**3GPP TSG-WG SA2 Meeting #160 *S2-2313277***

**Chicago, United States, November 13 – 17, 2023 (revision of S2-2312743)**

**Source: Huawei, HiSilicon**

**Title: New KI: Selection of Network Function**

**Document for: Approval**

**Agenda Item: 19.4**

**Work Item / Release: FS\_EnergySys/Rel-19**

*Abstract: This document proposes a new Key Issue description regarding the selection of Network Function with considering the energy saving and energy efficiency.*

# 1. Introduction

This document proposes new Key Issues description regarding the following aspects:

* Selection of Networking Function with considering the energy saving and energy efficiency. WT#3 highlights the following parts:

|  |
| --- |
| - WT #3. Study 5GS enhancements (e.g., energy usage adjustment for NF from CN aspect, energy saving related decision making, **NF selection leveraging NF energy states**) for network energy saving including 5GC(NFs) and NG-RAN interactions, analytics, etc. Impacts on the UE are not ruled out e. g., for scenarios specified in TR 22.882 by SA1 EnergyServ. |

Currently criteria of the Network Function selection mainly focus on the capability (e.g. support of certain feature), Service Area (e.g., Service area of the SMF), capacity related, UE location etc., however, lack of consideration on energy saving/energy efficiency which may cause sub-optimal result of energy saving related. Therefore, it is beneficial to add this new key issues in the study.

# 2. Text Proposal

It is proposed to capture the following changes vs. TR 23.700-66

\* \* \* \* First change \* \* \* \*

## 5.A Key Issue #A: Selection of Network Function considering energy saving or energy efficiency

### 5.A.1 Description

Currently the criteria of the Network Function selection mainly focus on the capability (e.g. support of certain feature), Service Area (e.g., Service area of the SMF), capacity related, UE location etc. The lack of considerations on energy saving and/or energy efficiency may cause sub-optimal result of network operations or service requirement fulfilment.

This key issue will study the following aspects:

- Whether and how to enhance the NF selection related functionalities considering energy saving and/or energy efficiency based on e.g. NF energy states, analytics regarding energy saving and/or energy efficiency, UE subscription, capability of NFs, energy related information provided by OAM or from other NFs;

NOTE 1: Existing information defined by SA5 impacting the NF selections procedure (e.g. energy saving attributes/states as defined in TS 28.541 [X]) are considered during the study of this key issue.

NOTE 2: Existing NF selection mechanisms in SA2 is taken as the baseline.

\* \* \* \* End of changes \* \* \* \*