



Mary Jane Coombs,
Director,
California Air Resource Board,
1001 I Street, Sacramento, California 95814.

22nd August 2018

Dear Ms. Coombs,

Siemens wishes to inform you that we support amending CARB's existing regulations governing Sulphur Hexafluoride emissions from gas insulated switchgear. Siemens made a statement in 2014 of its intention to be CO2 neutral across all businesses by 2030, and is well on the way to achieving this.

For Non SF6 applications, Siemens uses Clean-air technology with vacuum interruption (VI); this has a GWP of zero. In our view, this is the most sustainable solution possible. Siemens has used VI for over 40 years, and in high voltage applications since 2010. Clean air insulation has been in service in high voltage switchgear since the 1970's.

Please find below our SF6-free High Voltage Product release schedule for Gas Insulated Switchgear and Dead Tank Breakers. We look forward to working with CARB and all California utilities on these exciting changes.

Clean Air Portfolio & Roadmap – 60 Hz Circuit Breakers



| Voltage | kA | Continuous I | Release Date |
|------------|------------------|--------------|--------------|
| 72.5 kV LT | 40 kA | 3150 | 2018 |
| 72.5 kV DT | 40 kA | 3150 | 2020 |
| 145 kV DT | 40 kA | 3150 | 2020 |
| 145 kV DT | 63 kA | 3150 | 2022 |
| 245 kV DT | 40 kA | 3150 | 2022 |
| 245 kV DT | 63 kA | 4000 | 2024 |
| 362 kV DT | 63 kA | 4000 | 2024 |
| 500 kV DT | 63 kA | 4000 | 2026 |

Clean Air Portfolio & Roadmap – 60 Hz GIS



| Voltage | kA | Continuous I | Release Date |
|--------------|---------|--------------|--------------|
| 72.5 kV Wind | 31.5 kA | 1250 | 2018 |
| 145 kV | 40 kA | 3150 | 2018 |
| 145 kV | 50 kA* | 3150 | 2020 |
| 245 kV | 50 kA* | 4000 | 2022 |
| 362 kV | 63 kA* | 5000 | 2024 |

***Siemens will be announcing the successful development of the 50 kA and 63 kA Vacuum Interrupter (VI) at the Cigre Meeting in August**

CIGRE is a major conference and presentation event in the electrical engineering calendar and Siemens will be presenting the latest developments in Non SF6 technology and VI's to support the above roadmap.

Sincerely

Paul Roskilly

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Siemens Industry Inc.
Energy Management Division, High Voltage Products