performance of new buildings, making them smarter;

5) develop recommendations to the MoDs to develop defence energy strategies including plans of actions to achieve long-term energy efficiency and reduced energy consumption without any compromise to the operational objectives, assisting, at the same time, in the implementation of the EU energy targets;

6) share the best practices of those MoDs that have already developed and started implementing their energy efficiency plan and building renovation strategy plan and to encourage the remaining MoDs to develop similar plans;

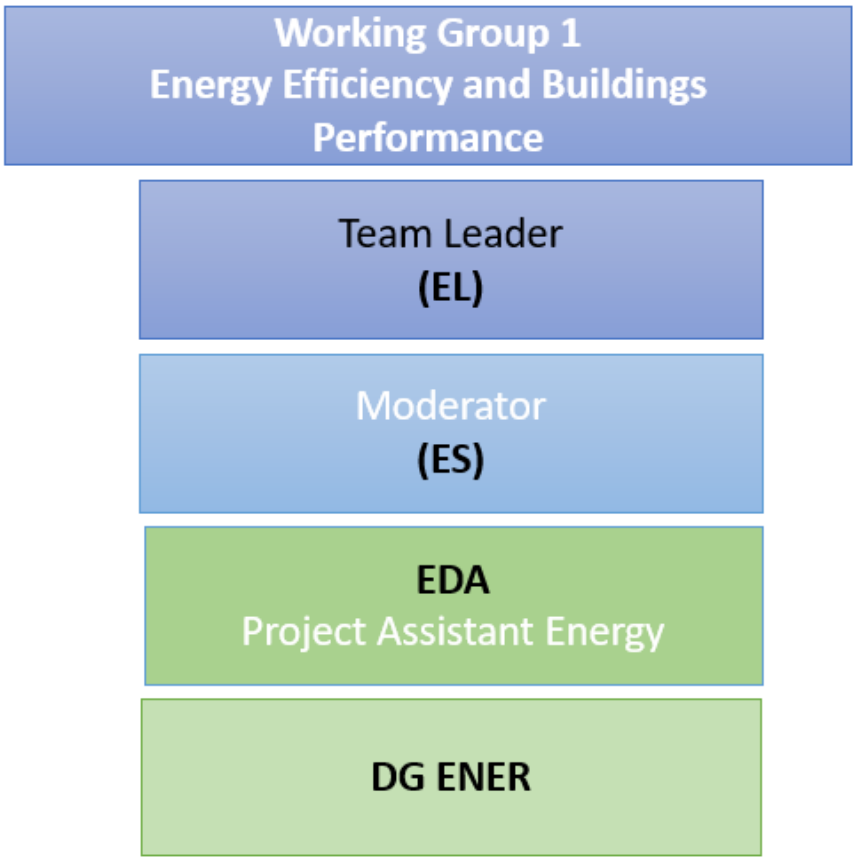
7) explore how to better support the MoDs to utilise the more sophisticated data management tools that are available and build automation and control systems. In this respect, the development of national defence long-term plans will allow investment in small steps towards full automation and control;

8) produce guidelines to assist the MoDs to improve the energy efficiency of military building stock and fixed infrastructure;

9) develop guidelines or other energy-related studies for raising awareness and increase knowledge of the significance of promoting energy efficiency in the EU defence and security sector;

10) describe and generate defence energy-related projects / best practices; including dual-use synergies within the defence and civilian markets (up to 8 information sheets).

8.3. Structure



8.4. Deliverables

The WG-1 is invited to develop the below key deliverables in two cycles:

- **1st cycle**: June 2020 – September 2021
- **2nd cycle**: October 2021 – February 2023

TYPE	Items	Timelines
1st cycle: June 2020 – September 2021		
Working Group 1 fact sheet	1	**Done**
Information sheet – defence energy project ideas **(Part I)**	4	**end Sept of 2021**
Studies – subcontracting **(Part I)**	1	**end Sept of 2021**
Guidance on the implementation **(Part I)**	Inputs	**end Sept of 2021**
2nd cycle: October 2021 – February 2023		
Information sheet – defence energy project ideas **(Part II)**	4	**end of Feb 2023**
Studies –subcontracting **(Part II)**	1	**end of Feb 2023**
Guidance on the implementation **(Part II)**	Inputs	**end of Feb 2023**

Note: for more information about each deliverable, please see **Part A, section 5. Deliverables**.

9. Working Group 2. "Renewable Energy Sources"

9.1 Scope

The scope of this working group is to explore how to better assist the MoDs in enhancing **the use of renewable energy sources (RES) in the defence sector**. In this respect, the group will explore feasible options to contribute to European and national energy security by reducing dependence on fossil fuels. This task will be achieved by a**ddressing the use of renewable sources of energy, production of renewable energy** (wind, solar, wave, tidal, biomass, geothermal, hydrogen, hybrid systems, etc.), **use of defence land for generation of renewable energy, energy conversion, energy storage, energy used in transport and renewable energy applicability in military transport.** These different areas will be addressed by the development of sub-themes based on the outcomes and priorities identified in the previous phases and will build on the progress made, while seeking to meet shortfalls exposed through gap and risk analyses. Among other areas, during the CF SEDSS III sessions the group will be invited to address the annotated articles from the Renewable Energy Directive (RES) – EU 2018/2001 – and applicable articles from the Energy Efficiency Directive.

Considering that during the previous phases it was found that the MoDs have different perspectives of the utility of RES to defence and that this generally produced less activity in their countries (limited budgets, lack of objective data, both benchmarking and within business cases) the RES Working Group will try in Phase III to fill this gap and to enable progress on RES penetration. In this respect, the group will further explore cost effective options both nationally or in collaboration with other MoDs which can lead to the development of concrete collaborative project ideas and will present innovative processes such as Energy Performance Contracting (EPC) which can offer an opportunity to decrease cost and transfer risk.

9.2 Objectives

The **CF SEDSS Working Group 2** is proposed to pursue the following **ten (10) objectives**:

1) develop and/or review frameworks for delivery of RES projects in both national and EU contexts including appropriate procurement procedures, collaborative processes, funding mechanisms and consideration of EPCs;

2) examine feasibility of applying existing and emerging RES technologies across national defence sectors, including by implementing pilot projects where relevant;

3) deal with the financial delivery and technical aspects of deploying renewable energy in the defence context (including the examination of contractual and legal considerations);

4) address the topics of fuels and mobility with the support of the civilian counterparts in the concerted actions on RES;

5) develop guidelines or other studies for raising awareness and increase knowledge of the significance of the integration of RES in the EU defence and security sector;

6) increase RES awareness and skills within armed forces to enhance operational effectiveness;

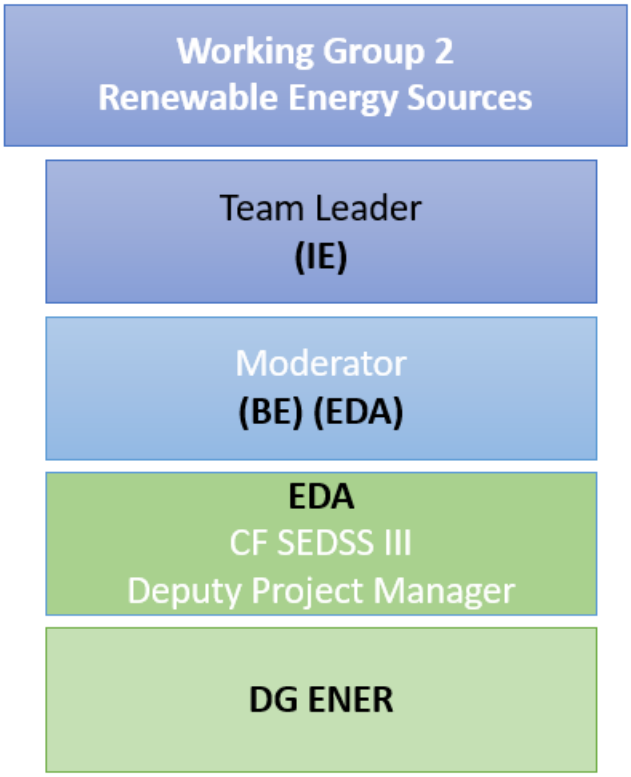
7) support the MoDs to develop RES strategy, policy or actions plans by taking into account the RES Directive with the view of enabling them progressively to use RES in the defence sector and increase resilience;

8) develop an implementation plan for RES in the defence sector, consistent with NATO approaches to RES where applicable;

9) identify how RES can contribute to securing energy strategic autonomy for the European defence and security sector;

10) describe and generate defence energy-related projects / best practices; including dual-use synergies within the defence and civilian markets (up to 8 information sheets).

9.3. Structure



9.4. Deliverables

The WG-2 is invited to develop the below key deliverables in two cycles:

- **1st cycle**: June 2020 – September 2021
- **2nd cycle**: October 2021 – February 2023

TYPE	Items	Timelines
1st cycle: June 2020 – September 2021		
Working Group 1 fact sheet	1	**Done**
Information sheet – defence energy project ideas **(Part I)**	4	**end Sept of 2021**
Studies – subcontracting **(Part I)**	1	**end Sept of 2021**
Guidance on the implementation **(Part I)**	Inputs	**end Sept of 2021**
2nd cycle: October 2021 – February 2022		
Information sheet – defence energy project ideas **(Part II)**	4	**end of Feb 2023**
Studies –subcontracting **(Part II)**	1	**end of Feb 2023**
Guidance on the implementation **(Part II)**	Inputs	**end of Feb 2023**

Note: for more information about each deliverable, please see Part A, **section 5. Deliverables**.

10. Working Group 3. "Protection of Critical Energy Infrastructures"

10.1. Scope

The scope of this working group is to explore how to better assist MoDs in **increasing the protection and resilience of defence-related critical energy infrastructures (CEI)** and associated networks, using different tools, guidelines, methodologies, vulnerability measurements, risk assessment or emergency plans etc. Building on the momentum developed through the Phase II, this working group will take stock of the work that has been done in the **position paper on the PCEI and the document on the protection of defence-related CEI against hybrid threats,** and whenever relevant it will ensure synergies of this work with the EDA Project Team on Cyber Defence and Cyber R&T. In this context, **the group will organise a thematic workshop to develop templates that can be used by the MoDs to test their risk assessment or emergency plans and vulnerabilities. With the support of the JRC and DG ENER, a table-top exercise is foreseen to be organised for exploring the dependency of a defence-related CEI against hybrid threats or other hazards.** The above tasks will be achieved through developing sub-themes based on experience and outcomes from the previous phases and by addressing, among other areas, the annotated articles from the Energy Efficiency Directive and the European Critical Infrastructures Directive – 2008/114/EC – or the revised directive when approved and the regulation on gas security of supply.

10.2. Objectives

Critical infrastructures do not operate as isolated systems and the continuity of their services is quite dependent on the proper operations of other infrastructures and networks. If one of their inputs fails, the critical infrastructure cannot optimally provide its own service. In addition, if these dependencies are bi-directional, meaning the services are mutually dependent on each other, these linkages are called interdependencies. These complex relationships mean that a disturbance in the normal operations of one critical infrastructure can impact other critical infrastructures. In this context, the **CF SEDSS Working Group 3** is proposed to pursue the following **seven (7) objectives**:

1) include the development of protection from natural disasters, terrorist or cyber-attacks, and criminal activity as well as the evolution of threats driven by the development of smart grids or the implications of climate change to infrastructures, networks and installations;

2) explore how to contribute better in preventing and managing crisis at a cross-border level with regards to the gas security of supply (mostly Regulation 2017/1938);

3) identify how to contribute to enhancing risk preparedness in the electricity sector (mostly Regulation 2019/941);

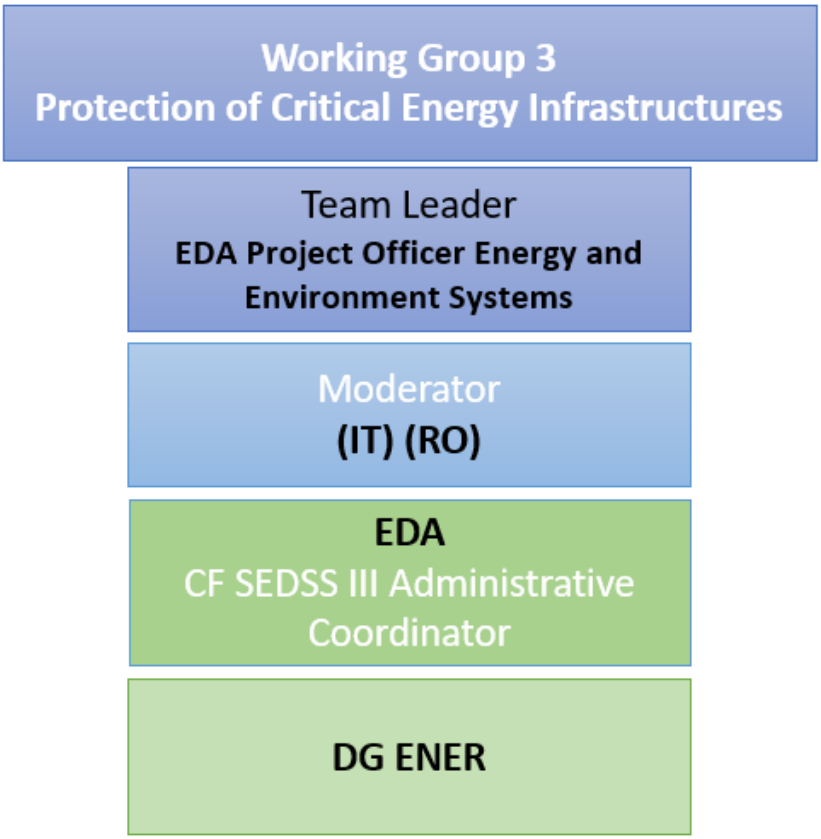
4) develop guidelines or other studies for raising awareness and increase knowledge of the significance of the PCEI in the EU defence and security sector;

5) identify how PCEI contributes to securing energy strategic autonomy for the European defence and security sector. In this respect, the group will extend its focus on energy security and resilience of networks, and energy diplomacy including to support the implementation of existing *acquis* in/with the defence sector.

6) considering that security is a critical success factor in the transition towards sustainable energy models, the objective will be to improve the resilience of the infrastructure energy network, which is important for the armed forces. In this respect, the PCEI WG-3 will conduct a survey on the involvement of the MoDs on the above matters;

7) support the MoDs to address the energy-related challenges in this field, the PCEI WG-3 will describe and generate defence energy-related projects / best practices; including dual-use synergies within the defence and civilian markets (up to 8 information sheets).

10.3. Structure



10.4. Deliverables

The WG-3 is invited to develop the below key deliverables in two cycles:

- **1st cycle**: June 2020 – September 2021
- **2nd cycle**: October 2021 – February 2023

TYPE	Items	Timelines
1st cycle: June 2020 – September 2021		
Working Group 1 fact sheet	1	**Done**
Information sheet – defence energy project ideas **(Part I)**	4	**end Sept of 2021**
Studies – subcontracting **(Part I)**	1	**end Sept of 2021**
Guidance on the implementation **(Part I)**	Inputs	**end Sept of 2021**
2nd cycle: October 2021 – February 2023		
Information sheet – defence energy project ideas **(Part II)**	4	**end of Feb 2023**
Studies –subcontracting **(Part II)**	1	**end of Feb 2023**
Guidance on the implementation **(Part II)**	Inputs	**end of Feb 2023**

Note: for more information about each deliverable, please see Part A, **section 5. Deliverables**.

11. Transversal Working Group

11.1. Scope

The **scope of the transversal working group** is specific for both the group as a whole and for the individual sub-groups of which it is comprised. It is important to stress that the transversal group was introduced to **fill a gap that was identified in phases I and II of the CF SEDSS**. In other words, the transversal group was added to **enhance collaboration and address cross-cutting areas of mutual interest of the three working groups,** such as the innovative energy technologies, energy-related policy and management as well as financing mechanisms and funding instruments including current and emerging opportunities. The group will also stand ready to **address any other potential areas** beyond the identified ones, such as the importance for defence to consider the climate change dimension (environmental risks) and its link with the security dimension, circular economy in defence, etc.

To address the above transversal areas, the following sub-themes will be established:

- **Policy & Management Observatory:**
  to focus primarily on the energy management policy dimension aiming at helping the MoDs to assist the defence sector in establishing policies, strategies, processes, roadmaps, methodologies and tools to improve energy management and performance as well as cultivating green defence energy culture;

- **Technology, Research & Innovation Hub**:
  to address issues, coordinate activities, collect best practices and raise awareness on innovative and smart energy technologies such as intelligent metering system, blockchain, artificial intelligence, digitalisation, big data, sensors, energy management networks, cybersecurity, etc.;

- **Financing & Funding Gateway Cell**:
  *where the Agency will apply its internal methodology **"IdentiFunding for Energy in Defence"** to review or identify existing and new financing mechanisms or other funding instruments to support the implementation of defence-energy related topics.*

11.2. Objectives

The sub-themes of the **CF SEDSS traversal working group** are proposed to pursue the following **objectives**:

11.2.1. Policy and Management Observatory

The main focus and aim of the **PMO sub-group** is on the energy management policy dimension. The focus is to be put on enabling the MoD's experts to address topics related to the human factors and behaviour

as well as cultivating an energy culture in the defence sector (change mindsets). The aim of this Observatory is also to encourage the MoDs to promote the application of smart integrated energy management systems in the military sites, to move towards the development and implementation of EPCs, including appropriate energy performance indicators, to set energy targets, to promote energy monitoring and modelling to facilitate the sharing of best practices (for instance the establishment of energy task force within the MoDs) as well to raise awareness of the importance of applying sustainable energy in the defence and security sectors.

The **Policy & Management Observatory** will work with the **CF Management Team** and the **EDA PO on Energy & Environment Working Group** to collect and analyse through **a sub-contracting study** the MoD's defence energy-related data in line with **the indicative performance indicators** (based on the CF III grant agreement), including among others:

i. the existing and future number of defence policies/strategies/plans that MoDs developed or will develop to address energy considerations including through the use of Environmental or Energy Management Systems (EMS or EnMS, PCEI);

ii. the number of existing and future European multinational collaborative actions in place which address energy considerations in the fields of energy efficiency, RES, PCEI or other cross-cutting subjects (i.e. energy management, hybrid threats, climate security, etc.);

iii. the number of existing and future defence related energy infrastructure projects in place (including ongoing/planned projects and physical infrastructures).

The **Policy & Management Observatory is also invited to:**

- create through a sub-contracting study the **profiles** of the different of EU MoDs with aim at presenting the established functions and the tools they use to address energy considerations in the areas of energy efficiency and the energy performance of buildings, renewable energy sources, and the protection of critical energy infrastructures.

- investigate through a sub-contracting study the potential establishment of an **EU defence energy-related repository & observatory** including terms of reference and appropriate structure, if relevant.

11.2.2. Technology, Research & Innovation Hub

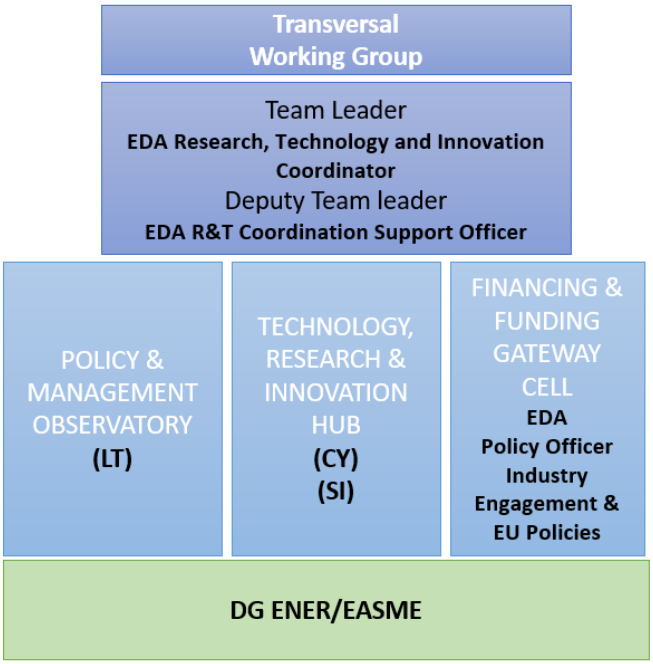
The **TR&I hub** will deal among others with the technology side of energy efficiency, RES and PCEI concentrating primarily on energy in buildings and fixed infrastructure. The aim of this hub is to contribute to the organisation of the Energy Technology Solutions events to be held in the context of the two CF SEDSS III plenary conferences. In essence, the Hub will collect, analyse and share information about the emerging smart energy technologies that if applied by the defence sector will have a positive impact in

minimising energy footprint. To this respect, the Hub will enable the MoDs and other defence energy-related stakeholders to explore the broadening of the scope of energy efficiency plans and interventions to address both technology and cultural change together, in order to exploit synergies and realise their full untapped potential.

11.3.3 Financing & Funding Gateway Cell

The aim of this subgroup is to provide guidance (whenever relevant), with the support of EDA's contractor, on how to further improve the project ideas and share tips to get funding for the projects based on best practices. This Cell will also act as the interface with representatives and experts from different entities such as the SRSP, EIB, LIFE programme etc., and will coordinate the collaboration with the working groups. One of the key objectives of the Cell is to investigate, through an analysis, the bottlenecks that need to be removed or the necessary amendments that are required to be made to allow the defence community to access financing or other EU-funding opportunities as well as to provide recommendations on how to address them. For the purpose of the project, this Cell will use the internal methodology of "*IdentiFunding for Energy in Defence*", to identify existing and new financing mechanisms (including private or public) that will support the implementation of defence-energy-related topics as well as match each CF SEDSS III project idea with a wide range of potential eligible funding sources at the European level.

11.3 Structure



11.4. Deliverables

The TWG is invited to develop the below key deliverables in two cycles:

- **1st cycle**: June 2020 – September 2021
- **2nd cycle**: October 2021 – February 2023

TYPE	Items	Timelines
1st cycle: June 2020 – September 2021		
Transversal working group 2 fact sheet	1	**Done**
Information sheet – defence energy project ideas **(Part I)**	3	**end Sept of 2021**
Studies – subcontracting **(Part I)**	1	**end Sept of 2021**
Guidance on the implementation **(Part I)**	Inputs	**end Sept of 2021**
2nd cycle: October 2021 – February 2023		
Information sheet – defence energy project ideas **(Part II)**	3	**end of Feb 2023**
Studies – subcontracting **(Part II)**	2	**end of Feb 2023**
Guidance on the implementation **(Part II)**	Inputs	**end of Feb 2023**

Note: for more information about each deliverable, please see Part A, **section 5. Deliverables**.

PART C - DISSEMINATION AND COMMUNICATION ACTIVITIES

12.1. Dissemination and Communication Plan

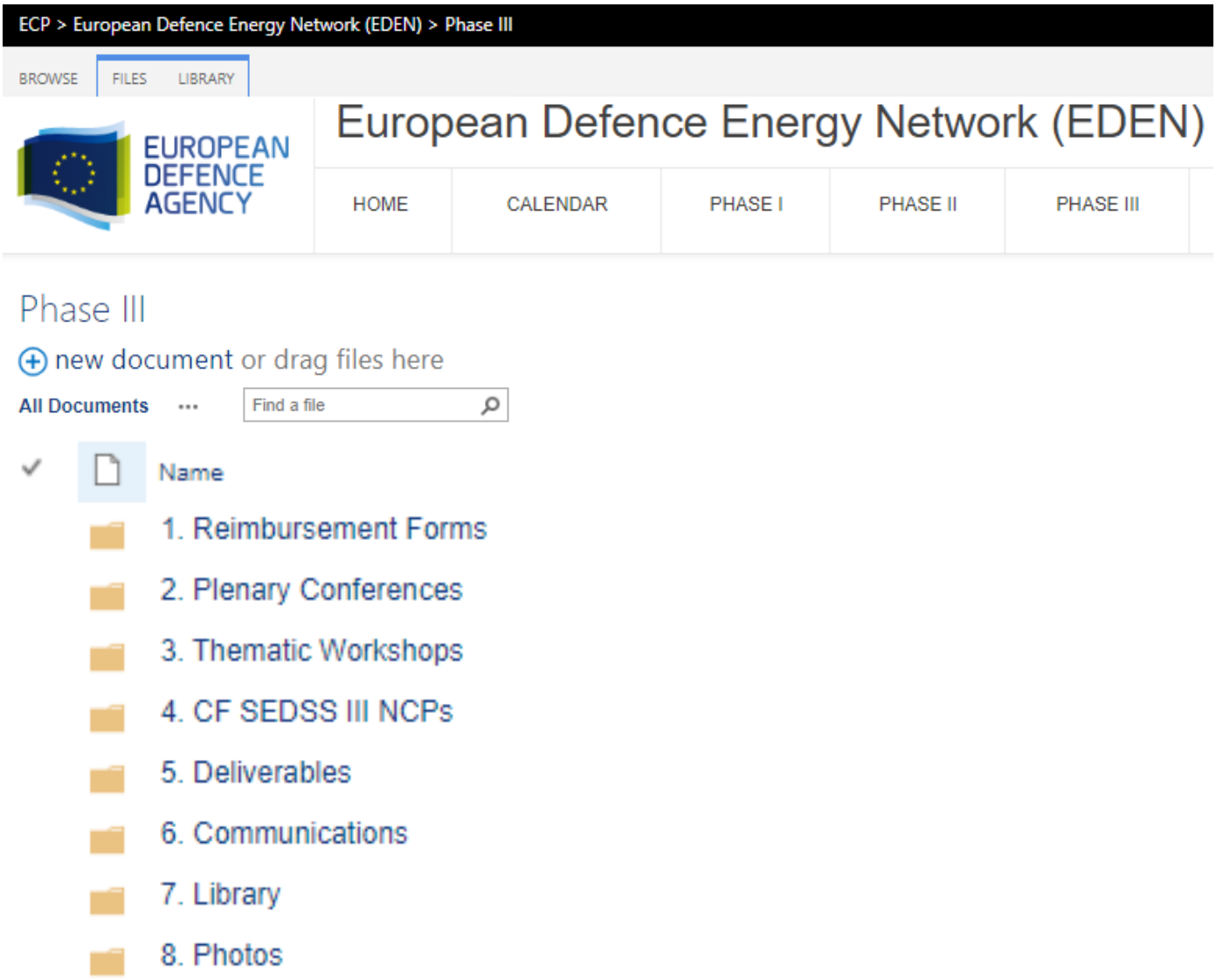
The CF SEDSS III management team will develop a Dissemination and Communication Plan by December 2019 to ensure the effective dissemination and communication of the project activities, objectives and deliverables to different target groups and the general public, whenever appropriate. This Plan will also aim at raising awareness of the positive impact of the project in assisting the MoDs as well as other defence-related stakeholders to promote sustainable energy in the defence and security sector further. In this respect, the CF management team, with the support of EDA's Media and Communication Unit (MCU), and whenever needed, the Information and Technology (IT) unit, will use several tools, such as the CF SEDSS website, EDA's Collaboration Platform, twitter, LinkedIn, etc.

12.2. CF SEDSS Website

https://eda.europa.eu/eden

12.3. CF SEDSS EDA Collaboration Platform (ECP)

https://ecp.eda.europa.eu/R/European_Defence_Energy_Network_EDEN/Pages/Home.aspx


ECP > European Defence Energy Network (EDEN) > Phase III
BROWSE
FILES
LIBRARY
EUROPEAN DEFENCE AGENCY
European Defence Energy Network (EDEN)
HOME
CALENDAR
PHASE I
PHASE II
PHASE III
Phase III
new document or drag files here
All Documents
Find a file
Name
1. Reimbursement Forms
2. Plenary Conferences
3. Thematic Workshops
4. CF SEDSS III NCPs
5. Deliverables
6. Communications
7. Library
8. Photos

12.4. Social media

EDA Twitter:

https://twitter.com/EUDefenceAgency?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor

Please use the **Twitter hashtags** below for the **Consultation Forum** to help us to share news about the CF SEDSS and the work of the working groups:

- **#CFSEDSS**
- **#sustainabledefence**

Team leaders and moderators are invited to urge their WG members to use such **hashtags** when **advertising the Consultation Forum** and their related activities on social media (**Twitter & LinkedIn**).

Consultation Forum for Sustainable Energy in the Defence and Security Sector Phase III (CF SEDSS III)

EUROPEAN DEFENCE AGENCY | European Defence Energy Network

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