

## What the Texas Freeze Means for You

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My wife, Lynnda and I don't have our \$1,400 stimulus checks yet but we already spent the money stimulating the economy. We were getting supplies to treat the water in our 10+ year old hot tub. It is what they call a soft tub. Fine for two people and crowded for four. The lining is worn and it has a slow leak. We were examining new hot tubs while waiting for the counter person. We saw what we wanted.

For over 10 years we have been buying our hot tub supplies from this store. The salesman wandered over. "If you are considering buying that tub, today is the day. We held our prices last year but we can't eat another cost increase. The price of this tub is going up over \$500 on Monday." We all have heard *the price is going up, buy today*. It is one of the oldest sales tactics to entice us to buy now. I can still remember the line from a TV commercial *the price is going to go up and the kids are going to grow up*. That one gives us two reasons to buy.

This time I knew the salesman was telling the truth. In the last three weeks I have attended three conferences where one of the major discussions was resin shortages and increasing costs to processors because of the February ice storm and subfreezing temperatures in Texas. Processors are the people who make the products we use like milk jugs, packaging, shoes and hot tubs. They need resin to make those products.

To explain why we will be seeing increased prices, here is a brief explanation of how we get the many thousands of products we use every day. This isn't an ad for plastics. Most product packaging and fresh fruit and vegetable packaging is made from plastics of some type. The purpose is to protect the product and keep it fresh. When I was a kid, things like catsup, pickles, mustard and even milk were packaged in glass containers. They were heavy to ship, to carry and could break. In the grocery store hearing the sound of breaking glass was common. Someone had to clean up the mess and broken glass.

Food was brought home in paper bags. Now imagine if someone put that paper bag on a damp sink or countertop. When someone else, like me, picked up the bag the bottom fell out. Now imagine 3 or 4 glass jars or a gallon of milk hitting the floor and breaking. The aftermath wasn't pretty. We put our parents through a lot. When my kids dropped a jar of mayonnaise all we had to do was pick it up and put it back in the fridge.

The raw materials to make food packaging and thousands of products like computers, TVs, cars (especially electric cars), healthcare PPE and my hot tub all come from petrochemicals. In the U.S. this starts with natural gas liquids (NGLs). These NGLs are produced from wells with the natural gas. The NGLs are then sent to a fractionator to break them into separate products like methane, ethane, propane and butane. These base carbon compounds are then turned into various intermediate or finished products. For example, the ethane can be sent to a cracker like Shell is building in Pittsburgh and turned into polyethylene. Crackers like Shell and PTT if built in the Shale Crescent USA would have remained in operation during the Texas cold just like they would have during Texas hurricanes. This will provide a dependable resin source for processors in our region.

Today our ethane is sent out of the region since we don't have any ethane crackers. Most goes to the Gulf Coast for their crackers. Some is sent to Europe by a specially built ship. Ethane can also be burned as part of the natural gas stream. It is much more valuable as a feedstock. Burning ethane is like lighting your fireplace with a \$100 bill.

Ethane crackers on the Gulf Coast turn the ethane into polyethylene pellets (resin). Most of these pellets are then shipped back to our region where, according to IHSMarkit, 70% of the demand for polyethylene is. Processors in our region turn the polyethylene into thousands of products.

In February during the ice storm and extreme cold weather in Texas, ethane crackers and other petrochemical plants on the Gulf Coast lost electric power and natural gas. With no way to prevent freezing, pipes and valves cracked shutting down plants. Over 80% of U.S. polyethylene production was shutdown. Polypropylene used to make many products for the automobile industry and healthcare products like N-95 masks suffered a similar fate. This is worse than any hurricane.

Until these recent conferences I didn't understand how serious the damage was. We were told 50% of the production is now back on line. With so many plants damaged at the same time there is a shortage of physical resources like valves and specialty piping. Experienced human resources who can repair the damaged units are also needed. The repair process could take months.

This means processors who make the stuff we need and want can't get resin to meet demand. Reduced supply has dramatically increased prices processors must pay for resin. In 2020 demand for services like travel dramatically decreased. Demand for products globally increased. We can't expect relief from overseas suppliers. People created home offices and did home improvements. Students needed pads and computers. My hot tub salesman had a banner year in 2020 selling pools and hot tubs to people stuck at home.

We can expect to pay more for everything from food to everyday products made from petrochemicals like polyethylene and polypropylene. Some products may be in short supply. When the salesman said our hot tub was in stock, Lynnda told me, "You know what I want." We bought the hot tub.

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