

North American Nitrogen Outlook

TFI Outlook
November 2016
Doug Hoadley

Hoadley Consulting: *Over 25 years of experience in the fertilizer industry*

Expert on the nitrogen, phosphates and potash industries

- ▶ Detailed knowledge of the competitive situation for North America
- ▶ Global competitive costs analysis for N, P & K
- ▶ Feasibility studies for new projects, expansions and M&A
- ▶ Strategic planning
- ▶ Economic and marketing analysis

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Agenda

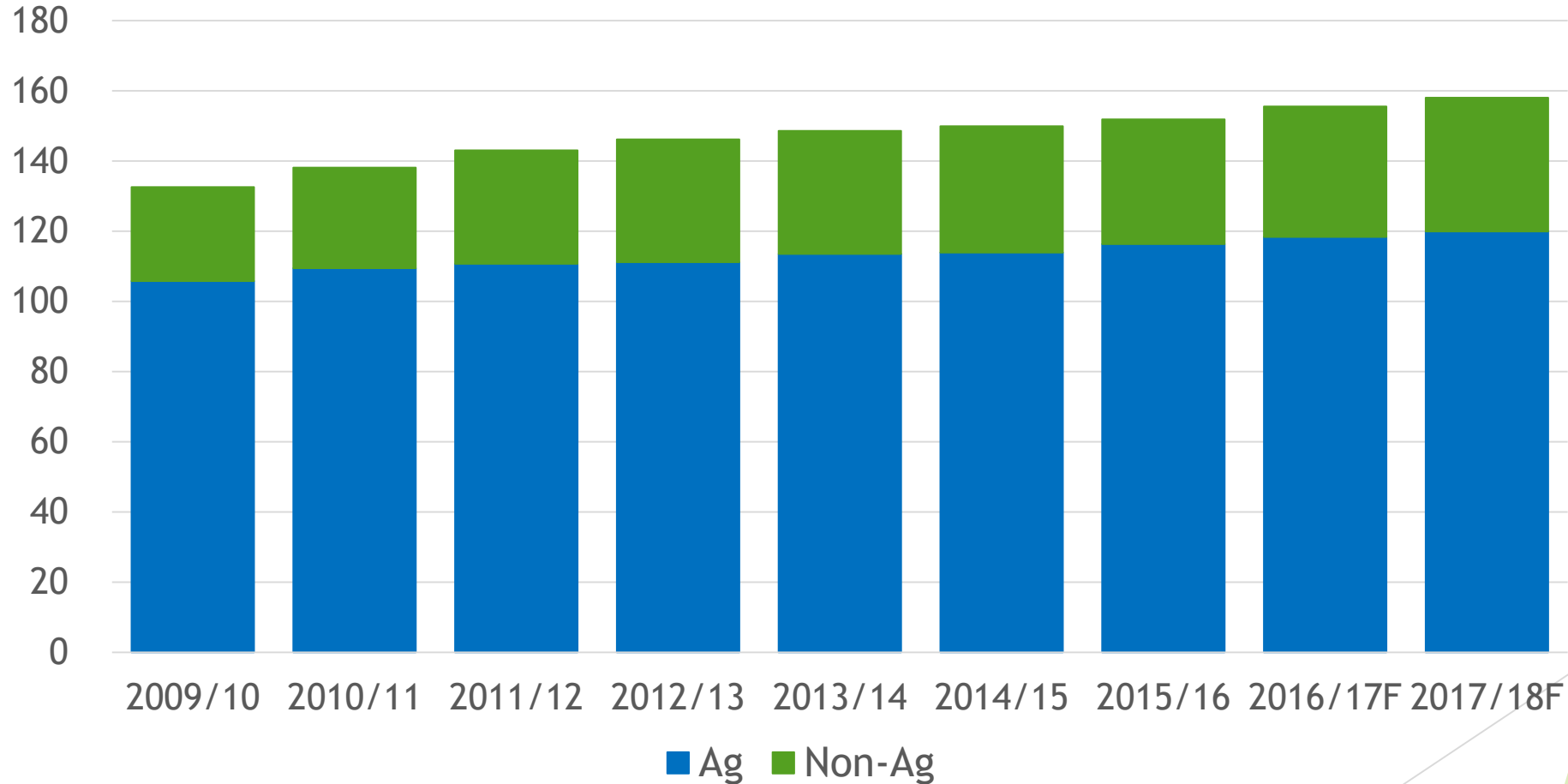
- ▶ Demand Outlook
- ▶ Changes to Capacity
- ▶ Ammonia Outlook
- ▶ Urea Outlook
- ▶ UAN Outlook
- ▶ Summary

Key Nitrogen Drivers

- ▶ Low grain prices = slow demand growth
- ▶ New nitrogen capacity puts pressures prices
- ▶ Collapse in energy values plus currency devaluations results in lower costs for marginal producers
- ▶ Cash costs for most producers have fallen
- ▶ Cheap freight shrinks the globe
- ▶ China, China, China

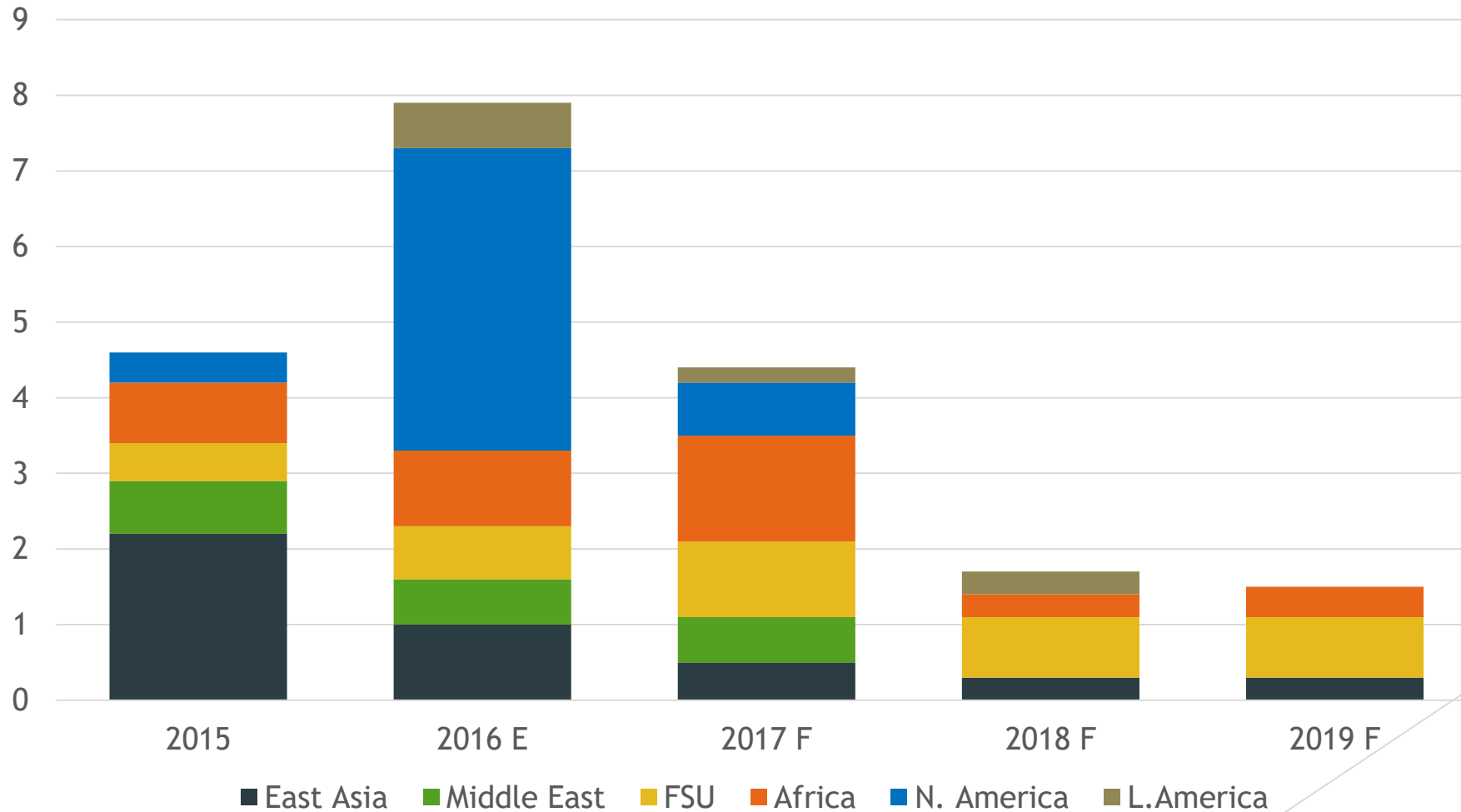
World Nitrogen Demand shows consistent growth of near 2%

Million tonnes N

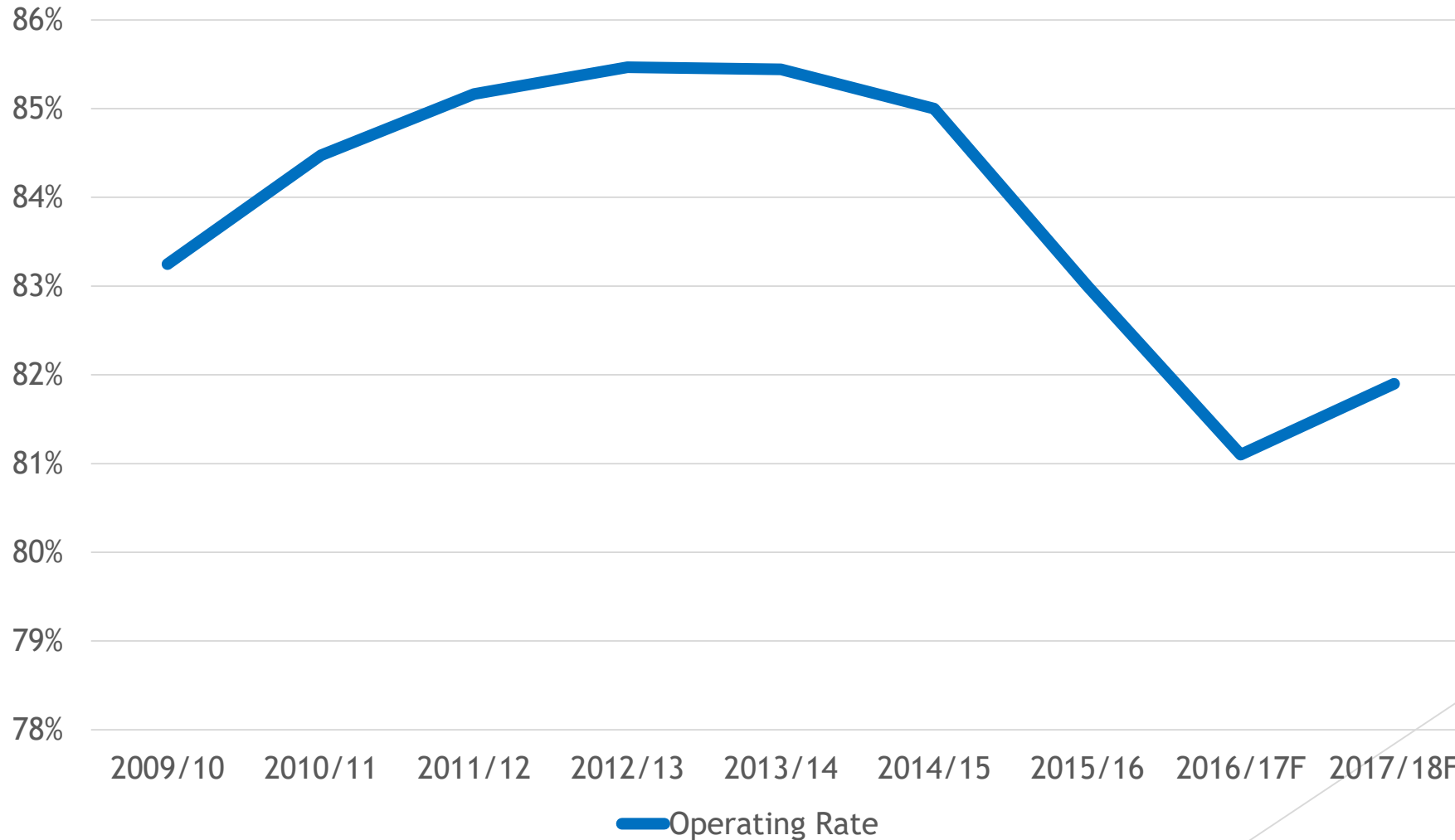


World Nitrogen Capacity growth to slow after 2017

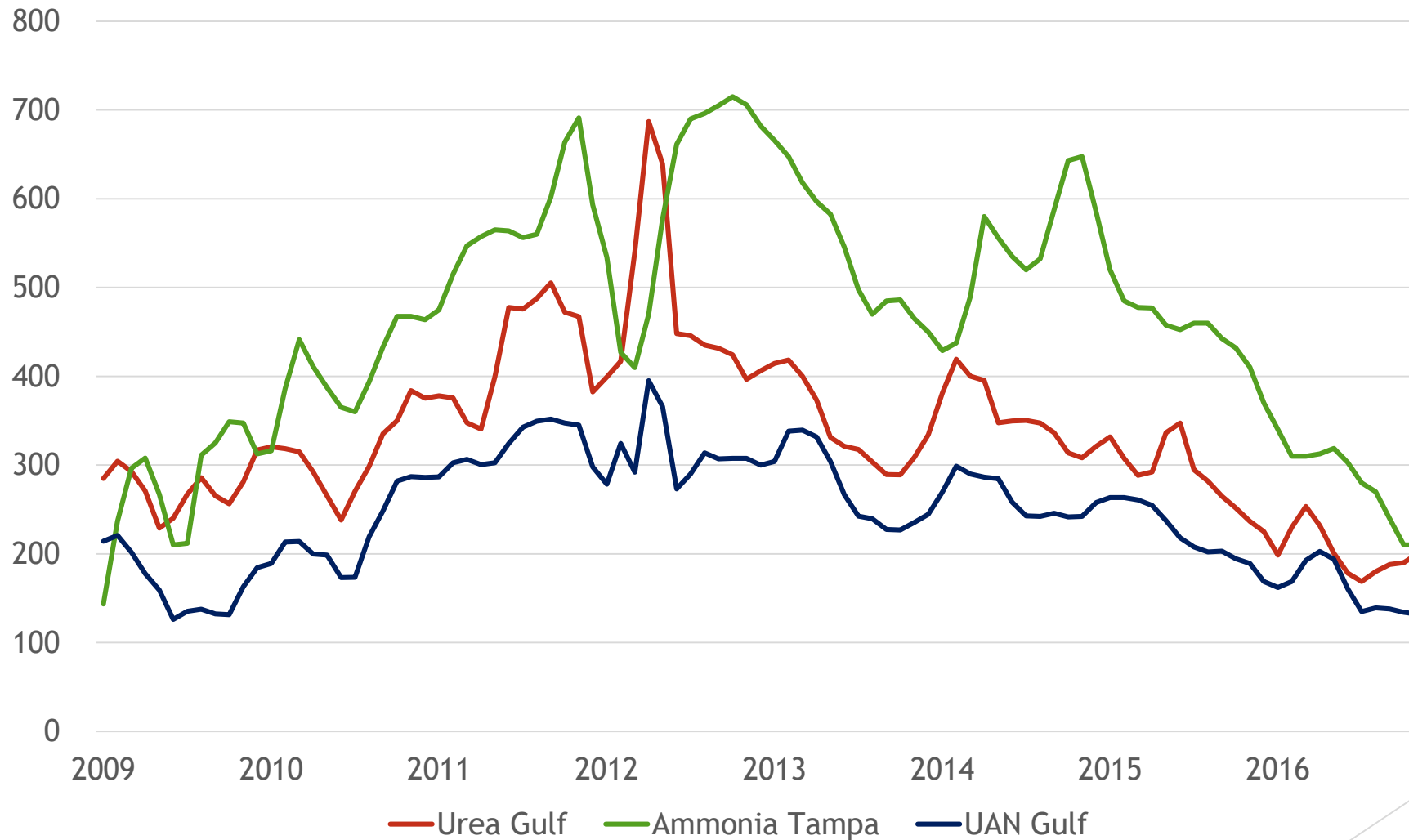
Million tonnes N



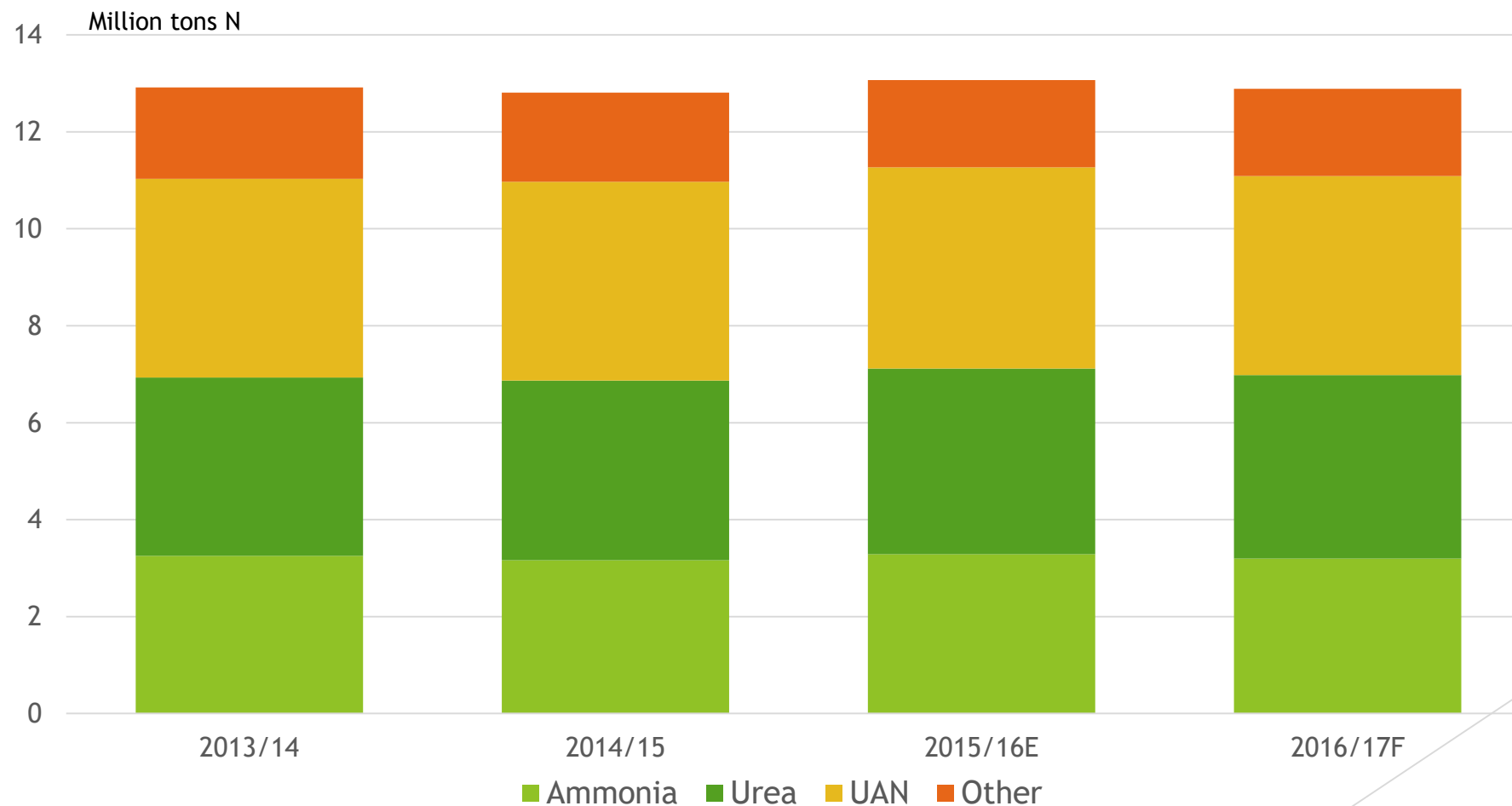
World Nitrogen operating rate declines near term, putting pressure on prices



Nitrogen Prices have declined to 7-year lows

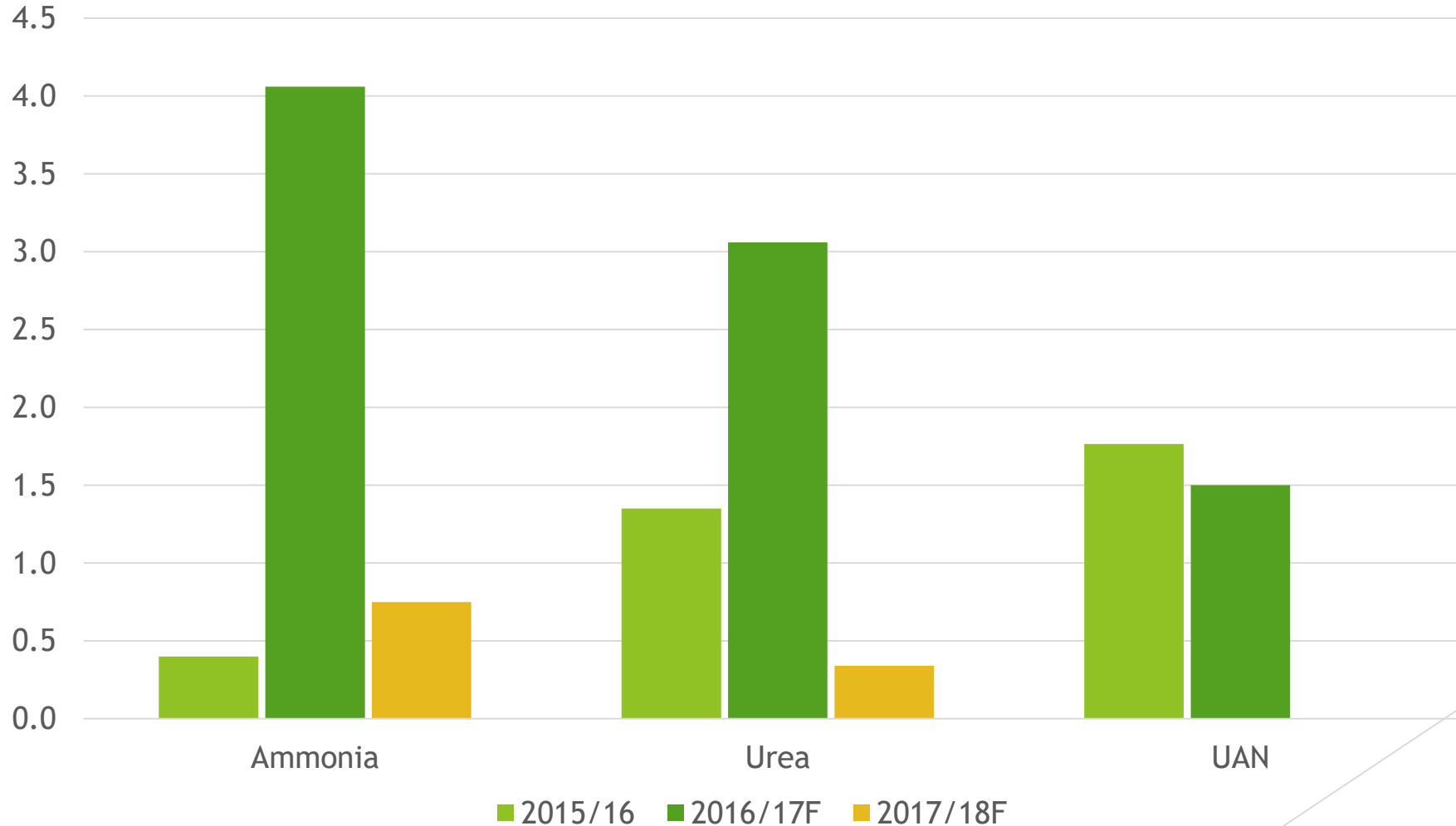


USA nitrogen fertilizer demand forecast to decline 1% to 2% next year



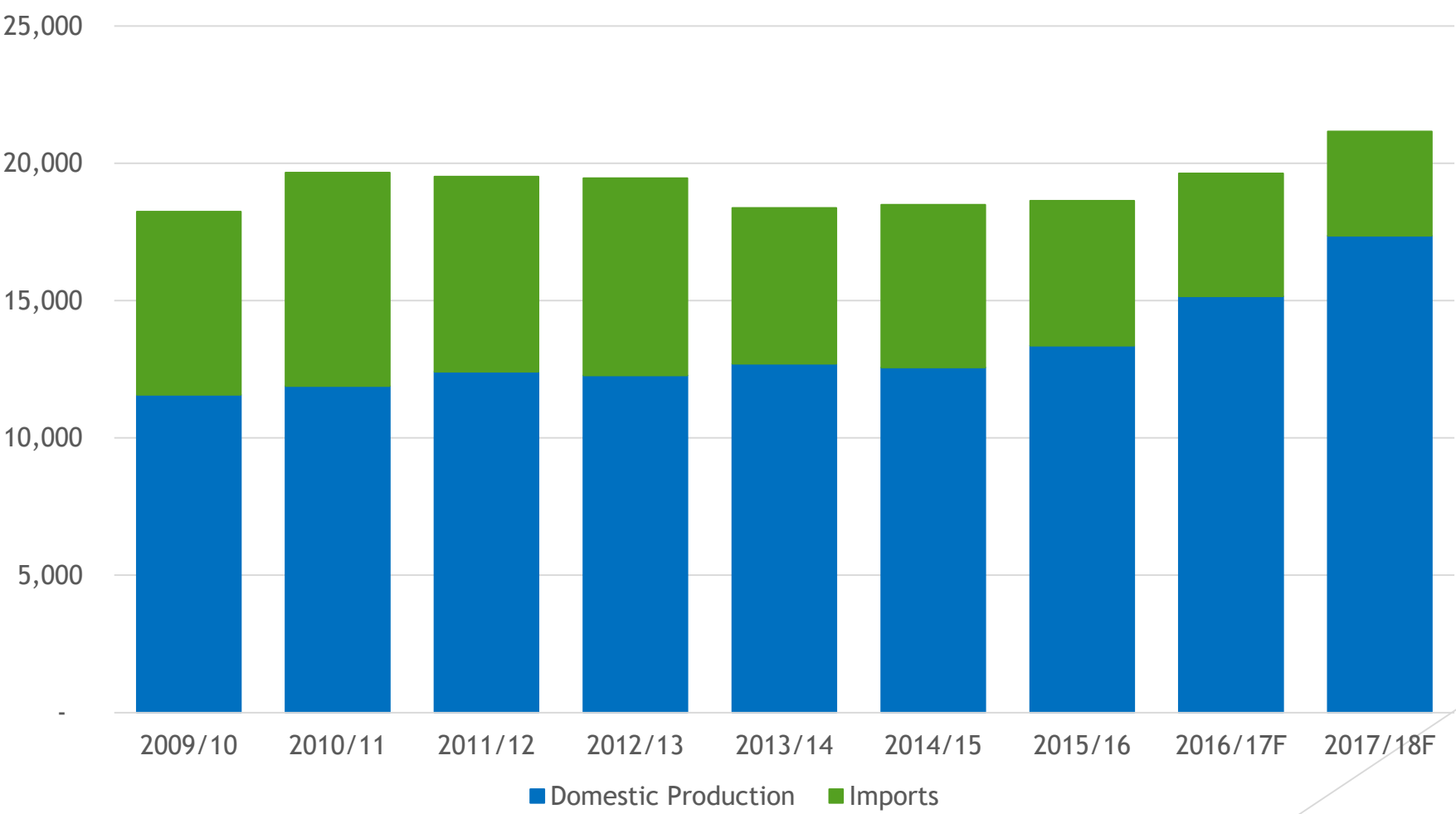
North American Nitrogen Capacity growth peaks in 2016/17

Million tons



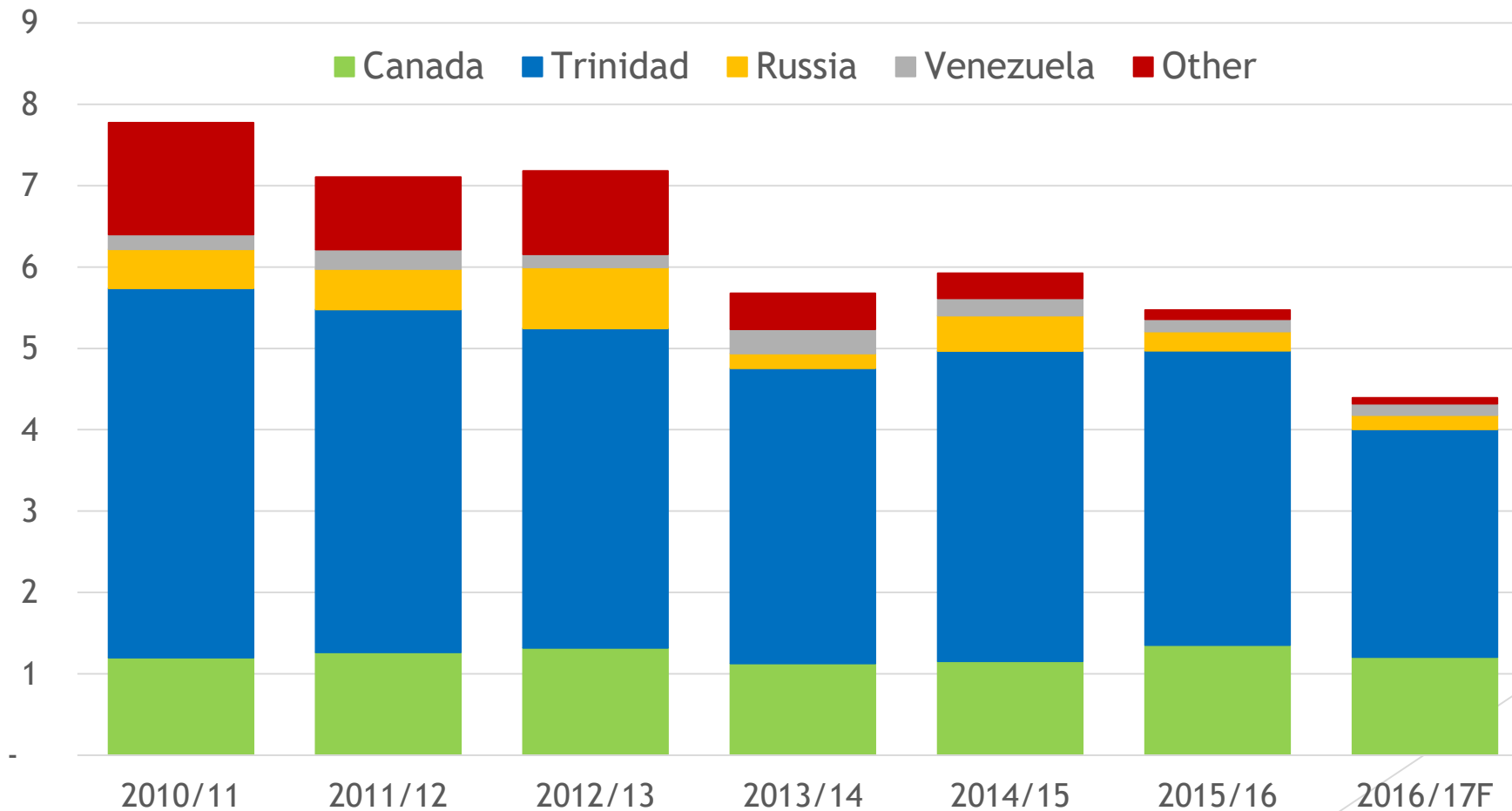
Ammonia Situation and Outlook

New USA ammonia production will displace some imports, as demand grows

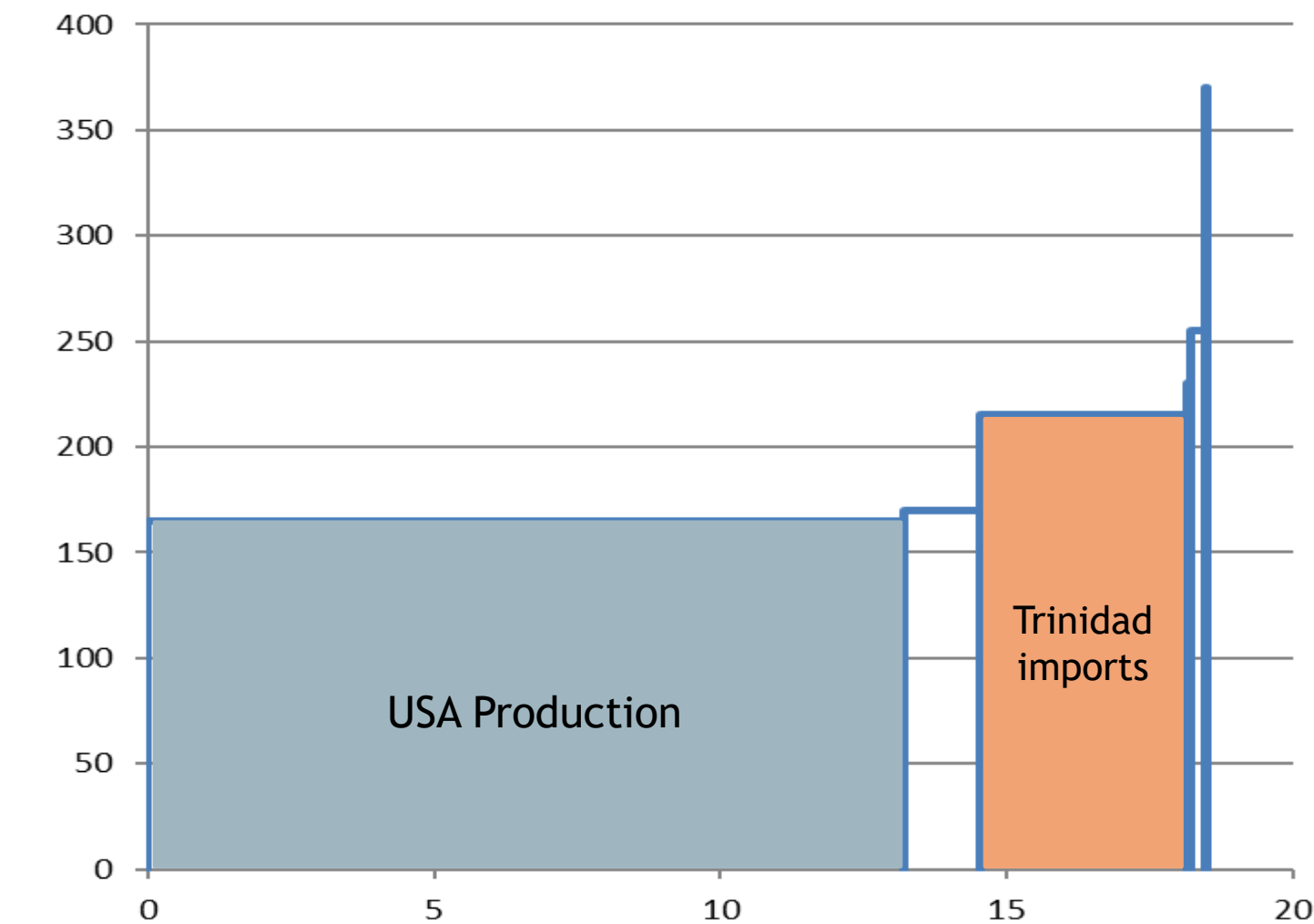


USA offshore ammonia imports to decline, especially from Trinidad

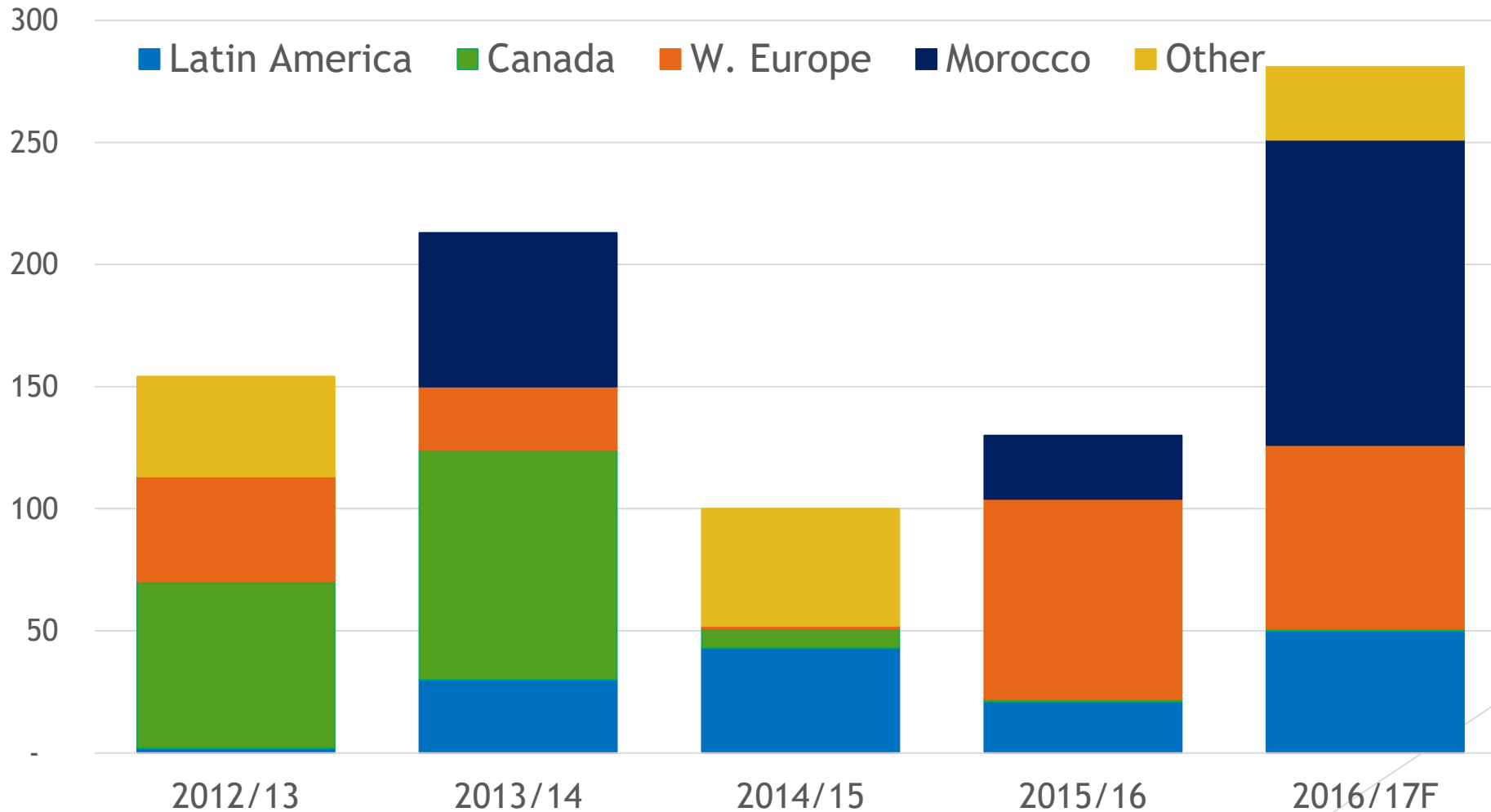
Million tons



2015/16 Ammonia Cost Curve based on USA supply

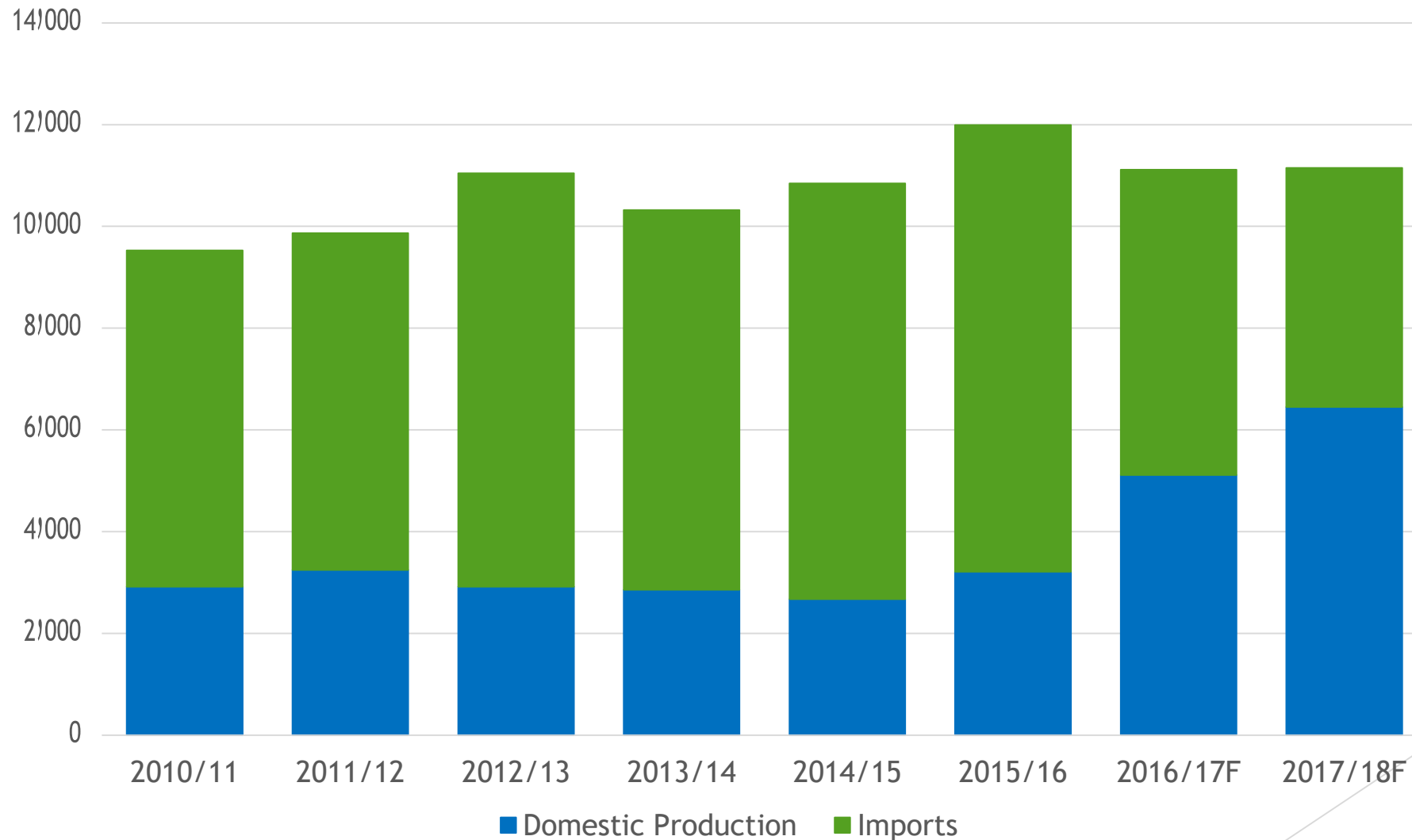


How high will offshore USA Ammonia exports grow?



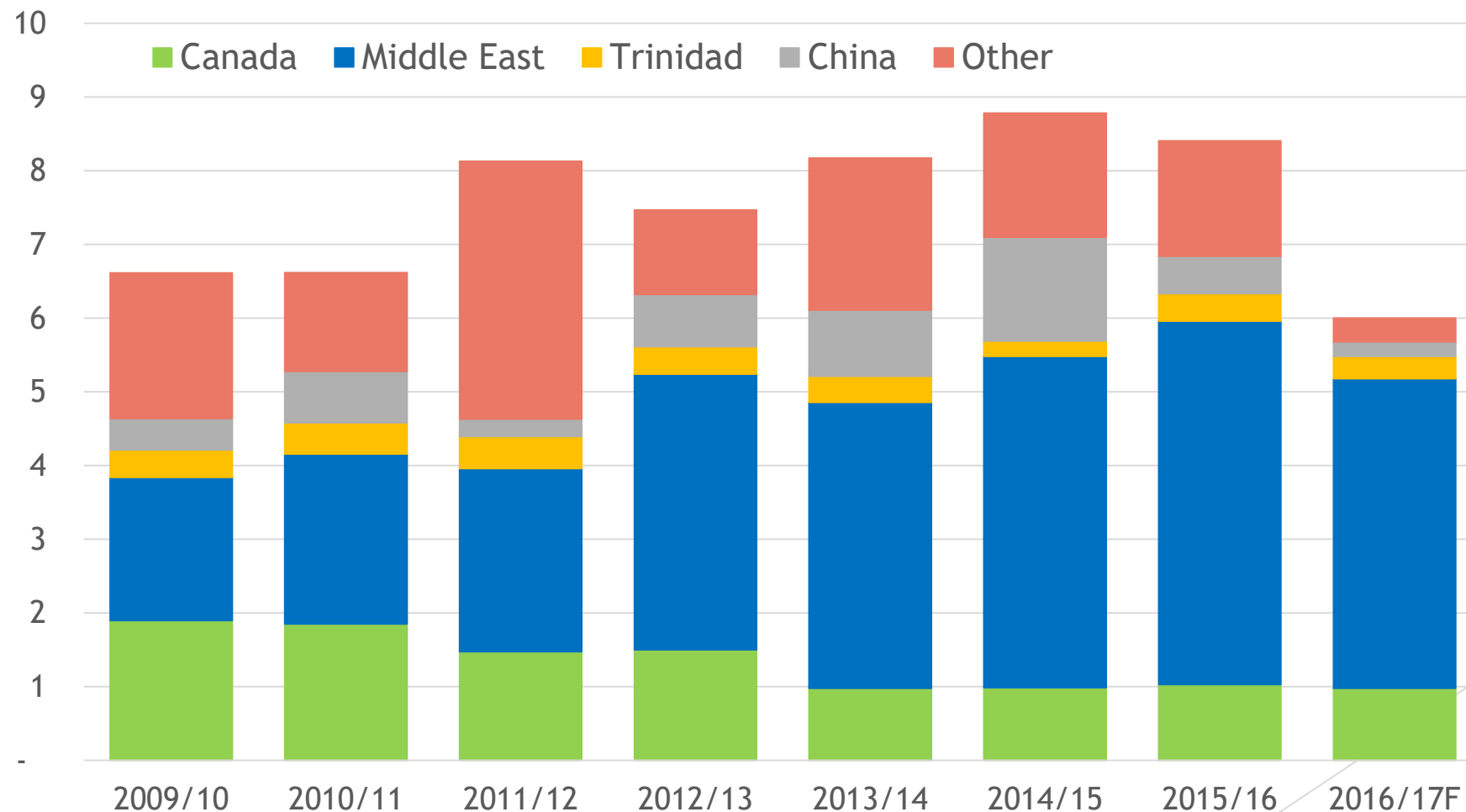
Urea Situation and Outlook

New USA urea production will displace about half of current imports by 2017/18

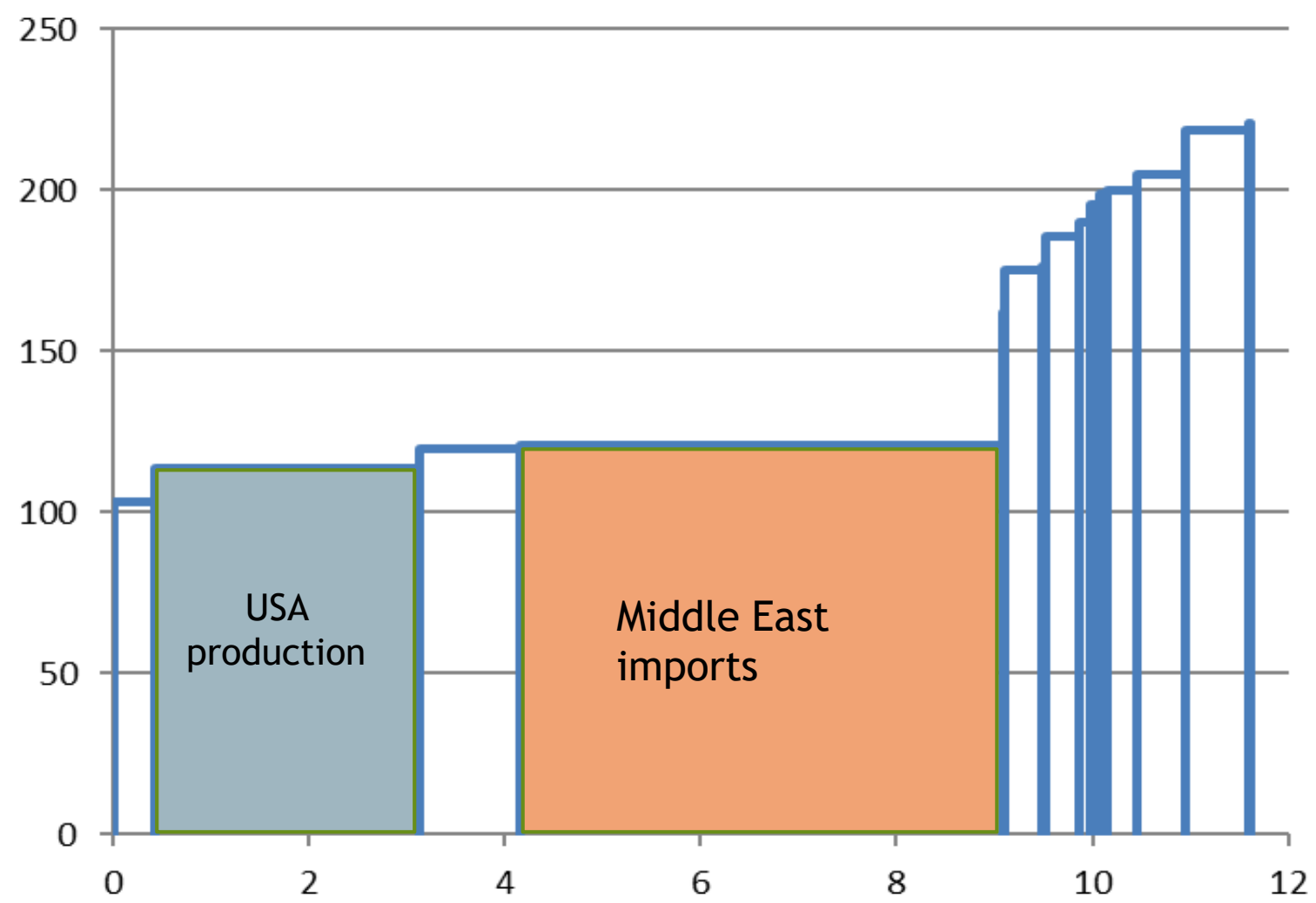


USA urea imports to decline, but Middle East remains very competitive

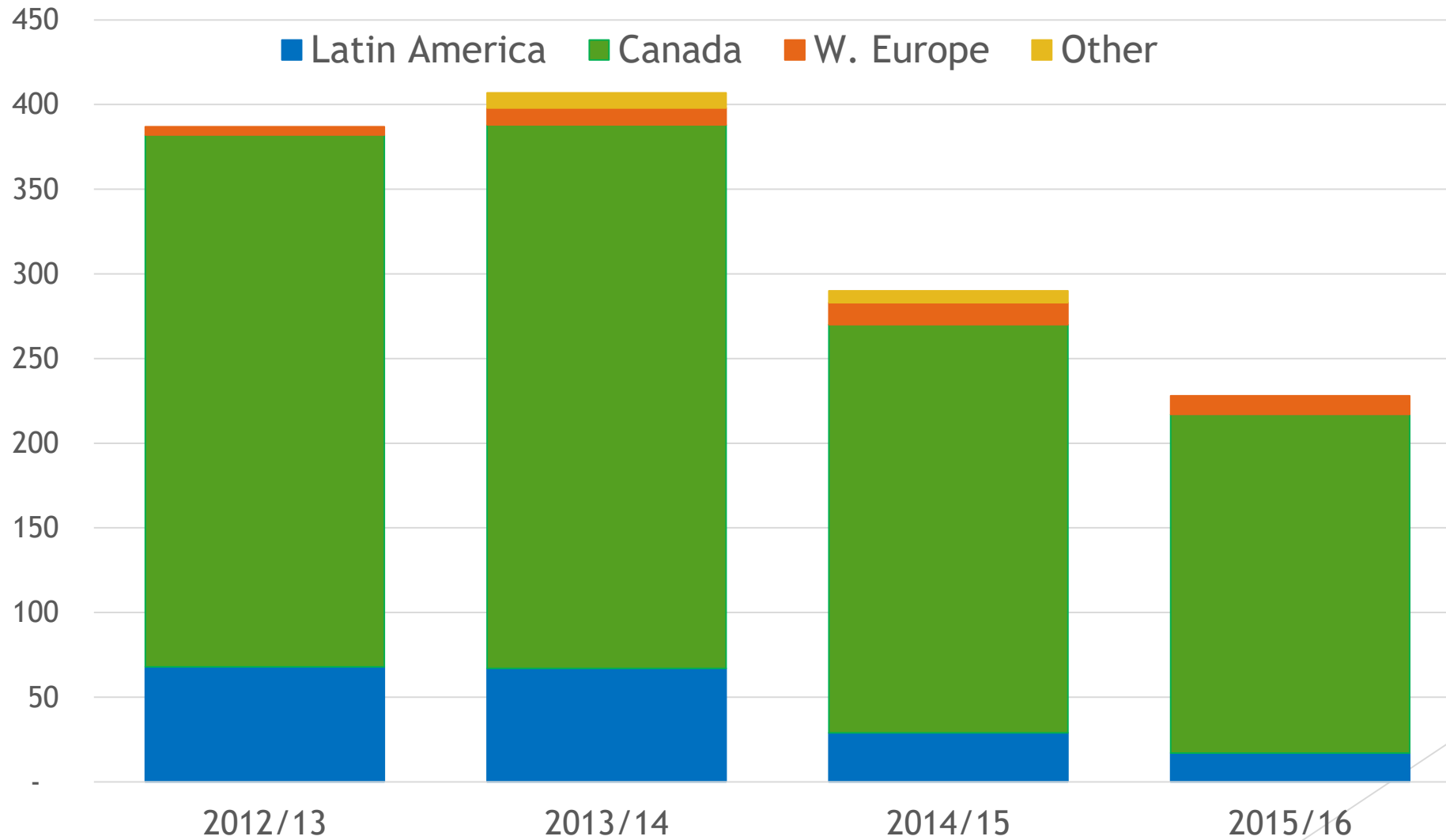
Million short tons



2015/16 Urea Cost Curve based on USA supply

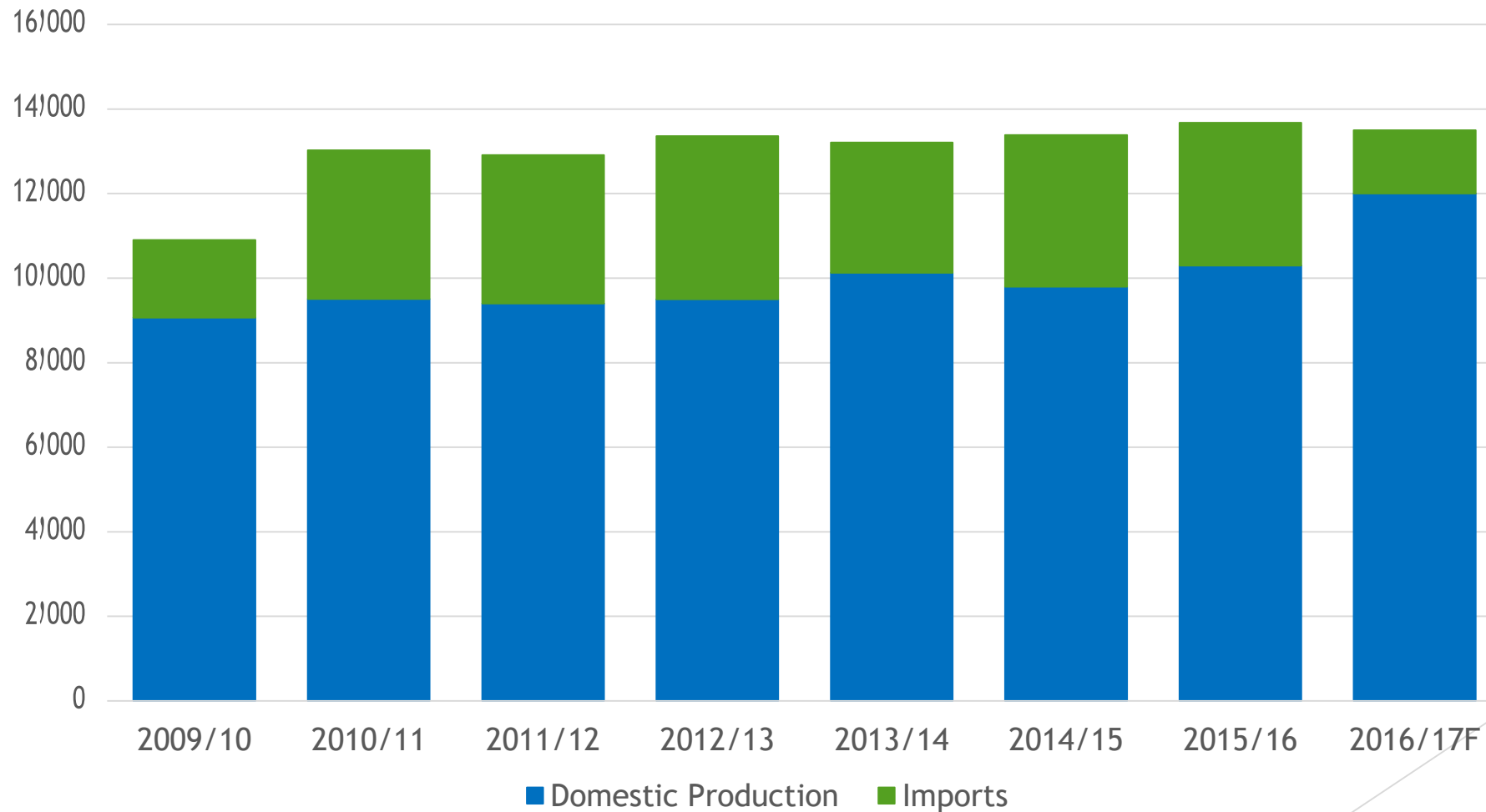


Will Offshore USA Urea exports increase?



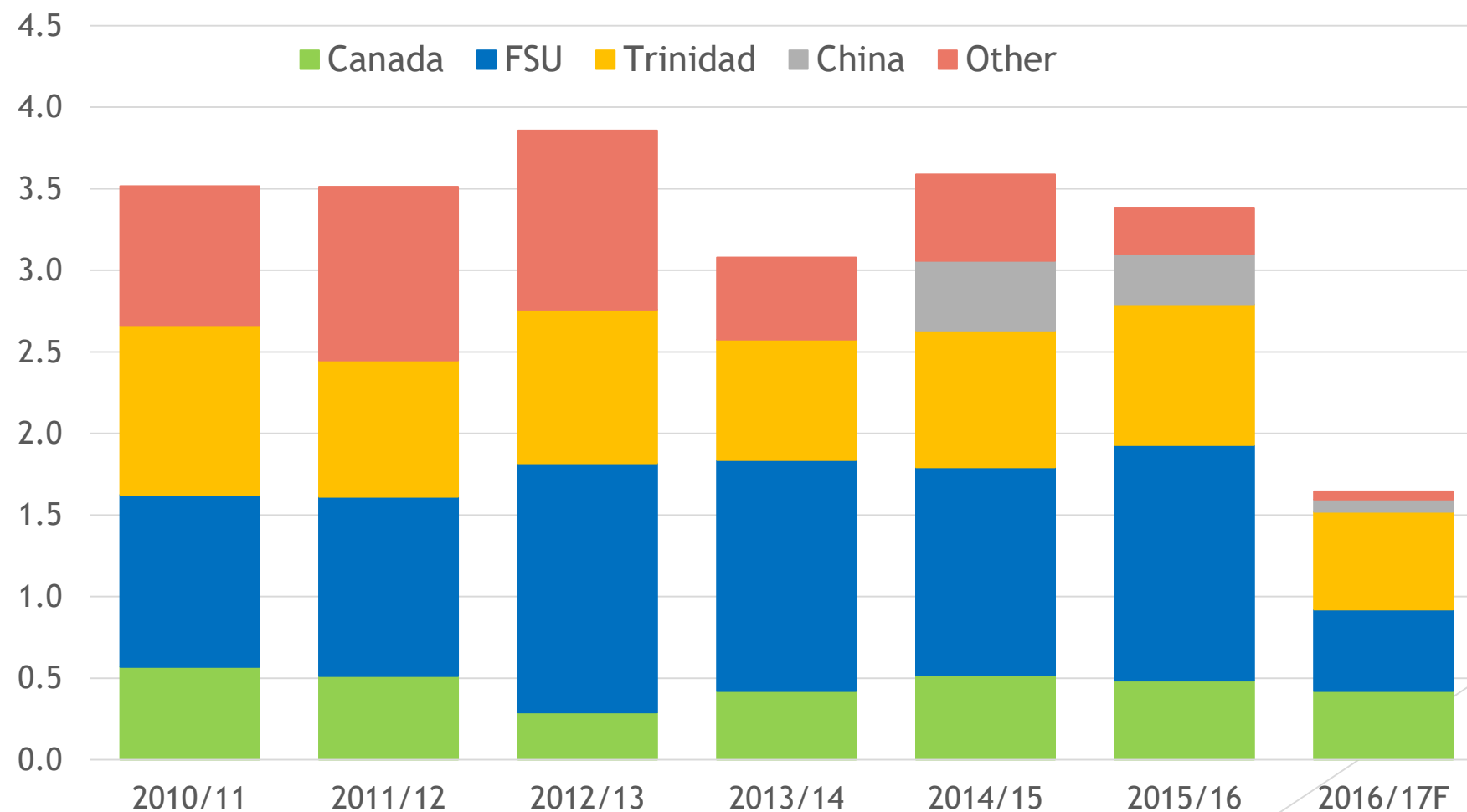
UAN Situation and Outlook

New USA UAN production will displace over half of current imports

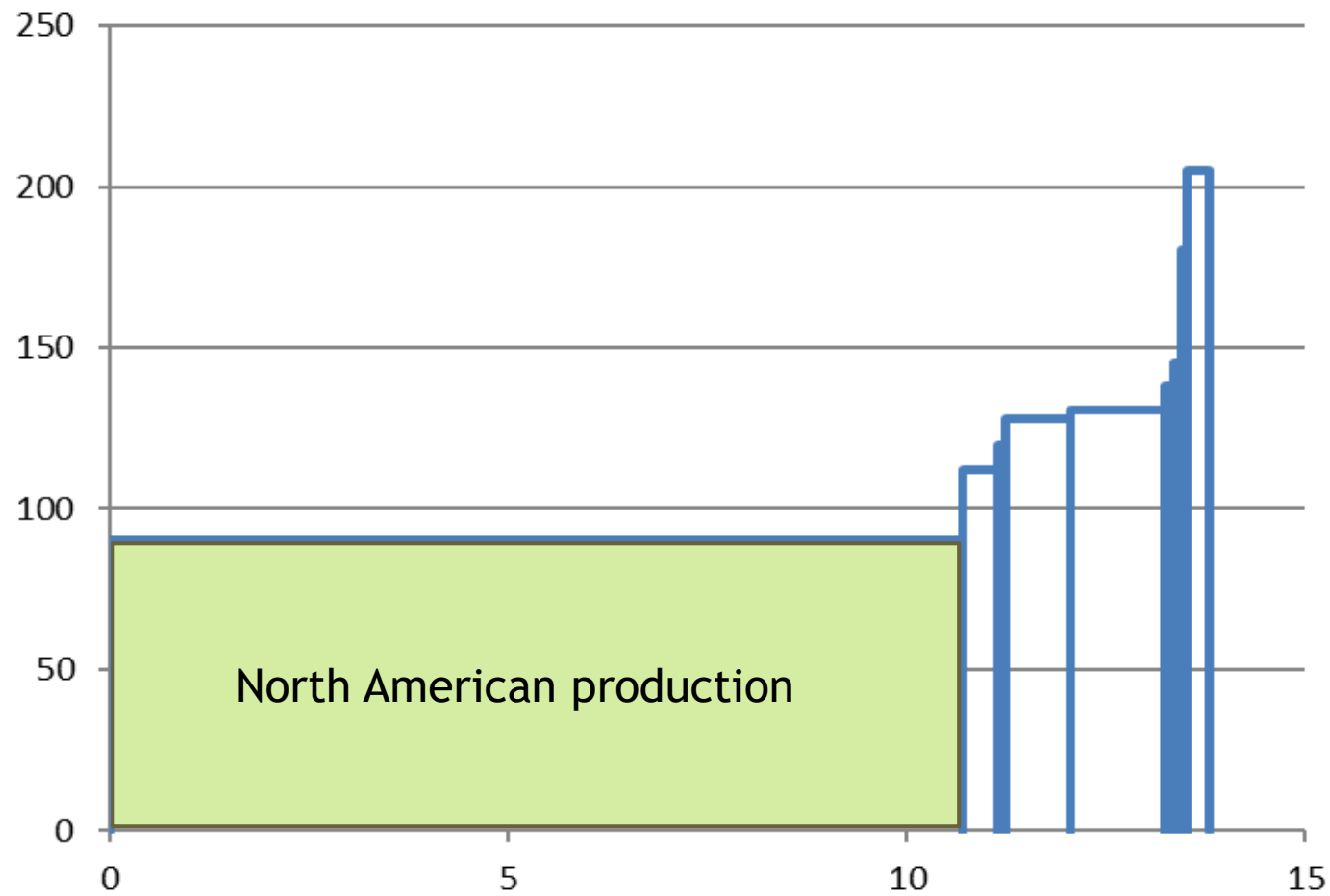


Lower USA UAN imports will impact Trinidad, Russia, China & Egypt

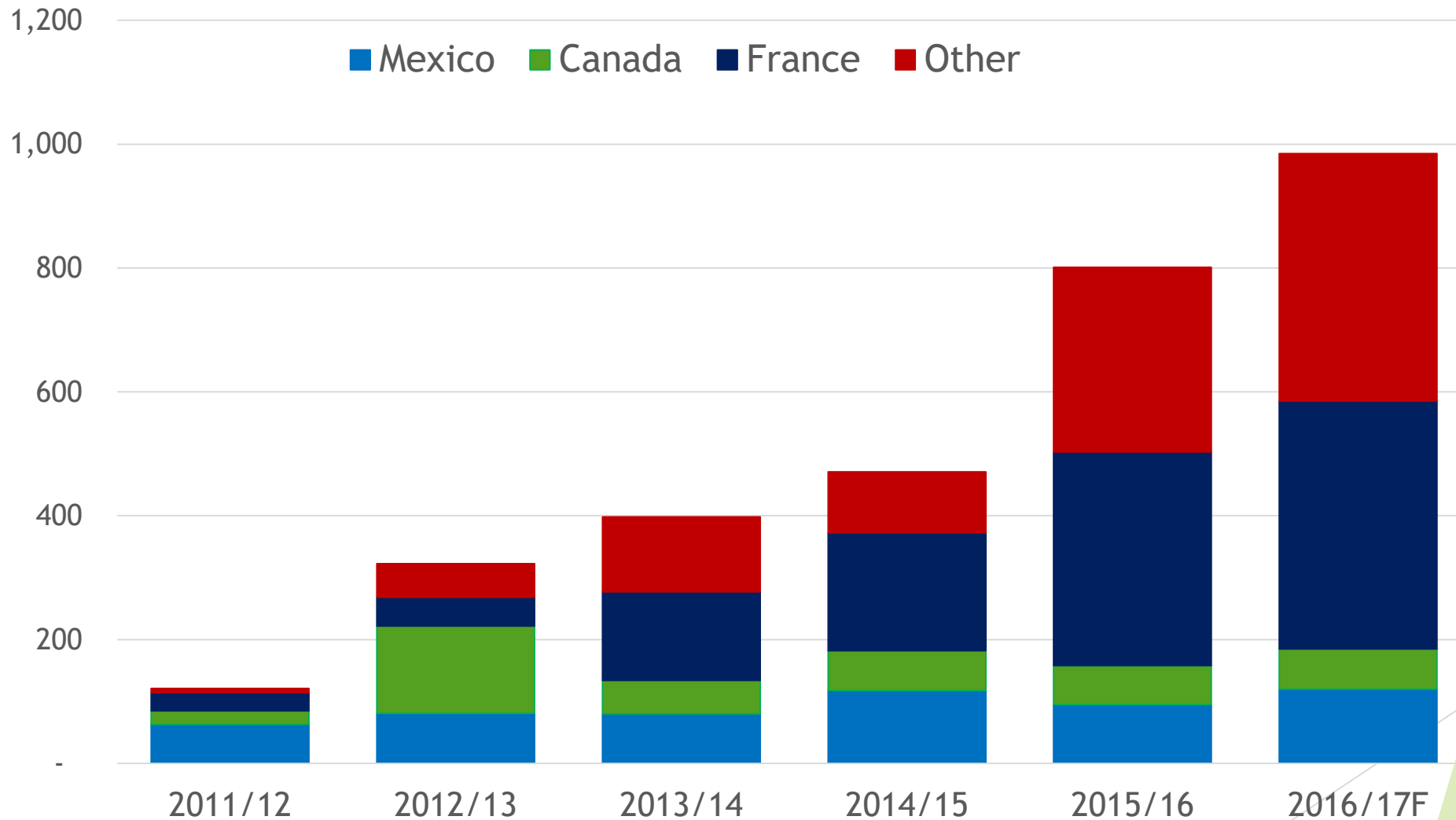
Million short tons



2015/16 UAN Cost Curve based on supply to North America



USA UAN exports will continue to grow



Summary

- ▶ New nitrogen capacity peaks in 2016; the global balance starts to return in 2018 and 2019
- ▶ Fertilizer demand growth will be slow unless grain prices rally; industrial growth should remain strong
- ▶ New capacity, lower energy values and currency devaluations has put pressure on nitrogen fertilizer prices
- ▶ The cash cost of the marginal supplier to the USA will decline as high-cost suppliers are no longer competitive
- ▶ New North American production will result in lower ammonia, urea and UAN offshore imports, but....imports will continue
- ▶ USA offshore exports will expand for UAN & ammonia and probably urea

Appendix

- ▶ Sources are mainly TFI, IFA, & Company Reports
- ▶ Forecasts are by Hoadley Consulting
- ▶ Years are USA fertilizer years (July-June)
- ▶ Data are short tons, mostly in '000 except where noted otherwise
- ▶ Costs are US\$/ton, delivered to US Gulf for Offshore suppliers
- ▶ We do not guarantee the accuracy of any assumptions, data or forecasts
- ▶ More questions? Call Doug at +1-847-636-1747
- ▶ Go Cubs!

