

**To: ETSI MEMBERS, OBSERVERS AND COUNSELLORS**

**Subject: Call for additional expertise in Specialist Task Force STF 516 to perform activities for Standardization Mandate M/462 addressed to CEN, CENELEC and ETSI in the field of ICT to enable efficient energy use in fixed and mobile information and communication networks - Phase 2**

Dear Madam,  
Dear Sir,

ETSI is releasing this Call for Expertise (CfE) to select additional Companies or Organizations (hereinafter referred as "applicants") to contribute to perform the tasks assigned to Specialist Task Force (STF) 516, as defined in the Terms of Reference (ToR) of [Annex A](#).

The STF has been set-up in July 2016 and will continue until May 2018. In the course of the activity, it has been identified the need to make available specific expertise that is essential to fulfil some of the tasks.

The goal of this CfE is to receive proposals from applicants having the necessary competence to contribute to the deliverables listed in [Annex B](#) and agree with them on the most efficient approach to achieve the objective defined therein.

I take your attention, in particular, on the specific qualification profile required for each deliverable that is presented in the relevant table of Annex B. We would also appreciate that the applicants provide their views on the methodology for the execution of the tasks. The Terms and Conditions to submit proposals are provided in [Annex C](#).

Proposals must be submitted before **8 November 2016**, using the WEB application on the ETSI Portal at the following address: <https://portal.etsi.org/stf/OpenCallForExperts>.


Non ETSI Members are entitled to answer this CfE, with the support of an ETSI Member (including Observers and Associate). In this case, the proposal must be submitted by the Official Contact of the ETSI Member.

As soon as possible after the deadline, the Officials of the relevant TCs and the ETSI Secretariat will draw up a short list of potentially suitable applications. The representatives of the pre-selected applicants will be invited to present and discuss their proposal with ETSI.

Yours faithfully,

Luis Jorge Romero Saro  
ETSI Director General

## Annex A Terms of Reference STF516 (TCsATTM, EE, CABLE)Activities for Mandate M/462 “Standardization mandate addressed to CEN, CENELEC and ETSI in the field of ICT to enable efficient energy use in fixed and mobile information and communication networks” – Phase 2

	<b>ToR STF516 (M/462)</b>
	Version: 0.3
	Author: ETSI proposal – Date:4 April 2016
	Last updated by: Alberto Berrini – Date:9 September 2016
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### Summary information

Approval status	Specific Agreement SA/ETSI/GROW/462/2015-06 (signed by EC/EFTA and ETSI)
Funding	<b>Maximum budget: 371 490 €</b>
Time scale	June 2016 to end May 2018

## Part I – Policy relevance and expected market impact

### 1 Policy relevance

Information and communication technologies (ICTs) now penetrate all parts of society. They bring efficiency benefits to businesses and organizations, and new lifestyle options for individuals. Economic evidence confirms that ICTs drive growth and improve competitiveness. As standardization is one of main tools to ensure efficient ICT development the European Commission issued the Mandate M/462 and provided the further support via the EU Rolling Plan for ICT Standardization (2015).

Europe's ICT infrastructure is developing rapidly, due to the advance of the single market, the liberalisation and deregulation of telecommunication policies, and the continuous restructuring of big market players that see global opportunities in the developing Information Society.

The booming developments in electronic commerce and the prospects for business development hold the promise of a world-class information infrastructure in Europe, led by market considerations. Convergence between digital technologies is also accelerating bandwidth demand.

The escalation in bandwidth demand is driving the need in all countries to expand telecommunications solutions, in general by using optical fibre and other high-capacity technologies for the network backbone (the core network) and a wider range of technologies for the access networks (from the closest radio base station or fixed subscriber unit to the client device), including various fixed technologies (VDSL2 for copper, GPON & 10GPON for optical, DOCSIS 2 for cable, power-line, etc.), and wireless technologies (GSM, UMTS, HSPA, LTE, LTE-Advanced, Wi-Fi, UWB, etc.).

In this context, it is imperative that the main ICT actors implement sustainable effective general engineering of fixed and mobile broadband ITN equipment and associated sites in order to improve energy consumption efficiency while proposing essential ICT solutions. To guide this engineering, it is essential that metrics, assessment methods and Key Performance Indicators (Global KPIs and per ITN equipment) are defined to monitor energy efficiency.

Furthermore, to support the environmental sustainability, methodologies are required to reduce end-of-life environmental impacts.

In order to provide a multi-annual overview of the needs for preliminary or complementary ICT standardization activities to undertake in support of the EU policy activities, the European Commission

provides the EU Rolling Plan for ICT Standardization in collaboration with the European Multi-Stakeholder Platform on ICT Standardization. The current Rolling Plan (2015) describes standardization needs, ongoing activities and a progress report in the ICT Environmental Impact domain. In a sub-part (C.2) "ongoing standards developments", the Rolling Plan takes into account EC Mandate M/462 and some activities directly connected to this.

This proposed action is in response to the European Commission's Mandate M/462. This proposal reflects the tasks required under Phase 2 of the mandate.

M/462 requests the ESOs to deliver standards to enable efficient energy use, now considered as energy management, in fixed and mobile information and communication networks and their associated applications, facilities and infrastructures at both the network and subscriber level. This technical proposal refers to proposed actions required in order to fulfil the tasks requested for Phase 2.

## 2 Rationale

The standardization programme for M/462 was defined in the CEN/CENELEC/ETSI framework report of the ESO response to M/462 (phase 1) adopted in early 2012.

In the phase 1 report, a gap analysis has been carried out and the specifications and standards within the scope of Mandate M/462 have been reviewed and listed (both available and under development). In order to monitor the programme of work identified in phase 1, a phase 2 report of the published and under development deliverables has been prepared and agreed in the CEN/CENELEC/ETSI M/462 CG.

This phase 2 report summarises the current coverage of ETSI activities in relation to the elements/sub-systems structure identified in phase 1.

The most significant standards described in this phase 2 report need to be published by 2017 the latest as European Norms (EN) in order to be taken into account by the European Commission in the list of standards to be attached to potential new European legislation (e.g. Regulations or Delegated Regulations) supporting the development of efficient ICT products and components.

## 3 Objective

The objective of this proposed action is to prepare and achieve the adoption and publication of the required European Norms (ENs) to fulfil Mandate M/462 according to the analysis reported in the phase 1 and 2 reports. This proposed action addresses the priority ENs identified in this proposal (to be considered as Phase 1). A further proposal will be submitted to address the remaining ENs.

The ENs shall address:

- Equipment and system standards: these standards have to take into account the most efficient solutions in order to minimize energy consumption and to optimize end-of-life environmental impacts.
- KPIs with methodologies to determine equipment energy efficiency: standardized and simple test procedures to determine power consumption and relevant service use by equipment.
- Standardized global indicators (ratios): to monitor the improvement of overall efficiency of operational networks - these ratios provide recognized energy efficiency trends for sites and networks in order to define the efficiency level of each ICT network segment.
- Methodologies to evaluate Information Technology & Networks (ITN) equipment end-of-life environmental impacts.

The aim of this proposal is to issue 13 European Norms (ENs) as described in § 7.2 in support of the implementation of an efficient infrastructure of Information and Communication Technology (ICT) in the following areas:

- Sites: access site, radio access, central office, core site, e.g. transmission site or data centre;
- Long haul/backbone using optical fibre technologies;
- Transit/metropolitan edge/back haul using optical fibre technologies;
- Access, including transport and local distribution concentrating on optical fibre technologies and radio based stations;
- Residential, including end-user connections.

The objective of ETSI is to complete the required standards for M/462 by the end of 2017/Q1 2018.

## **4 Market impact**

The availability and efficient use of energy and environmental impact have assumed strategic relevance worldwide.

A wide range of initiatives have been delivered with the objective of reducing energy consumption or improving energy efficiency and reducing environmental impact for specific aspects of information communication technologies.

The delivery of broadband solutions across both fixed and mobile infrastructures represents a significant opportunity for energy efficiency and reducing environmental impact. It is critical that involved parties are able to develop, construct and operate such equipment and infrastructures in a manner that are able to follow a defined roadmap which combines technical advances with environmental sustainability.

The development of standards defining metrics and rules for environmental sustainability of ICT equipment and infrastructures shall meet the objectives of the involved parties by providing a top-down approach applying environmental conscious design for products and infrastructures from development phase until the end of life.

The developed standards will define sustainable solutions to apply in order to increase lifecycle resource management. Failure of implementation of these efficient requirements will have costs for involved parties.

## **Part II – Execution of the work**

### **5 Working method / approach**

#### **5.1 Specialist Task Force (STF)**

ETSI needs specific technical expertise that is not currently present within the involved technical committees, e.g. energy efficiency of physical components, installation of networks, cabling of building, legal documents, network architectures and the relationships that each of these has with regard to overall energy efficiency management, end of life. These specialists will assist in the definition of the main and essential tools to manage a reduction of energy consumption of operational networks and sites, data centres included.

Therefore, under this proposed action ETSI will perform the work described above with the support of an ETSI Specialist Task Force (STF).

The work of this STF will be essential to aid the drafting and preparation of the required deliverables as rapidly as possible in order to maximise the resulting benefits and to publish the required standards by the end of 2017 (as European Norms (EN)) in order to be taken into account by the European Commission in the list of norms attached to the foreseen new pieces of European legislation (e.g. Regulations or Delegated Regulations) supporting the development of efficient ICT products and components.

The STF will develop the draft technical content for the planned deliverables through consultation with stakeholders by means of active liaisons with technical committees of official organizations (European/International Standardization Organizations, fora), meetings, workshops and desk-based research in order to ensure that field needs and the most improved solutions are taken into account and resulting in state of the art standards.

The work of the STF and its programming schedules will be supervised by a Steering Committee (open to EC/EFTA attendance).

The STF will report on its milestones to Steering Committee, and ETSI TC ATTМ, and TC CABLE, and TC EE.

In order to complete the list of ENs requested by M/462 in due time (final target being the end of 2017/Q1 2018), the STF will base its work on current ETSI specifications (if existing or in drafting) with the support of the involved ETSI committees. Other available international standards/specifications will be also considered for this task.

## **5.2 Other type of activity than STFs**

### **5.2.1 Steering Committee (SC)**

As mentioned above, the proposed action will be directed and supervised by a Steering Committee taken from:

- chairman of ETSI TC ATTМ and its Working Groups and extended as required to include specific additional ETSI specialists, e.g. "Plugtests®" specialists (ETSI CTI), Home Networking experts;
- chairman of ETSI TC CABLE and its Working Groups in order to support the STF study by cable network knowledge;
- chairman of ETSI TC EE and its Working Groups in order to support the STF study by energy monitoring and measurement knowledge;
- relevant ETSI Technical Officers;
- chairman and secretaries of CENELEC Technical Committees such as CLC/TC 215 will be invited building upon the existing co-ordination group between CLC and ETSI within ETSI-CENELEC Co-ordination Group for Installations and Cabling;
- high level industry representatives (preferably representatives of Industry Associations (two maximum));
- EC/EFTA (as Counsellors to the SDOs);
- nominees with appropriate expertise from a combination of national EU/EEA governmental agencies.

The steering committee will be led by two ETSI Technical Committees: TC ATTМ and TC EE.

The steering committee will supervise STF work and schedule, and will be responsible for the approval of the reporting of the milestones set for the STF over the duration of its activity. The Chair/Vice-Chair from ETSI ISG OEU may be invited on occasion as guests to provide field knowledge of ICT users.

### 5.2.2 Other interested actors

The work will be co-ordinated with:

- ETSI Board IoT Strategy Group,
- ETSI TC ERM,
- ETSI TC Smart M2M on service implementation works,
- ETSI TC MSG,
- ETSI TC PLT,
- ETSI TC SES,
- CENELEC TC 205 on control/command and home building electronic systems by means of the CENELEC/ETSI ATT M I&CCG.
- CEN/CLC/ETSI Smart and Sustainable Cities and Communities Coordination Group (SSCC-CG)

Cooperation will be ensured by means of workshops with:

- ITU-T: SG 15, SG 5,
- European Community e.g. EC DG Cnect, DG Growth, DG JRC department in charge of the Energy Efficiency Codes of Conduct (Broadband, Data Centre...),
- Other coordination groups (e.g. Green Data Centres), and fora (e.g. Broadband Forum, HGI, FSAN, 3GPP).

### 5.3 Qualification required, mix of skills

The STF will consist of providers with strong competence and knowledge in ICT technologies and of operational sites and networks.

This means that the STF must be able to complete the missing ENs by issuing the right operational European Standards to support deployment, the life, and the end of life of efficient and sustainable ICT sites and networks.

Last but not the least, STF must be able to improve and consolidate current standardised indicators through their operational knowledge outside of the specific area of pure standardization technicians.

The STF will consist of providers, which must be prepared work in close cooperation to share the tasks under the guidance of the reference Technical Bodies.

One of the providers will act as STF Leader and will be responsible for the consolidation of the documentation, coordination the STF activities and the provision of the required progress reports to the steering committee. This provider will also be responsible for the drafting of the Interim and Final Reports to the EC/EFTA.

The other providers must be able to perform specific tasks (e.g. fixed and mobile access networks, core networks, data centres, etc.).

The following relevant expertise is required:

- One provider acting as STF leader, with a proven record of standards project delivery:
  - Possess a strong knowledge of project management, report writing, consensus building, presentation skills, working in an international environment;
  - Have hands-on experience in the implementation of communications sites (data centres included), networks, systems and services.

- Providers, with the following qualifications:
  - Hands-on experience in the engineering and the implementation of communications networks, sites (data centres included), systems and services;
  - Good knowledge of telecommunications legislation;
  - Good knowledge of the use of Key Performance Indicators.
  - Strong knowledge of creation of Key Performance Indicators;
  - At least one with a strong knowledge of deployment and operational core and fixed networks;
  - At least one with a strong knowledge of deployment and operational core and mobile networks;
  - At least one with a strong knowledge of deployment and operational data centres, and servers, and storage;
  - At least one with a strong knowledge of environmental area;
  - At least one with a strong knowledge of waste/end of life;
  - At least one with a strong knowledge of operational implementation.

## 6 Performance indicators

### Effectiveness and efficiency

- Steering Group review meetings, at least 3 meetings per year (minimum of 6 in total)
- Workshops to promote STF activities, between 3 to 4 events
- Plugtests, related interoperability events that are covered by a separate action grant
- Participation of Member delegates in meetings/workshop events related to STF work [e.g. types (e.g. environmental specialists, network specialists) and number of participants]
- Contribution of Member delegates [e.g. types (e.g. standards, presentations) and number of documents presented by delegates, types (e.g. standards, presentations) and number of documents presented by the STF for comments]
- Approval of deliverables from the Reference TB according to schedule
- Publication of deliverables (ENs) according to schedule
- Respect of time scale, with reference to start/end dates in the approved action grant

### Stakeholder engagement

- Contribution / Voluntary work from ETSI TBs : TC ATTM, TC CABLE, and TC EE will provide contributions in order to support development of deliverables
- Stakeholder representation in the project (e.g. category, business area) to support improvement of proposed draft standards
- Liaison with industry to identify requirements and raise awareness on the project deliverables

### Dissemination of results

- Presentations to ETSI TBs in TB plenary sessions and WG meetings
- Liaison activities performed by the STF (e.g. workshops/conferences/events)
- Contribution to other standardization bodies by attending body meetings (face to face or remote participation)

### Impact

- Comments received on drafts (e.g. on the WEB site, on mailing lists.)
- Availability and acceptance for any necessary listing by the EC/EFTA

## **7 Work plan, milestones and deliverables**

### **7.1 Introduction**

Further to M/462, the STF will produce European Standards (ENs). The process of approval and publication of ENs is longer than any other type of ETSI deliverable (e.g. ES, TS). Therefore, the production of these ENs requires flexibility in terms of length in publication and the expected date of publication may be delayed of 6-9 months, dependent upon the receipt of any general or technical comments received during the ETSI public approval phase. The dates stated in the schedule tables below are in anticipation of adoption without comments.

### **7.2 Deliverables**

Deliverables under this action will include two activity reports to the EC/EFTA, an Interim and a Final Report. These activity reports will provide a detailed information on the actions performed and on any issues that have arisen and how they have been resolved, the details of consultations and liaisons with the different stakeholders plus the latest drafts of the ENs worked on.

The Final Report will also provide the publication versions of the adopted ENs and include the information on the achievement of the performance indicators in these ToR.

#### **7.2.1 Network operator sites named ICT Sites**

##### **D1 ETSI EN Lifecycle Resource Management of ICT sites (Data centres included)**

**Work Item Reference:** DEN/ATTM-002

**Title:** Broadband Deployment & Lifecycle Resource Management; ICT Sites

**Scope:** The present document details measures that shall be taken to improve Lifecycle Resource Management (e.g. energy efficiency) in ICT sites (including data centres) for broadband deployment.

**Schedule:**

	<b>Stable Draft</b>	<b>Draft for TB Approval</b>	<b>TB Approval</b>	<b>Start of Public Approval</b>	<b>Publication</b>
<b>Month/Year</b>	Mar 2017	Jun 2017	Jul 2017	Aug 2017	Mar 2018



## D2 ETSI EN on Global KPI for energy management for Operational infrastructures; General requirements

**Work Item Reference:** DEN/ATTM-003

**Title:** Energy management; Global KPIs; Operational infrastructures; General requirements

**Scope:** The present document describes the energy management landscape of the operational infrastructures of broadband deployment addressed by this multi-part deliverable, their inter-relationship and boundaries.

It specifies the following aspects for Global Key Performance Indicators (KPIEM) in relation to energy management for these infrastructures:

- Common objectives in relation to:
  - Energy consumption;
  - Task efficiency;
  - Energy re-use;
  - Renewable energy.
  - General requirements for all KPIs specified in the ES 205 200-2 series in relation to:
  - Infrastructure scalability.

**Schedule:**

	Stable Draft	Draft for TB Approval	TB Approval	Start of Public Approval	Publication
Month/Year	Mar 2017	May 2017	Jun 2017	Jul 2017	Feb 2018

## D3 ETSI Global KPI for energy management of ICT Sites

**Work Item Reference:** DEN/ATTM-004

**Title:** Energy management; Global KPIs; Operational infrastructures; Specific requirements; ICT Sites

**Scope:** The present document specifies Objective KPIs and a Global Key Performance Indicator (KPI<sub>EM</sub>) for performance of energy management in operator data centres (ODC), operator sites (OS) and customer data centres (CDC) in accordance with objectives and requirements defined in EN 305 200-1.

**Schedule:**

	Stable Draft	Draft for TB Approval	TB Approval	Start of Public Approval	Publication
Month/Year	Mar 2017	May 2017	Jun 2017	Jul 2017	Feb 2018

**D4 ETSI EN on Implementation of Global KPI (DC<sub>EM</sub>)**

**Work Item Reference:**DEN/ATTM-005

**Title:** Energy management; Global KPIs; Operational infrastructures; Specific requirements; Global KPI for ICT Sites

**Scope:** The present document defines a Global KPI (DC<sub>EM</sub>) for classification of energy management performance in data centres (12/2014: ICT sites) based on the Global and objective KPIs defined in the EN 305 200-2-1 standard. Performance of energy management has 9 levels.

**Schedule:**

	Stable Draft	Draft for TB Approval	TB Approval	Start of Public Approval	Publication
Month/Year	Mar 2017	May 2017	Jun 2017	Jul 2017	Feb 2018

**D5 ETSI EN on KPI on Measurement Process for Energy Efficiency KPI for Servers**

**Work Item Reference:**DEN/EE-EEPS24

**Title:** Measurement Process for Energy Efficiency KPI for Servers

**Scope:** The document shall define Energy Efficiency KPI for Servers and relevant process to perform measurement and manage the KPI calculation.

**Schedule:**

	Stable Draft	Draft for TB Approval	TB Approval	Start of Public Approval	Publication
Month/Year	Jun 2017	Sep 2017	Oct 2017	Dec 2017	May 2018

**7.2.2 Fixed access delivery**

**D6 ETSI EN on Global KPI for energy management for operational fixed broadband access network**

**Work Item Reference:**DEN/ATTM-006

**Title:** Energy management; Global KPIs; Operational infrastructures; Specific requirements; Fixed Broadband access networks

**Scope:** The present document specifies Global Key Performance Indicators (KPI<sub>EM</sub>) in relation to energy management of fixed broadband access networks, e.g. IP-DSLAM, OLT and MSAN. It does not take into account the ONU in case of FTTB configurations.

**Schedule:**

	Stable Draft	Draft for TB Approval	TB Approval	Start of Public Approval	Publication
Month/Year	Jun 2017	Sep 2017	Oct 2017	Dec 2017	May 2018

**D7 ETSI EN on Global KPI for energy management for operational cable operator network**

**Work Item Reference:** DEN/CABLE-00022

**Title:** Energy management; Global KPIs; Operational infrastructures; Specific requirements; Cable access networks

**Scope:** The present document specifies Global Key Performance Indicators (KPIEM) in relation to energy management for Cable Operator access networks.

**Schedule:**

	Stable Draft	Draft for TB Approval	TB Approval	Start of Public Approval	Publication
Month/Year	Jun 2017	Sep 2017	Oct 2017	Dec 2017	May 2018

**7.2.3 Mobile access delivery**

**D8 ETSI EN on Global KPIs for energy management of operational mobile access networks**

**Work Item Reference:** DEN/ATM-007

**Title:** Energy management; Global KPIs; Operational infrastructures; Specific requirements; Mobile access networks

**Scope:** The present document specifies Global Key Performance Indicators (KPI<sub>EM</sub>) in relation to energy management of mobile broadband access networks, e.g. Base Transceiver Station (BTS), Remote Radio Head (RRH).

**Schedule:**

	Stable Draft	Draft for TB Approval	TB Approval	Start of Public Approval	Publication
Month/Year	Jun 2017	Sep 2017	Oct 2017	Dec 2017	May 2018

**D9 ETSI EN KPI on Measurement process for energy efficiency KPI for RAN Equipment**

**Work Item Reference:** DEN/EE-EEPS25

**Title:** Measurement Process for Energy Efficiency KPI for RAN Equipment

**Scope:** The document will define Energy Efficiency KPI for RAN Equipment [e.g. Base Transceiver Station (BTS), Remote Radio Unit (RRU), Base-Band Unit (BBU)] per technology (2G, 3G, 4G, 5G) and relevant process to perform measurement and manage the KPI calculation.

**Schedule:**

	Stable Draft	Draft for TB Approval	TB Approval	Start of Public Approval	Publication
Month/Year	Jun 2017	Sep 2017	Oct 2017	Dec 2017	May 2018

**7.2.4 Customer premises**

**D10 ETSI EN on Lifecycle Resource Management for residential premises (homes)**

**Work Item Reference:**DEN/ATTM-008

**Title:** Broadband Deployment & Lifecycle Resource Management; Customer network infrastructures; Homes (single-tenant)

**Scope:** This document describes practices which shall be taken to improve eco-efficiency of Customer network infrastructures; Homes (single-tenant) for broadband deployment.

**Schedule:**

	Stable Draft	Draft for TB Approval	TB Approval	Start of Public Approval	Publication
Month/Year	Jun 2017	Sep 2017	Oct 2017	Dec 2017	May 2018

**7.2.5 Network design**

**D11 ETSI EN on Overview, common and generic aspects of Lifecycle Resource Management of ICT networking**

**Work Item Reference:**DEN/ATTM-009

**Title:** Broadband Deployment & Lifecycle Resource Management; Overview, common and generic aspects.

**Scope:** The present document gives an overview of this multi-part deliverable covering energy management and sustainable broadband deployment.

**Schedule:**

	Stable Draft	Draft for TB Approval	TB Approval	Start of Public Approval	Publication
Month/Year	Jun 2017	Sep 2017	Oct 2017	Dec 2017	May 2018

**D12 ETSI EN on energy efficiency measurement method and KPIs of Network Function Virtualization (NFV) applications in ICT networks**

**Work Item Reference:** DEN/EE-EEPS26

**Title:** Energy efficiency measurement method and KPIs of Network Function Virtualization (NFV) applications in ICT networks

**Scope:** The present document specifies the method and metrics to determine the energy efficiency of Network Function Virtualization (NFV) applications. KPIs are also defined to determine the performances, in terms of energy efficiency, for the NFV applications.

**Schedule:**

	Stable Draft	Draft for TB Approval	TB Approval	Start of Public Approval	Publication
Month/Year	Jun 2017	Sep 2017	Oct 2017	Dec 2017	May 2018

**7.2.6 Life analysis**

**D13 ETSI EN for Lifecycle Resource Management of end-of-life of ICT equipment**

**Work Item Reference:**DEN/ATTM-0010

**Title:** Broadband Deployment & Lifecycle Resource Management; Management of end of life of ICT equipment(ICT waste/End of life)

**Scope:** The present document defines processes in relation to management of end of life of ICT equipment.

**Schedule:**

	<b>Stable Draft</b>	<b>Draft for TB Approval</b>	<b>TB Approval</b>	<b>Start of Public Approval</b>	<b>Publication</b>
<b>Month/Year</b>	Jun 2017	Sep 2017	Oct 2017	Dec 2017	May 2018

### 7.3 Work plan

The proposed action will be performed as described in the following tasks:

#### **Task 1: Establish Specialist Task Force (STF)**

The purpose of this Task 1 is to establish the STF team.

The STF providers will be selected and recruited following the agreed ETSI procedures and in compliance with the terms and conditions of the Framework Partnership Agreement (FPA) and Amendment 1 signed between the EC and ETSI on 31/08/2015. The ETSI STF providers will be recruited following the issuing of an ETSI Collective Letter. This will also be available from the ETSI STF page on the ETSI Portal and via the ETSI website.

The ETSI Director-General has the responsibility for the selection of the providers in consultation with the Chairmen of TCs ATTm, CABLE, and EE. The ETSI Secretariat and the Chairmen of TCs ATTm, CABLE, and EE, possibly assisted by the STF-SC, will assess the qualifications of the applicants for the STF during the selection.

#### **Task 2: Start-up activities [Milestone 1]**

The purpose of this task is to start the work in order to issue the deliverables requested in clause 7.1 and 7.2.

In order to start this work the following activities will be performed:

- Kick-off Meeting between the SC members and STF team to;
  - Ensure a clear understanding of the objective(s) of this action;
  - Identify and engage participants/partners that are able:
    - to assist in the survey of existing source material;
    - to support the development of results which link research activities into evolving convergence strategies with coordinated standardization activities and the identification of best-practice official documents;
- The STF will propose its work schedule to SC for approval and in compliance with the action grant;
- The SC will approve the STF work schedule;
- The STF will manage the start-up of the work

#### **Task 3: Research, analysis**

The purpose of this task is to:

- Determine source material availability in support of the objective/goal of the action;
  - to include the outputs of the H2020 projects (e.g. smart cities standardization);
  - to include and, where appropriate, enlarge upon the outputs of EC and national governments initiatives on energy consumption and broadband development;
- Identify areas of source material shortfall with regard to the objective/goal of the action.
- Analyse results of the research and issue task 3 report

STF will analyse results of the research.

The Progress Report will cover the activity leading up to the data resulting from analysis covering:

- Documentation addressing broadband deployment (international, regional, national);
- Research tools in support of the objective of the action, for KPIs especially;
- The availability of standards and associated documents from standardization bodies (SDOs, fora and elsewhere).

## **Task 4: Consultation and dissemination**

The determination of source material availability and the identification of areas of source material shortfall will require significant input from the following stakeholders:

- The service development and supply industry;
- Users, operators included;
- Standardization bodies (from the SDOs, fora and elsewhere e.g. ANSI, ITU, TIA, FSN, 3GPP).

In order to achieve this action the STF will open active liaisons with technical committees of official organizations (European/International Standardization Organizations, fora) and manage meetings (physical or audio) in order to ensure that they take into account field needs and the most improved solutions.

## **Task 5: Table of contents, scope [Milestone 2]**

Further to task 4, the STF will issue tables of contents and scopes of the draft deliverables stated in clause 7.1.

The STF will provide these tables of contents and scopes of the deliverables to the SC and to ETSI TCs ATT, CABLE, and EE for comment.

The STF will improve the tables of contents and scopes of the deliverables further to the comments received from the SC and ETSI TCs ATT, CABLE, and EE.

The final version of tables and scopes will be provided to the SC, and ETSI TCs ATT, CABLE, and EE **[Milestone 2] and the ETSI work programme will be updated.**

Further to finalization of the final version of tables and scopes an open Workshop will be organized in ETSI premises at the end of this task 5 in order to present the STF work and the future deliverables

## **Task 6: Initial draft [Milestone 3]**

The STF will issue initial draft versions of the deliverables requested in clause 7.2 during this task period.

STF will develop the technical content of the deliverables through consultation with stakeholders by means of active liaisons with technical committees of official organizations (European/International Standardization Organizations, fora) and desk-based research in order to ensure that field needs and the most recent solutions are taken into account.

The STF will provide these initial draft versions of the deliverables to SC, and ETSI TCs ATT, CABLE, and EE for comment and review.

As a result of the comments received the STF will improve the draft versions of the deliverables and will improve versions of initial draft versions of the.

STF will provide a **Progress Reports to SC** by mid of Task 6 period **[Milestone 3]**.

## **Task 7: Interim Report to EC/EFTA [Milestone 4]**

An Interim Report will be provided to the EC/EFTA 14 months after the start of the action to report on the activity performed until that date along with the latest draft versions of the draft ENs.

## **Task 8: Stable drafts [Milestone 5]**

In order to issue stable drafts of the requested deliverables the STF will complete technical content of the initial drafts coming from task 6.

The STF will develop these stable drafts through consultation with stakeholders by means of active liaisons with technical committees of official organizations (European/International Standardization Organizations, fora).

The STF will finalize these developments in cooperation with ETSI ISG OEU (ICT Users) by means of presentations and idea exchanges in a workshop with providers and users in order to ensure that they fully take into account field needs and most improved solutions.

The STF will provide the stable drafts of the deliverables to the SC, and ETSI TCs ATTM, and CABLE, and EE for **comments**.

The STF will provide a **Progress Report to SC** by mid of Task 8 period [**Milestone 5**].

## **Task 9: Final drafts [Milestone 6]**

The STF will further improve the stable drafts of the deliverables in the light of further comments from the ETSI TCs.

The STF will prepare and provide the final drafts of the deliverables to ETSI TCs ATTM, CABLE and EE for TC approval prior to public approval.

ETSI will circulate deliverables **at the European level following approval by the TCs**. That means that ETSI's National Standardization Organisations (NSOs) will have the opportunity to provide comments which may require further resolution and then be sent for national voting to result in publication if they are not approved in the initial ENAP phase.

STF will provide a **Progress Report to SC** by mid of Task 9 period [**Milestone 6**].

## **Task 10: Conclusions, Publication & Final Report to EC/EFTA [Milestones 7]**

Further to the development of Task 9 STF will provide **Final Progress Report to SC**. This report will include STF conclusions.

The STF will assist ETSI TCs ATTM, CABLE and EE to resolve received comments from National Standardization Organisations.

Further to the voting results, ETSI will publish the adopted European Standards.

The STF will provide **Final Report for delivery to the EC/EFTA**[**Milestone 7**].

The Final Report will be delivered 24 months after the date of signature that will provide:

- a report on the activities performed;
- a report on the performance indicators as defined in clause 6
- The publication versions of 13 ENs defined in clause 7.

It is estimated that there will be a number of missions performed throughout the action involving reporting to TB meetings, SC meetings plus other missions to the ITU and to an ISO/IEC meeting in Europe. The missions will be mainly performed by the STF leader with other missions shared between the experts as required.



Task	Month																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1. Establish STF team	█																							
2. Start-up activities Milestone 1		█	█	█	█																			
3. Research, analysis		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
4. Consultation, dissemination				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
5. Table of contents, scope Milestone 2				█	█	█																		
				█	█	█																		
				█	█	█																		
6. Initial draft Milestone 3							█	█	█															
							█	█	█															
							█	█	█															
7. Report to EC/EFTA Milestone 4														█										
														█										
														█										
8. Stable drafts Milestone 5											█	█	█	█	█	█	█	█	█	█	█	█	█	
											█	█	█	█	█	█	█	█	█	█	█	█	█	
											█	█	█	█	█	█	█	█	█	█	█	█	█	
9. Final drafts Milestone 6																					█	█	█	
																					█	█	█	
																					█	█	█	
10. Conclusions, Publication & Final Report to EC/EFTA Milestone 7																							█	
																							█	
																							█	

**8 Document history**

	Date	Author	Status	Comments
0.0	04-Apr-2016	ETSI proposal	For EC/EFTA approval	
0.1	27-Apr-2016	Alberto Berrini	CfE	Editorials
0.2	09-Sep-2016	Alberto Berrini		Updated scope D7 (CABLE)

**Annex B Response to the Request for Proposals  
CfE STF516 - CL16\_3326 – Deadline: 8 November 2016**

<b>Proposed contractor</b>	Company / Organization name
<b>ETSI membership status</b>	Full / Associate / Observer / NSO / non-member
<b>ETSI member support</b>	ETSI member Organization supporting the application. Indicate the full name from the <a href="#">list of ETSI members</a> Mandatory if the proposed contractor is not an ETSI member
<b>Support contact person</b>	Official contact of the ETSI member supporting Organization. Formal confirmation of the support from the Official contact (e.g. by e-mail sent to the STF Manager <a href="mailto:alberto.berrini@etsi.org">alberto.berrini@etsi.org</a> ) is required.

Contact person for the technical aspects	
Title	
Firstname	
Lastname	
Role	
e-mail	
Phone	

Contact person for finance and contract	
Title	
Firstname	
Lastname	
Role	
e-mail	
Phone	

**B.1 Introduction**

A short presentation of the technical structure responsible for this activity, e.g.:

- Business area, number of employees, link to WEB site
- Department(s)/team(s)/experts in charge of the technical activities related to the STF
- Reference to products/services of your Company/Organization or supporting Member to which the standards developed by the STF will apply
- Motivation for your Company/Organization or supporting Member to participate in the STF

**B.2 Technical competence**

Identify the profile of the principal technical staff who will contribute to the STF. For each one, provide a resume identifying the specific competence in direct relation with this project, e.g.

- Education and professional titles
- Current position and responsibilities
- Years of service (overall and on the STF-related activity)
- Standardization experience
- Contribution to previous and current work in ETSI or other standardization Bodies
- Any information that may be useful to qualify the technical competence of the staff
- Expected availability for the duration of the project

Note: the profile resumes can be provided within the answer to this CfE or as Annexes.

Please assess the level of competence of the proposed service providers' personnel with respect to the specific qualification required for this STF on a scale from 0 (no competence) to 5 (outstanding competence):

<b>Deliv</b>	<b>Description</b>	<b>Qualification required</b>	<b>Self assess</b>
D01	TC ATTM (NW/OP sites) EN 305 174-2 Broadband Deployment & Lifecycle Resource Management; ICT Sites	Operational expertise in the sector of ICT sites including data centres. Knowledge of the contents of CLC/TR 50600-99-1 and the EU Code of Conduct for Data Centre Energy Efficiency.	
D06	TC ATTM (Fixed access) EN 305 200-2-2 Energy management; Global KPIs; Operational infrastructures; Specific requirements; Fixed Broadband access networks	Operational expertise in the sector of fixed broadband deployment with a particular understanding of energy consumption per "bit" delivered to customer premises and per areas (urban and rural etc.) served by an operator node (access multiplexing equipment).	
D08	TC ATTM (Mobile access) EN 305 200-2-3 Energy management; Global KPIs; Operational infrastructures; Specific requirements; Mobile access networks	Operational expertise in the sector of mobile broadband deployment with a particular understanding of energy consumption per areas (urban and rural etc.) served by base stations and per "bit" delivered to base station areas.	
D10	TC ATTM (Customer premises) EN 305 174-5-1 Broadband Deployment & Lifecycle Resource Management; Customer network infrastructures; Homes (single-tenant)	Operational expertise in the sector of domestic (residential) customer premises. Expertise in domestic customer premises equipment sector to advise on applicable standards of energy consumption including de-facto regulation.	
D12	TC EE (NW design) EN 303 471 Energy efficiency measurement method and KPIs of Network Function Virtualization (NFV) applications in ICT networks	Operational expertise in fixed and mobile sector with specific knowledge of NFV technologies and implementation.	
D13	TC ATTM (NW design) EN 305 174-8 Broadband Deployment & Lifecycle Resource Management; Management of end of life of ICT equipment (ICT waste/End of life)	Operational expertise and specific knowledge of Waste Electrical & Electronic Equipment (WEEE) Directive and end-of-life management of ICT equipment.	

### **B.3 Proposed approach**

#### **B.3.1 Overview**

*In a short prose, identify the contribution that your Company/Organization will provide to this STF.*

*We also expect that you make a critical review of the ToR. You should indicate if you have found discrepancies, ambiguities, or omissions in the ToR and make comments/suggestions to improve or complete the definition of the STF tasks and objectives and/or propose alternative approaches that would allow achieving the STF objectives in a more efficient way.*

#### **B.3.2 Proposed contribution to tasks**

*Identify the tasks to which your Company/Organization is proposing to contribute and provide a description of the proposed approach, competences, reference to related activities.*

### B.3.3 Cost of proposed contribution

*In the following table, provide a summary of the cost of the contribution described above (if possible, please use integer figures). If necessary, you can complete the information with explanatory text.*

Deliv	Description	Days (optional)	EUR (mandat. ) see note	% of whole task (mandat.)	OK to share	Priority (0 to 5)
D01	TC ATTM (NW/OP sites) - EN 305 174-2 Broadband Deployment & Lifecycle Resource Management; ICT Sites				Y	
D06	TC ATTM (Fixed access) - EN 305 200-2-2 Energy management; Global KPIs; Operational infrastructures; Specific requirements; Fixed Broadband access networks				Y	
D08	TC ATTM (Mobile access) - EN 305 200-2-3 Energy management; Global KPIs; Operational infrastructures; Specific requirements; Mobile access networks				Y	
D10	TC ATTM (Customer premises) – EN 305 174-5-1 Broadband Deployment & Lifecycle Resource Management; Customer network infrastructures; Homes (single-tenant)				Y	
D12	TC EE (NW design) - EN 303 471 Energy efficiency measurement method and KPIs of Network Function Virtualization (NFV) applications in ICT networks				Y	
D13	TC ATTM (NW design) - EN 305 174-8 Broadband Deployment & Lifecycle Resource Management; Management of end of life of ICT equipment (ICT waste/End of life)				Y	
	<b>Total</b>					

**Note:** maximum total budget provisionally allocated for this CfE, for the 6 deliverables: **90 000 €**.

**Days (optional):** if compatible with your pricing model, you can indicate the number of working days that you expect your contribution will require

**EUR (mandatory):** indicate the total cost for your contribution to the task

**% of whole task:** indicate to which percentage of the execution of the whole task your offer corresponds.

**OK to share:** confirm that your Organization is prepared to share the task with other participants (this is an essential requirement in this specific project)

**Priority:** indicate your interest for the task, using a scale from 0 (no interest) to 5 (major interest).

### B.4 Financial information

#### B.4.1 Price and pricing model

*Please indicate the price you offer for the execution of the tasks for which you have expressed your interest, based upon the proposed approach and effort estimate in §B.3.2 above and an indication of your pricing model.*

*This fixed price is intended to include the travel cost required to perform the tasks, as defined in the ToR (e.g. to join common working sessions). If this travel cost is not included in your pricing model, make an explicit statement in B.4.2 below.*

**B.4.2 Travel cost**

*Identify the nature and expected cost of any travels that you estimate to be necessary to perform the tasks and for which you intend to claim the reimbursement in addition to the fixed price indicated in §B.4.1 above. If the number and destination of these travels cannot be exactly predicted, this will be treated as a provisional figure, to be adjusted with respect to the real cost.*

*The applicant accepts that these travels must have the preliminary authorization of ETSI and the travel cost will be reimbursed against justification of real cost and within the limits of the ETSI Travel Policy.*

**B.4.3 Other cost**

*Please identify here any additional cost that may be claimed for the execution of this work.*

**B.4.4 Fullprice information**

*Unless differently specified, the price quoted in §B.4.1 above shall include all costs for labour, material, equipment, testing and all items of expense, fees, taxes, duties, overhead and profit for the full performance of the services and of any travels other than those identified in §B.4.2. The applicant will be responsible for acquiring all software licenses, applicable contractor's licenses, business licenses, etc. and permits necessary to perform the Services.*

<p style="text-align: center;"><b>Annex C Terms and Conditions</b> <b>CfE STF516 - CL16_3326 – Deadline: 8 November 2016</b></p>
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### **C.1 Submission of Proposals**

All proposals in response to this CfE shall be submitted before the deadline indicated in this Collective Letter, using exclusively the WEB application on the ETSI Portal at the following address: <https://portal.etsi.org/stf/OpenCallForExperts>.

Proposals that will be partial or incomplete at the deadline will not be accepted.

The Terms and Conditions in this Annex will apply. Any exceptions requested by the applicant, including printed Terms and Conditions, will not be accepted.

### **C.2 Modification and Withdrawal of Proposals**

Applicants may, without prejudice to themselves, modify or withdraw their proposal by written request, provided that the request is received by ETSI prior to the due date and time at the address to which their proposal was to be submitted. The applicant may submit a new proposal provided that such new proposal is received prior to the deadline for responses which is specified in this Collective Letter.

### **C.3 Assessment of Proposals**

The ETSI Director-General, in consultation with the Reference Body Chairman, is responsible for the selection of the Organizations that will be contracted to perform the STF work. The ETSI Director-General and the Reference Body Chairman may be assisted by a Selection Panel to assess the applications received and make the final decision.

The ETSI Secretariat will communicate to the applicants only the result of the selection (accepted or not accepted). Should applicants need more information on the rationale for the selection, they must address a formal request to the ETSI Director-General.

The following evaluation criteria will be applied to all proposals, in order of priority:

- Evidence that the applicant has the necessary structure and expertise to ensure delivery
- Reference to current or previous activities in the specific technical domain of this project
  
- Critical review of the most efficient way to achieve the objectives in the STF ToR
- Effective proposed approach/methodology for the execution of the tasks
- Implementation schedule
- Clear pricing policy

Compliance with the first two criteria is mandatory.

Proposals that are not considered to comply with these criteria will be discarded.

Priority will be given to technical quality of the proposals. Pricing considerations will be taken into account to ensure that the best value for money is achieved. Compatibility with the maximum budget allocated to this STF will be verified before placing Service Contracts.

Following the assessment process, ETSI reserves the right to grant contracts to other than the cheapest proposals, to accept or reject any offer completely or in part, or to reject all proposals, without providing the reasons. If no offer is accepted, ETSI may decide to abandon the work or proceed in any other manner ETSI may select.

#### **C.4 IPR and confidentiality Agreements**

The information provided in this CfE, as well as the fact that the applicant has received the CfE, is considered confidential and protected under copyright laws. The applicant may not discuss, share, or use the information in this CfE for any purpose other than the response to this CfE.

ETSI will not disclose the content of any proposals to other applicants or any other party, with the exception of the persons involved in the assessment process described in §C.3 above.

However, ETSI reserves the right to make use of the information provided in this proposal to improve the project definition for the purpose of this CfE or any other manner in which ETSI may decide to proceed to select the service providers.

If successful, the applicant will be required to sign a Service Contract, which includes IPR and Confidentiality clauses aligned with the relevant policies in the ETSI Directives.

#### **C.5 Preparation cost**

ETSI will not be responsible for any costs or expenses that the applicant may incur in preparing and/or submitting the proposal.

#### **C.6 Service Contract**

A Service Contract will be proposed to the applicants that will be selected to perform the work. Details on the Terms and Conditions of this contract can be found on the ETSTI Portal, at the following address: <https://portal.etsi.org/STF/STFs/Contracts.aspx>

**Annex D - CONTACTS FOR ADDITIONAL INFORMATION**

<b>Name</b>	<b>Role</b>	<b>e-mail</b>
Beniamino Gorini	TC EE Chairman	<a href="mailto:Beniamino.Gorini@nokia.com">Beniamino.Gorini@nokia.com</a>
Dominique Roche	TC ATTM Chairman	<a href="mailto:dominique.roche@orange.com">dominique.roche@orange.com</a>
Paulo Valente	TC CABLE Chairman	<a href="mailto:paulo.valente@cable-europe.eu">paulo.valente@cable-europe.eu</a>
Michael Gilmore	STF516 Leader	<a href="mailto:Mike.Gilmore@BTINTERNET.COM">Mike.Gilmore@BTINTERNET.COM</a>
Marcello Pagnozzi	Technical Officer EE	<a href="mailto:marcello.pagnozzi@etsi.org">marcello.pagnozzi@etsi.org</a>
Martin Arndt	Technical Officer ATTM	<a href="mailto:martin.arndt@etsi.org">martin.arndt@etsi.org</a>
Chantal Bonardi	Technical Officer CABLE	<a href="mailto:chantal.bonardi@etsi.org">chantal.bonardi@etsi.org</a>
Gavin Craik	STF Manager	<a href="mailto:gavin.craik@etsi.org">gavin.craik@etsi.org</a>
Thierry Comont	Administrator	<a href="mailto:thierry.comont@etsi.org">thierry.comont@etsi.org</a>

For more information see also:

[STF home page](#)

[Open Call for Expertise / Requests for Information](#)