**3GPP TSG-SA5 Meeting #157  *S5-246028d1***

**Hyderabad, India, 14-18 October 2024**

**Title:** LS to RAN3 on renewable energy based LBO

**Response to:**

**Release:** 3GPP Rel-19

**Work Item:** FS\_Energy\_OAM\_Ph3

**Source:** 3GPP SA5

**To:** RAN3

**Cc:**

**Contact Person:**

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**Attachments:** None

**1. Overall Description:**

3GPP SA5 (Management, Orchestration and Charging) has initiated its Release 19 study on energy efficiency and energy saving aspects of 5G networks and services. In this context, 3GPP SA5 identified a use case where neighbor gNBs, which are candidates for distributed LBO, are powered using different types of energy sources, some of which being renewable, some others being not, and where the decision for choosing the target gNB to receive the load transferred from source gNB is taken based on such considerations.

As an illustration, in the figure below, gNB A and gNB C are both candidates to receive traffic load transferred from gNB B, the only difference between gNB A and gNB C being that gNB A is fully powered by renewable energy. With the guidance of renewable energy usage policy, gNB B gives gNB A higher priority and chooses gNB A.



To support this capability, the procedure of Distributed SON LBO would need enhancements to consider new energy related information, such as e.g. carbon emission, carbon emission efficiency and renewable energy usage.

**3. Actions:**

To RAN3: SA5 would like to ask RAN3 to provide SA5 with your feedback on the use case and potential solution described above.

**5. Date of Next TSG-SA WG5 Meetings:**

SA5#158 Nov. 18 - 22, 2024 Orlando, USA

SA5#159 Feb. 17 – 21, 2025 Sophia-Antipolis, France