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Praxair/Linde AG: On-Site, Merchant, Issues Drive Antitrust Risk; November Election's Results, FTC Transition Improve Clearance Odds

Deal Update

On December 20, 2016, Praxair, Inc. and Linde AG announced a plan to combine in a $65b+ merger of equals. Although the companies' initial merger discussions officially broke down on September 12, Praxair reapproached Linde on November 29, and Linde agreed to resume talks on December 7.

Interviews with US and EU-based industry sources and consultants point to a number of antitrust hurdles to the deal that would combine two of the globe's four major industrial gas suppliers. In particular, on-site, where the deal would reduce the number of competitive bidders for many larger greenfield projects from four to three, is a potential problem area, and may not prove susceptible to a fix. Likewise, some industry history of collusion and market allocation, as well as issues around potential divestiture buyers, may diminish antitrust enforcers' willingness to clear the deal conditioned upon broad, wide-ranging divestitures to address regional market overlaps.

The merger will face substantive antitrust reviews in the US, EC, and China, amongst other jurisdictions. Notably, the US may be the most competitively problematic major jurisdiction, and, given international antitrust authorities' increasingly close coordination, the FTC will play an important, and potentially lead, role in the global review.

During the companies' initial talks in August, Hillary Clinton appeared poised to prevail in November's US election—an outcome that would have almost certainly resulted in a more aggressive, less settlement-minded Commission, Bureau of Competition front office, and Mergers I Division by mid-to-late 2017. Donald Trump's unexpected victory and forthcoming FTC appointments, however, will likely have the opposite effect, thereby lessening the deal's FTC risk, and ultimately improving the merger's clearance odds.

In-depth—FTC Issues

Deal overview—industry consolidation, upcoming changes at FTC complicate settlement path to close. The industrial gas market has experienced substantial consolidation in recent years, including Air Liquide's 2004 acquisition of Messer's US, UK and Germany assets, Linde's 2006 purchase of The BOC Group, and Air Liquide's 2016 acquisition of Airgas. In each case (including Air Products' proposed 2010 acquisition of Airgas, which was not completed) the FTC (and EC) cleared the transactions subject to divestitures of overlap air separation units (ASUs) and other assets.

A Praxair/Linde merger, however, would be substantially larger, and occur in a substantially more consolidated environment, than any prior industrial gas deal. At the same time, the FTC's history of clearing industry consolidation conditioned upon divestitures to address regional market overlaps reportedly animates the parties' confidence that a deal could ultimately obtain required antitrust clearances.

The FTC, at the Commission and Bureau of Competition front office levels, is poised to experience substantial turnover in the near future. Although a Clinton victory would have almost certainly resulted in a more aggressive, less settlement-minded agency by mid-to-late 2017, the unexpected Trump win is likely to lead to the opposite result.

At the Commission level, President-elect Trump will fill at least two Commissioner vacancies, and likely three, as Chairwoman Ramirez is expected to depart in early to mid-2017. Although Ramirez is viewed as generally settlement-minded, Commissioner Maureen Ohlhausen, the leading candidate to become the next FTC Chair, will likely pursue an even more aggressively litigation-averse approach through, amongst other things, her selection of a new Bureau of Competition Director.

Importantly, the transition will have effects not only at the Commission and BC front office, but also at the relevant shop level. In particular, Mergers I, the Division with industrial gas expertise, is headed by Michael Moiseyev, who was appointed Assistant Director in January 2004, and has overseen prior industry consolidation. Because Moiseyev is viewed as highly settlement-oriented, a Clinton victory, and new Commissioners and front office appointments, would likely have led to Moiseyev's marginalization or exit. With Trump's victory, however, Moiseyev becomes relatively less likely to exit his post.

As the US is Praxair/Linde's most competitively problematic major jurisdiction, the FTC's approach will influence other major jurisdictions, and Europe, Brazil and Mexico, in particular. A united global antitrust front against a deal, as Halliburton's failed recent attempt to acquire Baker Hughes demonstrates, is nearly impossible for merging parties to overcome. However, November's election results, and consequent effects on the FTC, indicate that Praxair/Linde's clearance odds have improved since the companies' initial, August talks, when a Clinton victory was expected.

In-depth—Product Market, Geographic Market, and Targeted Customers

Competitive analysis—high shares in industrial gases, but no demand-side substitutability. The top four industrial gas suppliers—Air Products & Chemicals, Air Liquide, Praxair, and Linde—occupy 60% to 70% of the global gas supply market. These numbers, however, understate the firms' dominance outside of Asian markets—the top four control a combined 79% share in the US (Air Liquide (29%), Praxair (21%), Linde (15%) and Air Products (14%)) and combined 82% share in the EU (Air Liquide (32%), Linde (30%), Air Products (13%) and Praxair (7%)).

A combined Praxair/Linde's US (36%) and EU (37%) shares, although substantial, would not be overwhelming. In other jurisdictions, however, the post-merger firm would be dominant. In Mexico, for example, a combined Linde (13%) and Praxair (43%) would have a 56% share, and in Brazil, a 75% share (Linde (15%) and Praxair (60%)) of industrial gas revenue.

That said, at least from the demand-side, there is almost certainly no antitrust market for "industrial gases," as various gases are not substitutable for end-users. Steel mills, for example, which require substantial volumes of oxygen, would not switch to nitrogen in response to an increase in the price of oxygen. Petroleum refineries, which require on-site sources of hydrogen, would likewise not switch to argon in response to a hydrogen price hike.

Given this lack of demand-side substitution, the FTC and EC have consistently defined industrial gas markets by individual gas, for example, bulk oxygen, nitrogen, and carbon dioxide. For this reason, then, the fact that the

Praxair/Linde deal would increase concentration in a relatively concentrated, yet overly broadly-defined, industrial gas market may provide limited insight into enforcers' views of the deal's actual impact on competition.

Industrial gas supply characterized by three distinct modes of supply; targeted customers. In addition to separate markets by gas, the industrial gas market is characterized by three relatively distinct customer groups—each of whom very likely constitute targeted customers around whom the agencies will define relevant product markets.

The first involve tonnage customers, who purchase hundreds or thousands of tons of gas per day, and demand an on-site air separation unit or hydrogen plants in order to provide a dedicated gas supply. Given these customers' substantial volume requirements, other forms of supply, such as bulk or cylinder gas, are almost certainly inadequate options. Tonnage customers enter into long-term contracts, typically 15-20 years, with an on-site supplier—outside of Asian markets, almost always one of Air Liquide, Air Products, Linde, or Praxair.

The second customer segment involves bulk (or merchant) customers, who take delivery of gas in cryogenic liquid form, typically transported by special road tankers. As is the case with on-site, bulk supply contracts are reasonably long-term—3 years in Europe, and 5 to 7 years in the US. The FTC, in prior industrial gas enforcement actions, has identified bulk purchasers as a targeted customer, unlikely to view on-site or cylinder supply as realistic competitive alternatives.

Like on-site, the Big Four dominate the supply of bulk gases in most markets, owing partly to the fact that tonnage plants often operate an associated liquefier that produces liquid oxygen, nitrogen and argon at relatively low cost. In the US, the four majors control a combined bulk market share of between 74% and 92%--according to the latter estimate, respective shares are Linde (17%), Praxair (25%), Air Liquide (28%), and Air Products (22%).

The final mode of distribution is cylinder, or packaged, gases sold to small-volume customers—a market characterized by substantial regional variance in supply structure. At first glance, this market is relatively fragmented—in the US, roughly 750 independent distributors occupy a combined 40% to 50% share (including hardgoods and consumables). Independent distributors, however, are typically reliant on the majors for bulk gas purchases, which they repackage into cylinders and sell to end-users. As a result, through the actual production of industrial gases and concomitant control of the bulk business, the majors enjoy substantial influence over the packaged market as well.

Geographic market definition—merchant markets often regional in nature; on-site business likely national or global. A final issue involves geographic market definition, which varies by gas and customer type. Suppliers typically distribute bulk oxygen and nitrogen just 100 to 250 miles from the air separation unit, and the FTC, in prior enforcement actions, has therefore defined these markets as regional in scope. For industrial gases with fewer production points, however, the FTC has defined geographic markets much more broadly—North America-wide for the sale of bulk nitrous oxide, and worldwide for the sale of bulk helium, for example.

Although neither the FTC nor EC has reached a definitive conclusion on the issue, the market for on-site bidding is likely at least national, and possibly broader. In fact, Linde, in defending its proposed 2006 BOC acquisition, submitted to the EC the geographic market for sale of [on-site] plants (ASU and HCS) was "global in scope."

<u>In-depth Look at Antitrust Barriers to Close—On-site</u>

Deal would reduce number of potential competitive bidders for many large on-site projects from four to three. On-site, tonnage customers very likely represent a targeted customer around whom the FTC and EC would define a relevant product market. And in the large tonnage market, and especially for projects involving requirements of over 1,000 tons per day, Praxair, Linde, Air Products, and Air Liquide are the only four firms with a substantial, global competitive presence.

Although the market for on-site supply schemes may be global in scope, competitive conditions vary at least somewhat by geography. In the US, for example, a combined Linde (13%) and Praxair (24%) would have a 37% share of on-site industrial gas revenues, with Air Products also at 37%, and Air Liquide at 22%. Remaining firms, most notably Taiyo Nippon Sanso (TNS) US subsidiary Matheson, account for just 4% of the market, almost exclusively at the lower tonnage level.

In the EU, the Big Four also dominate, although companies such as Messer Group, SOL, and SIAD are competitive for some smaller projects. By contrast, non-global competitors do compete relatively robustly in East and South Asian markets, including China (Yingde), Japan (TNSC), and India. "The fact is that the Big Four have a global footprint so they are able to bid generally across the world but also they have built, over many years, relationships with customers who have expanded globally and have asked them to bid," explains an EU-based industry source.

Industry sources detail smaller firms' substantial disadvantages. The four majors dominate large tonnage on-site bidding for a number of reasons. At the outset, a reliable flow of gas is absolutely crucial to a plant's operation—a factor that provides the majors, given their existing capabilities, a substantial advantage. "If you don't have the reputation or the reliability, nobody in his right mind is going to integrate their contract with [you] because you're putting your whole plant in jeopardy," says a US-based industry source.

On-site contracts' duration, typically 15-20 years, likewise benefit the majors. "The small sizes up to 2, 3, 400 tons a day of product, there's a lot of companies in the US that will claim to have that competence," notes an EU-based industry consultant. "But when you actually look at it and think, I'm going to commit to a 15-year contract, I want somebody who's still going to be there in 15 years, so the reluctance to deal with small companies is very real," the consultant continues.

Aside from reputational and reliability issues, the big four benefit from substantial infrastructure redundancy—an advantage that smaller competitors, necessarily, cannot replicate. "What is very important to a customer is what is the backup plan if that plant closes?" says the EU industry source. "Whereas if you're a new boy on the block, you're going to put up one plant, and if that plant goes down for any reason, they're going to say well what's your backup plan?" the source continues.

In addition, notes the EU industry source, on-site buyers are typically hesitant to contract with firms with whom they lack existing relationships—a factor that likewise disadvantages smaller firms. "They [majors] have the best automated systems and understanding of the customer because they're probably already supplying the customer with an on-site somewhere around the world," the source explains.

Finally, in addition to reputation and experience, the majors enjoy substantial advantages in technology and engineering capabilities. Given these factors, smaller competitors or new entrants appear poorly positioned to replace on-site bidding competition post-merger. In fact, even putting forth a complex on-site bid requiring substantial evaluation may take several years and cost $3 to $5m—a significant risk for a smaller company, especially given substantial existing disadvantages relative to the major players.

Customer reaction; countervailing factors; remedy concerns. In short, outside of Asia, the four major, global, competitors dominate the on-site market, with remaining firms facing substantial barriers to entry or repositioning. And the Praxair/Linde deal would reduce the number of potential competitive bidders for many on-site projects from four to three.

The parties will argue that this reduction in the number of competitive bidders would be unlikely to drive price or innovation effects. Perhaps most importantly, large on-site customers such as ArcelorMittal and ExxonMobil are powerful, sophisticated buyers, who, in general, are less vulnerable to post-merger price increases. And given that non-major bidders may be competitive for some smaller projects, any reduction in bidding competition would primarily affect customers requiring supply of 1,000 tpd or more—an even more powerful subset of an already powerful customer base. These customers, through opting for customer-owned, insourced supply, or simply through superior countervailing power, may be uniquely positioned to prevent post-merger price effects.

A limited customer set, however, also means that customer views will carry unique sway with antitrust enforcers. And on this front, initial reactions on the proposed Praxair/Linde tie-up appear less than positive, notes the EU-based industry consultant. “I’ve talked to some of the major companies, and they say the issue is we have fewer people who can bid us on-sites. And it’s the same wherever they look in fact, so these guys are global and they’re not happy,” the consultant continues. “That’s the sort of attitude I’m getting back—they [customers] really don’t like it.”

At the same time, however, on-site customers often view bidders’ reliability and engineering capabilities as of paramount importance—a factor that could work in the merging parties’ favor. “From a customer point of view, a lot of the time they’re not worried that there’s let’s just say four major gas companies left in the world that could quote them,” says the EU-based industry source. “I’m pretty much convinced that a higher rating for them is what that gas company has on the ground and what security of supply can they guarantee so that I have uninterrupted supply–that’s more critical than that they get four bids.”

In fact, although the market for on-site bidding may be global, competitive conditions vary not only at the national level, but also, by region. In the Texas Gulf Coast, for example, Praxair and Air Liquide have established substantial infrastructure and pipeline capabilities, providing significant advantages in backup security capability, as well as the ability to offer lowest-cost bids. Linde, despite a limited entry into the Gulf Coast region in recent years, remains a relatively marginal competitor in the area. In short, competitive conditions vary by region, and Linde and Praxair, despite high aggregate market shares at the national level, may be relatively distant competitors in at least some markets.

Ultimately, the on-site market will represent a substantial issue for antitrust enforcers. And problematically, in the event that the agencies conclude that a deal would lessen on-site bidding competition, the problem does not appear amenable to an obvious fix. Especially given smaller competitors’ substantial experience, reputational, redundancy, and R&D disadvantages, it is not clear that any divestiture asset package could restore on-site bidding competition at the national or global levels.

<u>In-depth Look at Antitrust Barriers to Close—Merchant Markets</u>

Merchant markets and divestitures—prior consolidation may limit buyers. Although the bulk segment is, at least based on prior enforcement actions, an easier issue to fix, the market nonetheless represents a substantial hurdle. A combined Linde and Praxair would, according to estimates, account for between 38% and 42% share of US bulk sales—an aggregate figure that, despite the fact that bulk markets are oftentimes local rather than national, points to substantial Praxair/Linde overlap.

In prior deals, enforcers have addressed bulk market concentration through market-by-market divestitures—typically air separation units and related businesses. In fact, Matheson, the US number five player, and by far the strongest and best-capitalized non-major, has grown primarily through FTC-ordered divestitures, acquiring assets in Air Liquide/Messer Group (2004) and, more recently, Air Liquide/Airgas (2016).

The 2016 acquisition is particularly substantial—Matheson acquired 18 ASUs, mostly in the East and Midwest, adding to its existing 17 ASU operation, primarily in the South and West. The company's newly-broadened footprint, however, will reduce the Praxair/Linde overlap markets in which Matheson lacks an existing presence, thereby potentially limiting the firm's ability to serve as a buyer for divestiture assets.

Coordination concerns. In theory, smaller buyers could acquire overlap market ASUs and other assets, restoring pre-merger market concentration in local markets. Even to the extent smaller buyers have the financial resources to make such acquisitions, however, a complex, wide-ranging sale to operationally inexperienced buyers is a risk the 2017 FTC will very likely prove less willing to take than the 2016 Commission. Perhaps more importantly, however, reducing the national (and global) competitive set from four to three, even in the event that divestitures restore pre-merger concentration levels in local markets, may raise broader, system-wide concerns, at the regional, national, or even global levels.

Although unilateral market power is typically the primary concern of modern merger analysis, coordination issues remain strong in commodity product markets such as industrial gas. In the FTC's Air Liquide/Airgas Analysis, for example, the FTC concluded that "certain conditions prevalent in these relevant [bulk] markets, including the relative homogeneity of the firms and products involved and availability of detailed market information, are conducive to collusion or coordinated action." This language is consistent with prior FTC industrial gas enforcement actions, in which complaints, in each case, have expressed concern about post-merger coordinated effects.

Although the FTC has focused on coordination issues at the regional level, the EC, in 2006, determined that the Linde/BOC merger would increase the likelihood of collusion and market allocation in the overall European industrial gas market. Because the deal would have had the effect of cementing Linde (Eastern Europe) and Air Liquide's (Western Europe) respective geographic dominance, the EC concluded that, absent divestitures, "both companies would thus be likely to have a common incentive not to compete effectively, by allocating geographic markets through the adoption of a *chacun chez soi* approach in Europe."

Industry history of coordination heightens concerns; coordination concerns may complicate a fix. As a general matter, coordination concerns are most pronounced in product markets with documented histories of collusion. In detailing concerns about post-Linde/BOC merger coordination, for example, the EC placed substantial weight on "evidence of past collusion between these firms on the bulk and cylinder markets," and specifically, the EC's 2002 enforcement action against a Dutch industrial gas cartel. And unfortunately, coordination in the industry, and involving Praxair and Linde in particular, appears to be an ongoing issue.

In September 2010, for example, in the largest fine in the agency's history, Brazil's CADE fined Praxair $1.26b, for cartelization, price fixing and market allocation—a fine the agency doubled due to Praxair's repeat violation of antitrust laws. CADE also fined Air Liquide, Linde, and Air Products amounts ranging between $129m and $142.6m.

European markets have likewise proven a continuing issue. In June 2012, for example, the Spanish National Competition Commission (CNC) opened infringement proceedings against Praxair, Air Products, and Heineken España, alleging market allocation, price fixing, and information exchange involving carbon dioxide markets. And two months later, in August 2012, the Turkish Competition Authority opened an investigation into Linde's Turkish unit and two Turkish producers, focused on alleged bid-rigging and pricing information exchanges. To some extent, the industry's substantial track record of actual collusion is unsurprising, given not only homogenous products and firms, but also industry characteristics including high entry barriers, substantial incumbency advantages (in both bulk and on-site), and significant customer switching costs.

Ultimately, a Praxair/Linde merger would reduce the number of industry global majors from four to three, and strengthen the firms' respective areas of dominance. Given the industry's history and characteristics, the FTC and EC will harbor significant concerns about a deal that would cement a global oligopoly market structure, increase entry barriers, or otherwise increase the likelihood of post-merger market allocation. As a result, even in the event a proposed fix addresses local market overlap issues, broader coordination concerns are likely to diminish global enforcers' appetite to accept any large, wide-ranging settlement offer.