TSG-SA WG2 Meeting #166 S2- 2413002

18 - 22 Nov. 2024, Orlando, FL, US

**Source: Samsung, Lenovo (Rapporteurs)**

**Title: Rel-19 Work Item Exception for EnergySys**

**Document for: Approval**

**Agenda Item: 30.9**

3GPP™ Work Item Exception

# Title : 5GS Enhancement for Energy Efficiency and Energy Saving

## Acronym : EnergySys

## Unique Identifier : 1050112

**Release 19 Submission form**

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| --- | --- | --- | --- | --- | --- |
| **Feature / Item:** | **5GS Enhancement for Energy Efficiency and Energy Saving** | | | | |
| **Affects:** | **UICC apps:** | **ME:** | **AN:**  **X** | **CN:**  **X** | **Others (specify):** |
| **Expected Completion Date:** | SA#107 (March 2025) | | | | |
| **Service(s) impacted:** | Control of energy efficiency and energy saving in the network | | | | |
| **Specification(s) affected:** | TS 23.501, TS 23.502, TS 23.503 | | | | |
| **Task(s) within work which are not complete:** | WT #1:  Whether and how the per AF level energy consumption information can be exposed are FFS.  WT #2:  Finalize description of Energy Saving indicator by resolving editor's notes, and conclude whether notification from the EIF can be provided to the PCF and used for AM policy decision.  WT #3:  Adding additional parameter in the NF profile is FFS. | | | | |
| **Consequences if not included in Release 19:** | WT#1: SA1 requirement for per-application energy information exposure will not be supported.  WT#2: incomplete specification of the subscription based approach and Policy control based on UE energy consumption information is not supported..  WT#3: NF discovery and selection based on energy criteria in NF profile is not supported and UP path selection based on energy criteria is not supported UPF selection for path selection reuses the energy criteria based NF selection approach) | | | | |

**Abstract of document:**

Exception sheet for Rel-19 Work Item "5GS Enhancement for Energy Efficiency and Energy Saving"

**Contentious Issues:**

WT #2 has the following objective documented in the WID:

- WT #2. The objective of this WT is to specify the enhancements for subscription and policy control to enable network energy savings as service criteria based in WT#1. The following enhancements will be specified:

- The definition of energy saving subscription information per UE that is stored as part of the subscription data in the UDM/UDR, to assist the network to perform energy saving strategies for the UE

- The detailed procedures for the PCF to receive UE subscription data and notification related to the energy related information to trigger making policy decisions (reusing the existing parameters)

WT#2 has not fully completed the sub-task on the definition of energy saving subscription information per UE (1st sub-bullet above), and could not finish the other sub-task on the detailed procedures for the PCF to receive UE subscription data and notification related to the energy related information (2nd sub-bullet). More specifically, whether notification from the EIF can be provided to the PCF and used for policy decision by the PCF could not find consensus.

WT#3 has the following objective documented in the WID:

- WT #3. The objective of this WT is to specify the 5GS enhancements to support network energy saving and efficiency based on WT#1. The following enhancements will be specified:

- Enhancements of NF discovery and (re-)selection based on energy related information

- New energy related information and/or existing NF profile parameters in the NF Profile to allow an operator to influence NF discovery and selection based on their energy strategy

- …

In the WT#3 discussion, we could not reach consensus regarding the energy related information in the NF profile. More specifically, we could not conclude in the discussion whether one single parameter (i.e., Energy priority information) or multiple parameters (i.e., Energy Efficiency, Energy Saving Status in addition to Energy priority information) are needed in the NF profile. It should be noted the UP path selection also depends on using the NF selection above,