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NEWS



## They use g<sup>3</sup>, GE's SF<sub>6</sub>-free solution

And reduce their CO<sub>2</sub>-equivalent emissions by 372,000 tons  
12/06/2018 - 2.57 pm

 CLIMATE CHANGE  GIS  G<sup>3</sup>  
 SF<sub>6</sub>-FREE SOLUTIONS

*What we do matters and can impact our environment, too. COP 24 is taking place this week to introduce common rules to limit global warming. Discover what 12 leading utilities are doing to avoid additional CO<sub>2</sub> on their grids? Will you join the g<sup>3</sup> trend?*



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As a driver against the climate change, the global warming and the release of CO<sub>2</sub>-emissions into the atmosphere, the European Union has paved the way with its **F-gas regulation** challenging the actors of the energy sector at its utmost for finding solutions to replace SF<sub>6</sub>-gas in the electrical equipment.

SF<sub>6</sub> (sulfur hexafluoride) has been the gas used in high voltage equipment for decades thanks to its remarkable properties as an insulating and switching medium. However, it's now being negatively called-out by the authorities as being a greenhouse gas. Its global warming potential<sup>(1)</sup> (GWP) is 23,500 times greater than CO<sub>2</sub> (IPCC 2013) and it has a lifetime in the atmosphere of 3,200 years, putting it at the top of the Kyoto Protocol list.

### And the winner is... g<sup>3</sup>

GE began researching for a relevant solution years ago. Together with 3M<sup>TM</sup>, the company worked on a gas mixture based on 3M<sup>TM</sup> Novec<sup>TM</sup> 4710 fluid and CO<sub>2</sub>/O<sub>2</sub>. This solution – commercially available - is called g<sup>3</sup> (g cubed). g<sup>3</sup> is indeed a revolutionary gas for the electrical transmission industry, offering the **same technical performances as SF<sub>6</sub> with an environmental impact reduced by more than 99%**.

Since the 2014 launch of the g<sup>3</sup>-gas mixture to replace SF<sub>6</sub> in high voltage equipment (see article [“In search for an SF6-gas replacement”](#)) and the launch of the first SF<sub>6</sub>-free high voltage gas-insulated substations in 2016 (see article [“Gas-insulated Substations are switching to g3, the SF6-free solutions”](#)), as many as 12 electrical utilities in no less than seven countries have already installed or planned to install g<sup>3</sup> SF<sub>6</sub>-free gas-insulated switchgear (9 sites, 58 bays), g<sup>3</sup> gas-insulated lines (5 sites, 1957 meters) and g<sup>3</sup>-current transformers (2 sites, 6 CT). Some utilities have already placed several orders as they are convinced about the impact of this solution and the number of requests for g<sup>3</sup>-filled products is increasing monthly.

## COP 24 has just kicked off: some leading utilities are taking action against global warming with g<sup>3</sup>

During this COP 24, we would like to recognize and thank our future-oriented customers. We are proud of these g<sup>3</sup> pioneers, launching a new era for the electrical transmission. Thanks to their engagement and resulting projects, more than **372,000 tons of CO<sub>2</sub>-equivalent** (approximately 16 tons of SF<sub>6</sub>) **will not be installed** on their electrical grids. That corresponds to more than 80,000 cars taken off the road, an amazing amount indeed!

True, these are already some great figures. We are extremely proud about being part of this fantastic achievement in support of a healthier planet.



**Adopt g<sup>3</sup> and reduce your CO<sub>2</sub> impact**

And, this is only the beginning of a very promising journey... We would like to encourage all of you, especially those who deal with SF<sub>6</sub>, every day - to check and see what **you can do** to reduce the environmental impact of your next high voltage substation project. Have you discovered the below g<sup>3</sup> App yet? We recommend you evaluate the positive impact of using g<sup>3</sup> in your high voltage substations. Join the trend. We are keen to have you all on board: utilities, standardization bodies, academia and students, influencers.



## Seeking more information about g<sup>3</sup>?

We have created a one-stop shop of resources including webinars, brochures, interviews and much more... check out GE's Grid Solutions **g<sup>3</sup> dedicated webpage**, the **Resource pages**, or consult with our g<sup>3</sup> R&D experts, Yannick Kiefel, Arnaud Ficheux and Robert Luescher listed on the right side of this article.

## Notes

\* g<sup>3</sup> is a trademark application owned by Grid Solutions SAS

\* 3M and Novec are trademarks of the 3M Company

(1) Calculation mode of GWP: please refer to the sidebar in Think Grid article "**The impact of "F" gas regulation**"

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**Robert Lüscher**

*Senior R&D Systems Engineering Manager at Grid Solutions*



**Yannick Kieffel**

*Materials and Eco-Design R&D Manager, Grid Solutions*

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