China’s Five-Year Plan Encourages Increased R&D in the Chemicals Industry

“We are still far behind developed countries in the world in terms of the overall capability and level of technology innovation.” (from Five-Year Plan outline)

The latest Five-Year Plan, covering the period from 2016 to 2020, provides a roadmap for China’s national development. The section covering the Petrochemical and Chemical Industry emphasizes goals for innovation, including:

- Improve the traditional chemical industry by eliminating enterprises that aren’t reaching conservation and emission standards, and by upgrading areas such as marketing and e-commerce.

- Build all new chemical plants within existing chemical parks, and chemical assets outside of chemical parks will be relocated within them—to enhance innovation and synergies between material flows, logistics, engineering and environmental protection within the networks of these chemical parks.

- Upgrade the chemical industry based on independent innovation; commercially, the key target is to establish a number of world-leading chemical companies with recognized global brands;

The government objective is to turn from a big chemical country into a great chemical power, with innovation as a key driver.

Tools China will likely use to implement the plan

- Regulations, such as mandating stricter pollution limits or promoting certain production technologies
- Financial incentives for R&D, like letting companies take tax deductions for R&D costs
- Incentives for innovative products, such as government subsidies
- Incentives for government staff using GDP targets to measure their success
- Support government staff, which will encourage companies to develop products that solve specific problems

Priority segments of innovation

- Increased local R&D for, e.g., engineering plastics, organosilicones, organic fluorine materials, specialty rubbers and membranes for water treatment
- Deep research on shale gas Development of Chinese biomass technology
- Further development of modern coal chemical industry with increased environmental focus R&D on high-end downstream products
- Development of environmental protection technologies based on cooperation between industry and academia, e.g., for air and water pollution
- Development of modern producer services, e.g., logistics, scientific and technological services, creative design, business services, IT and trade

Want to know more about China’s Five-Year Plan and its impact on the chemical industry? Read our white paper “China’s chemical industry: Moving towards basic research”