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Comments on 'Open Energy Networks'

Dear Sirs,

In your paper 'Open Energy Networks' you described the problems and possible solutions for the grid integration of distributed energy resources (DER). Furthermore, you asked for consultations and comments with further ideas to help stabilizing the electrical grid in the next years.

With this letter I would like to give you some additional information about voltage regulated distribution transformers (VRDT) that can regulate the voltage in the LV grid by using On-Load-Tap-Changers (OLTC) without further investments in network infrastructure ("poles & wires"). This technology is used in most power transformers in Australia where OLTC today help transmission operators to regulate the voltage in the transmission and distribution network. VRDT are a cost effective alternative to investments in poles and wires and the technology has been accepted all-over Europe by DNSP to minimize costs for grid integration of DER (see VDE FNN report).

Please find as annexes to this letter two publications:

1. 'Voltage Regulating Distribution Transformer (VRDT) – Use in Grid Planning and Operation', FNN VDE, 2016 (The VDE e.V. (German: Verband der Elektrotechnik, Elektronik und Informationstechnik) is one of Europe's largest technical-scientific associations with 36,000 members, including 1,300 corporate and institutional members and 8,000 students)
2. 'Benefits of using voltage regulating distribution transformers for grid integration of renewables – Lessons learned from first installations in Australia and New Zealand', Dr. Thomas Smolka, EEA Conference NZ, 2018 (Best paper award as non-member)

I hope my input is valuable and can help ENA identifying all available and cost effective technical solutions that should be used by DNSP to ensure grid integration of DER is done most efficiently at lowest costs for end-customers in Australia.

Best regards,

Dr. Thomas Smolka
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