



Dry Ice Procurement \$

Current as of November 6, 2020

**Breakthroughs that
change patients' lives**

Logistics and Handling Information Intended for the Use of State Immunization Units, Current as of November 2020, Specifications and assumptions are subject to change. No claims with respect to safety or efficacy are intended to be made. PFIZER CONFIDENTIAL. (

US Dry Ice Assessment Summary

Capacity/Capability Review

Vaccine Center Considerations

Assessment Criteria

- *Availability – liquid CO2 and dry ice market capacity relative to vaccine dry ice need
- *Delivery support – geographic coverage and service models

Outcomes

- *CO2 and dry ice quantity is back to pre-COVID levels
- *US manufacturers ~2.5 million tons of dry ice per year
 - Vaccine dry ice need is 1-2% of market total
- *Three industrial gas companies are able/willing to deliver dry ice to up to 10K Vx centers
 - Airgas, Continental Carbonic, and Linde have 1,000s of locations in the US and existing accounts with most hospitals/ universities (Suppliers stated preference is to directly service PoU)

Service Set Up

- *Order to deliver will take 1 to 4 weeks
- *Centrally coordinated top-off dry-ice delivery may increase lead time and complexity.
- *Indicative cost is ~\$1 per pound (+/- 50%) and is dependent on location, quantity delivered, and container type
- *Handling in accordance with safety and procedural guidance



US Dry-Ice Provider Contacts

Company .				
				
Product details	<ul style="list-style-type: none"> Standard Pellets sizes approximately 1/2" – 3/4" diameter 	<ul style="list-style-type: none"> Regular Pellets 3/4" diameter Rice Pellets: 1/4" diameter Blasting Pellets 1/8" diameter 	<ul style="list-style-type: none"> Regular Pellets 3/4" diameter Rice Pellets: 1/4" diameter Blasting Pellets 1/8" diameter 	<ul style="list-style-type: none"> Regular Pellets 3/4" diameter Rice Pellets: 1/4" diameter Blasting Pellets 1/8" diameter
Logistics .	<p>15 production facilities and 50 distribution centers across the United States.</p>	<p>500,000 customers in North America served through direct delivery, distribution centers, retail stores, and e-commerce solutions.</p>	<ul style="list-style-type: none"> Over 300 locations in the US Operations in 44 US states. 	<ul style="list-style-type: none"> Over 300 locations in the US Operations in 44 US states.
Contact .	<p>David Joyner <i>National Carbon Dioxide Product Manager</i> david.joyner@airgas.com 832-515-1132</p> <p>Airgas has set up a call center and a website link for vaccine centers to submit requests. Airgas Dry Ice Contact Us Phone: 1-800-329-0010</p>	<p>Jen Gruss <i>Director Strategic Accounts</i> jen.gruss@linde.com (515)-689-1440</p>	<p>Dennis Harris <i>President Continental Carbonic</i> Dharris@continentalcarbonic.com</p>	<p>Francisco Garcia <i>Executive Vice President Operations Matheson</i> fgarcia@mathesongas.com</p>