

the short term, yielding small but manageable price increases for helium users in the industrial sector.

“Although Texas Instruments [(TI)] has experienced price increases from our helium suppliers [since the passage of the HSA], strong conservation efforts have allowed us to keep our costs stable,” said Chad Kaneshige, Worldwide Chemical and Gas Procurement Manager at TI. This reality, echoed by many helium users in the industrial sector, underscores what will hopefully become an important trend—conservation and recycling of helium.

“As prices go up, it will provide more incentive to capture and recycle helium, and industrial users potentially can have the largest impact here,” said Chan. “Recycling is also good for laboratory applications because it means you always have a helium reserve on site which allows you to be less impacted by delays in shipments,” Chan added. “We must reduce our demand,” said Halperin, which can be accomplished through recycling and eliminating helium usage where possible. While these options require significant capital investment, Halperin believes that for small-scale helium users, reducing demand is the “one realistic avenue to pursue.”

It is also important to note that helium’s role in the research and industrial sectors continues to merit Congressional interest as evidenced by the July 15, 2014



US Bureau of Land Management’s crude helium enrichment facility near Amarillo, Texas.

oversight hearing held by the US House Natural Resources Subcommittee on Energy and Mineral Resources to discuss the implementation and administration of the HSA. The hearing examined the initial mandated helium sales from the federal helium reserve, and focused in large part on how the BLM plans to define and regulate access to excess helium refining capacity—an important part of the transition toward a private helium market.

In addition, Subcommittee Chair Doug Lamborn (R-Col.) announced the release of a discussion draft of the American Helium Security Act of 2014. This bill, co-sponsored by House

Natural Resources Committee Chair Doc Hastings (R-Wash.), is meant to “secure and encourage future production of domestic helium, ensure helium producers have the regulatory certainty they need to explore for and produce helium on federal lands and facilitate a private domestic market for US helium,” said Subcommittee Chair Lamborn.

This bill could have significant impact on the helium market—it would be wise for the community of scientific helium users to monitor and help shape it as it progresses through Congress.

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Plans for European Spallation Source on schedule

<http://europeanspallationsource.se>

In July, Sweden, Denmark, and Germany announced that funding to build the European Spallation Source (ESS) has been secured, and ESS received approval to start construction. The project is scheduled to break ground just north of Lund, Sweden, in the early autumn, meeting the planned construction phase of 2014–2019.

“Together we achieve more,” said Johanna Wanka, German Minister of Education and Research. “We are convinced that major social issues from

biology and the life sciences to materials and energy research can be effectively explored in a transnational project with the most modern infrastructure.”

As a next-generation facility, ESS is expected to be significantly brighter and more intense than existing facilities. Spallation neutrons in the ESS will be generated by accelerating protons and directing them at a target made of tungsten, which will then release high-energy neutrons. Moderators adjacent to the tungsten target wheel will slow the neutrons down

to the cold and thermal energies required for experiments. Moderation inevitably leads to loss of neutron intensity, and moderator design work includes optimizing geometries to minimize losses. By removing restraints on the initial optimization, the ESS Target division found that smaller moderator dimensions tend to increase neutron brightness.

The participating countries are Sweden, Denmark, Czech Republic, Estonia, France, Germany, Iceland, Italy, Hungary, Latvia, Lithuania, The Netherlands, Norway, Poland, Spain, Switzerland, and the United Kingdom, although the amount of contributions is still being finalized. □

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