Exposed Refineries, Price-Gouging, and the Gas Crisis that Never Was

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n November 1, 1775, an estimated magnitude nine earthquake and massive tidal wave destroyed the Portuguese capital of Lisbon. Fires soon broke out in the few areas not devastated and raged for five days. Fortunately for the citizens of Lisbon, their able prime minister, Sebastiao de Melo, survived the disaster and quickly organized relief efforts. When asked what was to be done, Sebastiao laconically articulated his objectives, "Bury the dead and feed the living." The first construction work was the erection of gallows on the city's highpoints. The prompt execution of thirty-four looters quickly restored order. The fires were put out and thousands of bodies were collected and disposed of at sea. Disease did not break out, rubble was cleared, and reconstruction began. The first government response to a major disaster in the modern era was a resounding success.

Hurricanes Katrina and Rita have come and gone 230 years later, and the accompanying images of disaster relief suggest that the Bush administration could learn something from the Sebastiao administration. The rhetoric and proposals that followed Katrina and Rita, however, have once again proved true the wise words of Justice Oliver Wendell Holmes, "at this time we need education in the obvious more than investigation of the obscure." OLIVER WENDELL HOLMES, Law and the Court, in COLLECTED LEGAL PAPERS 291, 292-293 (1920). The laws, regulations, and government actions discussed in this article were intended to help people. Unfortunately, many had the opposite effect. Even those actions that were helpful were characterized as politically or ideologically motivated. "Education in the obvious" involves a hearty dose of economics. Healthy economic policy should ensure a prompt recovery and decreased vulnerability from natural disasters like Katrina and Rita.

Although the data are incomplete (largely due to the fact that satellite imaging has only been available since 1961), meteorologists suspect that hurricane activity runs in cycles with the number and intensity of hurricanes rising and falling in generational swings lasting between twenty and thirty years. For example, Atlantic hurricane activity was very heavy in the early nineteenth century but subdued in the 1840s, 1850s, and 1860s, only to ratchet back up between 1870 and 1899, before dropping off again from 1900 to 1925. The current violent cycle that produced Katrina and Rita

Mr. Walling is a legal fellow with the Mercatus Center at George Mason University and may be reached at awallin 1@gmu.edu. comes on the heels of decades of relative calm and is expected to last at least until 2020. Perhaps local, state, and federal officials have been lulled by the recent quiet spell, but their policies have left the nation's economy vulnerable to the impending violence of the rolling cycle.

News media coverage following Hurricane Katrina focused on countless tales of specific instances of government ineptitude. The public was told that relief workers had been purposefully barred from afflicted areas and that fears of mad cow disease kept millions of dollars worth of food donated by the United Kingdom from the mouths of hungry victims. The Federal Emergency Management Agency (FEMA) sent the Phoenix Fire Department's Search and Rescue Team home for bringing along four armed Phoenix police deputies. Apparently, FEMA has a policy prohibiting search and rescue teams from carrying firearms, implying that the citizens of New Orleans were more imperiled from gun-toting Phoenix police officers than rising storm surges or roving gangs of looters armed with automatic weapons.

While these individual stories presumably were true, the effect of these examples of ineptitude pales in comparison to the broader regime of laws and policies that did so much to make the United States more vulnerable to hurricanes and, despite the best of intentions, probably hindered relief efforts. America's economic vulnerability to hurricanes lies not in how much gross domestic product (GDP) might be affected, but in the type of economic resources imperiled by the storms. Together, Louisiana and Mississippi account for only about 2 percent of U.S. GDP. To put this in perspective, the city of Houston contributes about the same gross economic output as all of Louisiana and Mississippi. Unfortunately, oil and natural gas, along with refining and chemicals production, made up much of the imperiled GDP, meaning that the devastation of even one of the poorest areas of the country has huge potential implications for the entire U.S. economy.

The United States, like every other industrial economy, runs on petroleum, and the Gulf Coast is both a major source of domestic production and an important terminus for oil imports. Twenty-nine percent of U.S. domestic crude oil production or 1.5 million barrels per day (bpd) originates from the Gulf Coast. In addition, 1 million bpd in imports come through the Louisiana Offshore Oil Port (LOOP). Katrina's path threatened six of the nation's eleven largest refineries. In all, 8 million barrels of refining capacity, or 47 percent of U.S. production, lay at Katrina's mercy. With America's refineries already running at 95 percent capacity, the loss of so much refining capacity would have been catastrophic.

Given the relative inelasticity of gasoline (meaning there is a low consumer response to changes in price), forcing the country to consume half as much fuel without additional imports could have pushed the price of a gallon of gasoline past ten dollars. See Hilke A. Kayser, Gasoline Demand and Car Choice: Estimating Gasoline Demand Using Household Information, 22 ENERGY ECON. 331 (2000). Almost overnight, the United States would become the "pitiful, helpless, giant" once prophesized by Richard Nixon.

How did so much of the nation's crude oil supplies and roughly half of its refining capacity become so imperiled? The short answer is that government policies have restricted much of America's energy production to one of the most dangerous and vulnerable parts of the country. Oil production areas that either do not suffer hurricanes or do so to a lesser extent—the eastern Gulf, the Atlantic and Pacific Coasts, and huge sections of the Alaskan coast and mainland—are all off limits to oil exploration.

Furthermore, the economically depressed Gulf Coast region has been more welcoming to oil, gas, and refining facilities. The Gulf's need for economic development, combined with not-in-my-backyard (NIMBY) attitudes in wealthier states, has intensified the concentration of energy production and importation to the Gulf Coast area. For example, huge amounts of liquefied natural gas (LNG) are imported through the Gulf and transported to the rest of the country via pipelines. LNG arrives in massive ships and requires huge terminals from which to unload. Attempts to build terminals in places other than the Gulf Coast often run into fierce local opposition. Some senators recently attempted to add an amendment to the Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 685-686, which would have made it much more difficult to build LNG terminals in less vulnerable parts of the country. Senators John Kerry (D-Mass.) and Olympia Snowe (R-Me.) have proved particularly keen to keep LNG terminals out of their states, neither of which are likely to ever get hit by a Category 5 hurricane.

NIMBY movements have also dogged the lone effort to build the nation's first new oil refinery since 1976. Arizona Clean Fuels (ACF) started planning a \$2.5 billion state-of-the-art complex in 1989 and has yet to break ground. Delayed by multiple state and federal permit applications, ACF has faced stiff opposition from a local environmental group, which argued that the first proposed location for the refinery was too close to an urban area, while the second, a rural site, was too far. When queried about an ideal location for the proposed oil refinery, the environmental group's founder suggested Mexico. John J. Fialka, *Hurricanes May Energize Refinery Plan: Gulf Coast Woes Focus Lawmakers*, *Investors on a Longtime Bid to Build Arizona Complex*, WALL St. J., Sept. 23, 2005, at A4. Unfortunately, Mexico also has a propensity for getting hit by hurricanes.

Of course, building refineries in Arizona, LNG terminals in the Northeast, or drilling for oil off both coasts or in Alaska are politically charged and environmentally explosive propositions. This article does not wade into these disputes, but merely points out two relevant observations: This

nation must have refineries, oil wells, and LNG terminals; and these critical resources would best be placed in regions that are not about to be exposed to a rising hurricane cycle that could last until 2020. While there are benefits to limiting oil production and refining to the Gulf Coast and banning expansion elsewhere, the wake-up call provided by Katrina and Rita has exposed previously discounted costs that must be reconsidered.

Price-Gouging and Recovery

Whatever the difficulties imposed on relief efforts by government inaction, perhaps the greatest threat to relief and recovery did not come from a dereliction of duty, but from states' insistence on enforcing so-called antigouging laws. Although antigouging laws have a definite "I know it when I see it" element, most state statutes define price-gouging as charging more for goods and services during or after an emergency. Most economists, however, either dismiss the term or deem it too confusing to bother with. While the term "price-gouging" definitely triggers emotions, it is economically quite meaningless. Price-gouging laws are very popular with the public and even more popular with politicians of both parties, yet many economists oppose them because of the harms they can do to consumers and suppliers.

Although thirteen states have laws addressing price-gouging in the aftermath of emergencies, their destructive impacts are almost universally misunderstood. Florida's antigouging law is a typical example. Fla. Stat. § 501.160 (2005). In emergencies it is simply illegal to charge more than the average price that prevailed over the previous thirty days. Unfortunately, not only does this ensure that valuable resources in the affected areas will be misused, but they will continue to be consumed in other areas of the country rather than foregone and sent to those most in need, as reflected or "signaled" by the higher price.

Many economists believe that price-gouging should not be considered a crime but, instead, as an essential element of any recovery effort. As a hurricane approaches, it will damage and destroy homes as well as drive people from them. This increases the demand for hotel rooms. If the price is controlled, or no gouging is allowed, then the hotel rooms will go to those who get there first, and everyone else will be left out in the cold, or the hurricane, as it may be. If the price is permitted to rise, the scarce resource (hotel rooms) will be available to more people and used more efficiently.

Other residents may find their homes habitable but damaged. While they might be more comfortable in hotel rooms, they may be safe and secure in their damaged homes. Whether they opt for a hotel room depends largely on the price charged. If they encounter fixed prices and get to the hotels quickly enough, then they will consume many rooms. However, if faced with gouged prices, some will think twice about a hotel room and make the best out of their damaged abodes. Rooms they would have ordinarily consumed at fixed prices are now available to persons with less viable substitutes (i.e., those who have had their homes severely dam-

aged or destroyed).

The desirability of price-gouging is not limited to hotel rooms; it extends to a wide variety of essential products including ice, gasoline, and plywood. Rising prices not only encourage conservation in the affected area but also guarantee that resources will flow from those areas untouched by the catastrophe. For example, the pace of rebuilding in the Gulf Coast should drive up the price of building materials in every region of the country. As a consequence, from New York to California, home builders and buyers will either put off building new homes, not build second ones, build smaller, or decide to make do with what they have for a little longer until the prices inevitably go down. While not realizing it, Americans not directly affected by the hurricanes will have ensured that the majority of home building and repairing resources that they might have otherwise consumed will instead be redirected to repair and replace the homes of those hit by the hurricanes.

Unberalded and Misunderstood Government Success

Despite the accumulation of numerous missteps and mistakes by local, state, and federal authorities following Hurricanes Katrina and Rita, policymakers actually got quite a few very big things right. While the news media constantly ran stories of violence, looting, despair, and government ineptitude, many agencies quietly waived regulations, when strictly implementing them would have greatly hindered relief efforts and rebuilding.

Unfortunately, the regulatory waivers received very little attention in the media, and most of what they did receive was far from positive. Rather than being seen as taking affirmative steps to nurture the fledgling recovery, some in the media chose to present the regulatory enforcement constraint as an attempt by the Bush administration to further a right wing agenda. According to these news stories, the Gulf Coast was going to be rebuilt, and at the same time serve as a guinea pig and as an excuse for the administration to, at least, temporarily rid itself of many popular regulations much hated on the right. See All Things Considered: Politicians Push Agendas via Katrina Aid (National Public Radio broadcast, Sept. 20, 2005). However, such thinking ignores both the realities imposed by the disaster and fundamental economics. Simply labeling temporary deregulatory moves in response to a disaster as pandering to the current administration's base ignores the vital question: Will the changes help or harm the recovery effort? Temporary regulatory waivers may have had the outward appearance of political pandering, but they rested on solid economic principles.

Hurricanes Katrina and Rita shut down millions of barrels of crude oil production and refining at a time when the nation's gasoline supplies were already tight and its refineries running at full capacity. Furthermore, in anticipation of rising prices and potential shortages, millions of American drivers simultaneously filled their gas tanks, which further exacerbated the situation. The resulting rush in demand and looming

pinch in supply combined with the gathering clouds of uncertainty sent gasoline prices flying to more than three dollars a gallon. While he mimicked Presidents Nixon and Carter in calling for conservation, President Bush did not repeat their disastrous rushes to price controls. Rather, the Bush administration directed the Environmental Protection Agency to suspend the use of boutique fuels, allowed the early sale of waiting stocks of winter gasoline, and authorized the use of high-sulfur diesel. High-sulfur diesel is primarily reserved for use by farmers and dyed red in order to catch truckers who are fond of procuring the cheaper, but more polluting, fuel on the sly.

While the suspension of gasoline regulations was roundly derided by environmentalists as politically motivated, the administration would have been hard-pressed to find a better solution to what bore the marks of a real gasoline crisis. Despite a few localized shortages, the regulatory suspensions worked beautifully. The steep rise in gasoline prices curbed the quantity demanded, while the early release of stocks of winter gasoline ensured additional supply. However, the waivers' greatest achievement was the temporary recreation of a truly national gasoline market. Under current EPA regulations, areas of the country unable to attain certain of the national ambient air quality standards (NAAQS) can only be serviced by a particular blend of gasoline. 42 U.S.C. §§ 7407–7410 (2000). The type of gasoline used depends upon the time of year and any number of climate, geographical, and air quality factors. These regulations have led to the multiplication of more than a dozen "boutique fuels," which refiners have designed to service specific areas. For example, there are five different blends of gasoline regulated for use in different parts of Texas. Energy Info. Admin., Dep't of Energy, PETROLEUM PROFILE: TEX. (Aug. 2005), available at http://tonto.eia.doe.gov/oog/info/state/tx.html. Boutique fuels have done much to improve the quality of our nation's air and are preferable to simply mandating a single super clean fuel for the entire country.

However, Hurricanes Katrina and Rita exposed problems created when boutique fuels combine with natural disasters. While producers and markets can usually supply boutique fuels to the areas where they are mandated, the overall structure of the market is fragile. Like most markets, the multiple markets for boutique fuels usually operate wonderfully. Producers produce, consumers consume, prices remain reasonable, and the air becomes noticeably cleaner. The downside is that the underlying market for gasoline works but is less robust and more delicate. Maintenance at a single refinery or problems with a lone pipeline can cause acute shortages of particular blends of gasoline and lead to high prices in areas where it is mandated. In a national market without boutique fuels, the market would simply respond to any shortage by shipping in stocks of fuel from alternative sources. Unfortunately, the proliferation of boutique fuels prevents the market from operating in such a fashion, as surplus supplies in some areas might be outlawed in those experiencing shortages.

EPA's temporary suspension of these regional boutique mandates made gasoline fungible again and recreated a

national gasoline market. The market would not have to look for the proper blend of gasoline, and gas could swash around the country freely. Furthermore, refiners had been building up stocks of winter gasoline, which is easier to refine than summer gas but evaporates more readily and thus results in additional smog during the warm summer months. The return of a more fungible national gasoline market, combined with authorization to use waiting stocks of winter gasoline early and a willingness to allow gas prices to rise ensured that the long lines and dry pumps of the early and late seventies would not be repeated.

Gasoline, as well as relief supplies, still had to be transported to the Gulf, and a spike in demand paired with a loss of refinery capacity could have imperiled supplies of diesel fuel. The open gasoline market may have freed up stocks of gasoline, but these supplies might have sat unused for want of the diesel fuel used by the heavy-duty trucks needed to transport them. EPA's lifting of restrictions on the use of high-sulfur diesel fuel brought fresh supplies of diesel to truckers who would have otherwise been staring at a shortage. Furthermore, between August 31 and September 14, the Department of Transportation eased rules restricting the number of hours truckers could drive while transporting fuel. FED. MOTOR CARRIER SAFETY ADMIN., DEP'T OF TRANSPORTATION, DECLARATION OF REG'L EMERGENCY, 49 C.F.R. 390.23 (Aug. 31, 2005). These two moves allowed the nation's trucks and truckers the flexibility to roll relief supplies into the Gulf Coast.

The suspension of EPA regulations also allowed for the importation of foreign refined gasoline. Foreign refineries often lack the ability to produce the boutique fuels mandated by EPA. Removing these regulations effectively tapped the United States back into the world gasoline market. While it might take several days for stocks of now legal foreign gasoline to reach U.S. shores, the measure ensured future supplies, which discourages hoarding, speculation, and the uncertainty that can inflate prices temporarily beyond their market-clearing levels.

Last, the federal government honored requests to tap the Strategic Petroleum Reserve (SPR). This ensured that refineries otherwise physically unaffected by the hurricanes but dependent upon supplies of Gulf crude oil remained in operation. Although the hurricanes forced a significant amount of refining capacity to close, the amount of production lost could have been even greater had SPR remained closed.

Sinking the Jones Act and Suspending the Davis-Bacon Act

What the administration did for the fuels market it also did for the transportation and labor markets. During their union with the British Crown, the thirteen American colonies fell under the much-loathed Navigation Acts, which required that colonial imports and exports be carried in British ships. Whether the Navigation Acts helped ferment the American Revolution is still debated

by historians, but indignation toward the mother country did not prevent the colonies from later adopting their own version of the Navigation Acts. Although the Jones Act, 46 U.S.C. app. § 688, deals primarily with injured sailors, it also requires that goods transported between American ports can only be transported in U.S.-flagged vessels. In order to wave Old Glory from their sterns, "Jones Act fleet" vessels have to be built in the United States, owned by U.S. citizens, and 75 percent of their officers and crew must also be Americans. See 46 U.S.C. app. § 883. Needless to say, the Jones Act limits the amount of shipping available to carry gasoline and other vital relief supplies to different parts of the country. While overlooked, its suspension guaranteed that essential relief supplies would not have to wait for U.S.-flagged vessels to become available before making their way to the Gulf by sea.

Although affected states and the federal government suspended many regulations ranging from the operation of temporary gas stations to the loosening of state cosmetology licensing, no single deregulatory action caused as much controversy as the temporary suspension of the Davis-Bacon Act, 40 U.S.C. § 276a. The Davis-Bacon Act dates from 1931 and requires that the federal government pay "prevailing wages"—usually much higher than local wages—on federally funded construction projects. Now, for the wage earner, high wages are a good thing, and suspending an Act that guarantees high wages in the aftermath of a devastating natural disaster appears utterly heartless. However, Davis-Bacon could have impeded the Gulf's recovery. Its suspension came for valid economic reasons.

Hurricanes Katrina and Rita destroyed an estimated 599,700 jobs. Martin Crutsinger, Storm Related Jobless Claims Rise, ASSOCIATED PRESS, Dec. 8, 2005. Of course, a flexible labor market is the best way to get those people back to work. While Davis-Bacon may result in individually higher wages, it also ensures that fewer persons will be employed on fewer projects, and that those projects will rely on smaller numbers of skilled workers combined with more equipment, rather than employing very large numbers of unskilled laborers. Whether someone benefits from Davis-Bacon depends on he or she being lucky enough to get a job. Suspending Davis-Bacon not only ensured that the federal government would have more resources with which to undertake more reconstruction projects, but that these projects would employ the maximum number of people. While the wages paid may have been slightly lower, the benefits of reconstruction would be spread among a larger pool of people.

Although price-gouging laws remained in force in Louisiana, Mississippi, Alabama, and Florida, thankfully, the federal government refrained from imposing price controls in the wake of the spiking gasoline prices that followed Katrina and Rita. Controls may keep prices artificially low, but they create shortages and actually decrease the ability of supply and demand to eventually push price below the controlled price—meaning that they may actually keep prices artificially high in the long term.

The steep rises in gasoline prices did not represent the market exploiting the fears of the American people, but rather, reflected them. The uncertainty, extent of the devastation, and the nationwide worry on how we would recover from such an unprecedented disaster produced national anxiety, which fueled higher gas prices every bit as much as increases in demand and short supplies. Although popular with people and even enjoying somewhat of a comeback among politicians, the mere thought of imposing a price control is enough to make the most reserved economist even more cynical about politics. Economist Larry Kudlow best summarized the prevailing point of view among economists when he characterized (without subtlety) price caps as "the stupidest thing imaginable with all of economic history going back 5,000 years." Sean Hao, Mainland Media Scorn Gasoline Price-Cap Law, HONOLULU ADVERTISER, Aug. 30, 2005, availale at www.honoluluadvertiser.com.

Even if price controls are perceived to be fair and equitable, they still end up costing those they are supposed to help. In 1979, the federal government imposed an eighty cent per gallon price control, which predictably led to long lines and shortages. Economist David R. Henderson estimates that the market-clearing price would have been about one dollar, and that people paid an additional thirty cents a gallon in lost time. DAVID R. HENDERSON, PRICE CONTROLS ON GASOLINE? BAD IDEA, (Hoover Institution, Weekly Essays, June 23, 2004), available at www-hoover.stanford.edu. At the end of the day, the "fair" price control ended up costing consumers an extra ten cents a gallon, while producers took home twenty cents less. Had price controls been imposed and long lines formed following Katrina, the economic loss from waiting in line would have been even greater. Unlike 1979, post-Katrina gasoline consumers were not merely giving up time spent working or missing their favorite TV show. Having just experienced a catastrophic natural disaster, Katrina consumers had a lot of extremely high-valued things to do. Waiting in line for gasoline would have meant delays in scores of other opportunities, such as the time needed to collect ice, food, or cut back the tree teetering perilously close to crashing through the living room.

Whether it was opening up the SPR, increasing the hours tanker truckers could drive, suspending the Jones Act, waiving the use of boutique fuels, or resisting the urge to impose price controls, the federal government's reaction to the twin "perfect storms" Katrina and Rita played a pivotal role in preventing the perfect gasoline crisis that never was. Private and public relief efforts may or may not have been competent or properly executed, but they did not founder for lack of fuel.

Final Lessons and Remaining Work

The federal government did plenty wrong before, during, and after the hurricanes, but it also got quite a bit right. Government policies have restricted crude oil production and refining to the Gulf Coast, which has

made the nation's economy particularly vulnerable to hurricanes. Furthermore, enforcement of antigouging statutes and the constant threat of price controls threaten the conservation of critical relief resources and impede their flow from unaffected areas. These issues need to be addressed as the nation faces the remaining years of the current hurricane cycle.

While the government should be admonished for what it did not do properly, it should also be praised for declining to enforce and actively suspending several troublesome laws and regulations that would have unnecessarily impeded recovery efforts. Yes, gasoline peaked above three dollars a gallon, but shortages and lines were rare (except in Florida, which may have been a result of a lack of power to fuel pumps and the zealous enforcement of the state's antigouging statute). Had the government chosen to adopt the policies of the 1970s or neglected to loosen its regulatory grip, then the country might very well have plunged into a national gasoline crisis. Three dollar gasoline is definitely preferable to no gasoline at all and, despite all of the damage inflicted, it only took about two months for gas prices to return to pre-Katrina levels.

The Gulf Coast is now recovering, and many are calling for a Marshall Plan for the affected area. Louisiana's senators, Mary Landrieu (D) and Mark Vitter (R), have proposed legislation authorizing \$250 billion in federal spending and tax breaks for their state, which, incidentally, happens to be about \$100 billion more than Louisiana's GDP. However, gold-plating Louisiana is not the solution. The lesson of Katrina and Rita is one of failure when the government went "hands on" compared to success when it went "hands off." It is often overlooked that Marshall Plan money came with strings attached. Recipient nations could not obtain the promised funding unless they made a commitment to some of America's principles, such as free markets and liberal economics. Perhaps strict adherence to the latter would provide a speedier and more complete recovery than any mountain of federal money. The Gulf Coast will recover, and that recovery will not depend upon the whim of the federal and state governments. It will be driven largely by ordinary people and powered by the dynamic forces of the American economy, which churns out over \$11 trillion in goods and services every year. If government control were the key to recovering from natural disasters, North Korea would be a source of advice, rather than a recipient of U.S. aid. This is not to say that the government does not have a role organizing and participating in relief efforts, but that government pay closer attention to what it should and should not do in those relief efforts. Laws and regulations should be brought in line with basic principles of economics, which should prevent government from inadvertently hindering when it is trying to help.