



For Immediate Release

Electronic Gases Market Undergoing Major Shifts

Techcet Forecasts \$3.9B Gas Business for 2016

San Diego, CA, June 28: The 2015 market for electronic gases totaled \$3.65B, up 4.3% over the prior year, according to a new report from Techcet Group, “**Critical Materials Report: Electronic Gases 2016.**” The 2016 outlook is for 6.8% growth overall, with the electronic specialty gases segment leading the way with 8.9% growth to \$2.53B and bulk gases increasing 4.3% to \$1.37B. Single digit growth is expected to continue to be the norm, with looming shortages in neon and helium threatening to retard the pace.

In bulk gases, Air Liquide increased its share by 3% and now dominates the market at 31% share. In specialty gases, market shares revealed major shifts, including former leader Air Products slipping in position behind Air Liquide. Air Liquide has taken the lead position at 27%, with Air Products dropping to 17% after repositioning themselves as an independent entity, now recognized as Versum. Praxair, Linde and TNSC-Matheson, followed by SK Materials (formerly OCI) continue to round out the other global share leaders.

Concerns about the availability of Neon continue to plague the industry. Over 70% of the global supply of neon is sourced from Iceblick in Odessa, Ukraine, where the political unrest has resulted in a 60% reduction in output in 2015. New capacity is being installed in Texas, Indiana, Ukraine, China and Dubai, but takes two years to come online. The shortfall has sent DUV laser manufacturers scrambling to develop strategies for neon use reduction, but these are not yet considered to be adequate. Meanwhile, the shortage has contributed to the further delay of EUV implementation from 2016-17 to 2020.

The scramble for new commercial sources for helium is being driven by the decision of the US Bureau of Land Management to stop supplying to the merchant market by 2021. This represents 30-40% of the US supply and 15-20% of the global supply. A new source of He has just been discovered in Tanzania, but any extraction and purification plant will take 2+ years to come on line. While helium supply is not an immediate concern, pricing has continued inching upward. By 2021, new sources/expansions will need be in full production in order to compensate for the BLM exiting the commercial market. See TECHCET's Gases Report for actual timelines and details.

TEHCET's 2016 Gases Report and 2016 Neon Report provide strategic information to ensure business continuity and support category management of the specialty and bulk gas markets and their supply chains. Included are supplier issues, raw material concerns and supplier profiles. Current issues surrounding helium, neon, nitrogen trifluoride, tungsten hexafluoride, krypton, xenon, and several more are provided in the Gases Report. High demand applications and forecast on supply vs demand are highlighted in the Neon Report. Global supply chain issues and regulatory changes that impact gases are also discussed in this year's reports.

ABOUT TECHCET: TECHCET CA LLC is an advisory service firm focused on Process Materials Supply Chains, Electronic Materials Technology, and Materials Market Analysis for the Semiconductor, Display, Solar/PV, and LED Industries. The Company has been responsible for producing the SEMATECH Critical Material Reports since 2000. For additional information about these reports or about CMC Fabs membership please contact Lita Shon-Roy or Jerry Yang at info@cmcfabs.org +1-480-332-8336, or visit our websites at www.techcet.com and www.cmcfabs.org.

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