**3GPP TSG-SA WG4 Meeting #127e S4-240715**

**eMeeting, 4**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **26.439** | **pCR** |  | **rev** | **01** | **Current version:** | **1.0.0** |  |
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| *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 | **x** | Radio Access Network |  | Core Network | **x** |

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| ***Title:*** | Use case on Application energy efficiency monitoring | | | | | | | | | |
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| ***Source to WG:*** | Nokia | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
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| ***Work item code:*** | FS\_MediaGREEN | | | | |  | ***Date:*** | | | 29-03-2024 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
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| ***Reason for change:*** | | One of the objectives of [S4-240](https://www.3gpp.org/ftp/TSG_SA/WG4_CODEC/TSGS4_127_Sophia-Antipolis/Docs/S4-240515.zip)468 states the following:  “Refine relevant SA1 use cases (5.5, 5.8, 5.9, 5.10 and 5.14) in TR 22.882 in the SA4 context.”  In this context, it is proposed to add the proposed content to the latest draft of TR 26.439 v 1.0.0 so that it is not left incomplete. | | | | | | | | |
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| ***Summary of change:*** | | This CR proposes new text to be added in TR 26.439 on “Use case on Application energy efficiency monitoring” use case section | | | | | | | | |
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| ***Consequences if not approved:*** | | Proposed objectives will not be met. | | | | | | | | |
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| ***Clauses affected:*** | | 5.1.2 (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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| 1st Change |

### X.x.x Potential new requirements needed to support the use case from SA4 perspective.

Based on the predicted energy efficiency information exposed from the 5G system, the application service provider shall be able to adapt the application service parameters based on the 5GS feedback. Such adaptation of the application service parameters can be for instance the application server re-location to an edge data network to enhance the energy efficiency for the application. In order to perform such operations, the application service provider shall use the relevant APIs exposed by the 5G system operator.

Based on the derived energy efficiency information notification for one or more application services exposed from the 5G system, the application service provider shall be able to decide to dynamically switch to a different service level, which may have different KPIs associated with the service. The switching of service level applies across all users/UEs subscribed to the application service. In order to perform such operations, the application service provider shall use the relevant APIs exposed by the 5G system operator.

The subsequent analysis by SA4 should consider:

* The extent to which different service levels can be described by applications provisioning these systems.
* The extent to which application flows are adaptable (possibly in real time) to these different service levels in reaction to reported energy consumption information.
* The extent to which service levels can adjusted heterogeneously across different target service areas of a 5G System with different energy consumption constraints.

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| End of change |

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| 2nd Change |

X. References

[x] 3GPP TS 22.882: " Study on Energy Efficiency as a service criteria".

[x] 3GPP TS 28.310: "Management and orchestration; Energy efficiency of 5G".

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| End of change |