**3GPP TSG-SA5 Meeting #162 *S5-254007d1***

Goteborg, Sweden, 25 - 29 August 2025

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **28.310** | **CR** | **0089** | **rev** | **1** | **Current version:** |  |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

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| ***Title:*** | Rel-19 CR TS 28.310 Add use case and requirements for ratio of renewable energy | | | | | | | | | |
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| ***Source to WG:*** | China Mobile | | | | | | | | | |
| ***Source to TSG:*** | SA5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | Energy\_OAM\_Ph3 | | | | |  | ***Date:*** | | | 2025-08-12 |
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| ***Category:*** |  |  | | | | | ***Release:*** | | | Rel-19 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
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| ***Reason for change:*** | | New aspects of energy related information, e.g., renewable energy consumption per UE granularity, per QoS flow granularity, and per PDU Session granularity, are expected to be provided by the 5G system. There is a need for the 3GPP management system to report the ratio of renewable energy per gNB and UPF along with the total energy consumption of gNBs and UPFs, or to report the renewable energy consumption for different granularities directly. | | | | | | | | |
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| ***Summary of change:*** | | Add use case and requirements to collect the ratio of renewable energy per gNBs and UPFs, and the renewable energy consumption for different granularities. | | | | | | | | |
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| ***Consequences if not approved:*** | | Use case and requirements to collect the ratio of renewable energy per gNBs and UPFs and the renewable energy consumption for different granularities would be missing. | | | | | | | | |
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| ***Clauses affected:*** | | 5.1.x (new), 5.2. y (new) | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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| **First change** |

#### 5.1.x Renewable energy consumption

The operators are interested in using renewable energy sources to reduce emissions and boost network efficiency. Therefore, it’s important to track and report the share of energy from renewable sources in their networks.

Due to the highly variable and unpredictable nature of renewable energy sources, the supply of renewable energy varies substantially by time and location. There is a need for the 3GPP management system to support to report the ratio of renewable energy on different granularities (e.g., NFs, Sub-netwrok), and the total energy consumption without considering the amount due to renewable and to non-renewable in order to estimate of renewable energy consumption, or to report the renewable energy consumption for different granularities directly. The estimation of Renewable Energy Consumption in the time interval T due renewable power supply allows to consider this factor in the decision related to NF (re)selection, for example in order to give priority to the NF function making use of the renewable energy based on the amount of renewable energy that is consumed by a UE.

Therefore, the 3GPP management system need to support to provide the ratio of renewable energy (e.g., per 5GC NF, per gNB, per S-NSSAI) based on energy related information obtained from various sources, or to provide the renewable energy consumption for different granularities, and support to report this information to authorized consumers, e.g., EIF.

Traceability: REQ-RECM-CON-1.

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| **Next change** |

#### 5.2.y Requirements for renewable energy consumption measurement

**REQ-RECM-CON-1:** The 3GPP management system shall be able to allow its authorized consumers to associate energy supply information and renewable energy related information, i.e., the ratio of renewable energy, the renewable energy consumption for different granularities (e.g., per 5GC NF, per gNB, per S-NSSAI) to be utilized within the 3GPP system.

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| **End of change** |