JOINT ECONOMIC COMMITTEE
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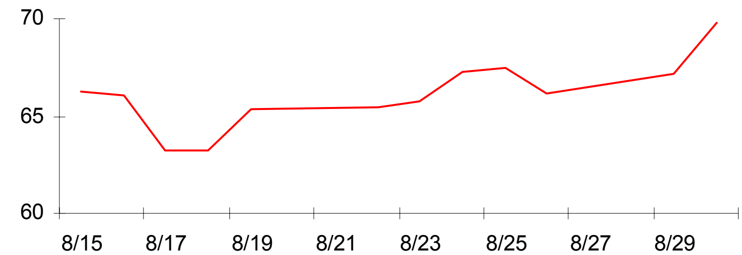
Update on Economic Impacts of Katrina

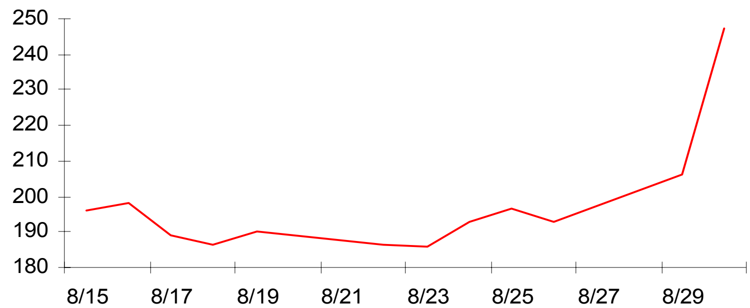
- Hurricane Katrina has generated substantial human suffering and economic disruption.
- The disruption to energy infrastructure from Hurricane Katrina has been significant. The Gulf of Mexico region is home to about a quarter of all U.S. oil and gas output.
  - 1.4 million barrels per day of offshore crude oil production has been "shut in." This represents about 91% of daily oil production in the Gulf.
  - Natural gas production shut in is 8,345 billion cubic feet per day, or 83% of daily gas production.
  - Cumulative shut in production for the period 8/26/05-8/31/05 represents about 1% each of the *yearly* production of oil and natural gas in the Gulf of Mexico.
  - At least 7 drilling rigs are adrift and 8 refineries have been shut down.
    - This development has been estimated to have idled between 1.8 and 2.3 million barrels a day of refining capacity, a little above 10% of the nation's total.
  - Katrina has disrupted the importation of 1 million barrels of crude shipped to refiners through the Louisiana Offshore Oil Port.
- In the aftermath of Katrina, energy prices have spiked. Global crude oil prices touched above $71 a barrel in recent days, and prices of gasoline and natural gas have soared (both spot and futures prices).
- Because the crude oil market is global in nature, effects on global oil prices from the millions of barrels per day of lost Gulf production will be spread out geographically and over time. This will reduce, somewhat, the near-term impact on crude oil prices.
- This is not true, however, of highly localized gasoline markets and the national natural gas market.
- Given the extra-lean stocks of gasoline inventories in existence before the storm, there is little ability to cushion consumers from price effects of further losses in U.S. gasoline production. Gasoline prices have indeed spiked (both spot and futures prices).
- The effect on natural gas prices from Katrina has, like the effect on gasoline prices, been larger than the effect on crude oil prices.
- Results on the New York Mercantile Exchange confirm the differing effects of Katrina on crude oil prices vs. prices of gasoline and natural gas (e.g., see figures below).

West Texas Intermediate, Cushing Crude Oil, Oct. Delivery (dollars/gallon)



Source: New York Mercantile Exchange (NYMEX) data from Energy Information Administration of the U.S. Department of Energy.

Regular Gasoline, Oct. Delivery (cents/gallon)



Source: New York Mercantile Exchange (NYMEX) data from Energy Information Administration of the U.S. Department of Energy.

- The price of the near-term futures contract for crude rose \$2.61 a barrel on August 30, reflecting pessimism about the consequences of Katrina for crude oil production; the January through March contracts rose to over \$70 a barrel. In recent days, crude futures prices have subsided somewhat, reflecting an easing of concern about effects of shutdowns of petroleum platforms in the Gulf of Mexico.
  - Crude prices are more than 50% higher today than a year ago, but would need to reach \$90 a barrel to surpass the inflation-adjusted highs set in the early 1980s.
- Based on futures data, traders believe that crude oil prices will be around 6% higher in October than they would have been without the damage done by the storm.
- Gasoline, on the other hand, spiked up by over \$.40 a gallon on August 29 and 30. Unleaded gasoline for October delivery traded above \$2.40 a gallon on September 1.
  - Retail gasoline prices have risen above \$3 a gallon in many localities, and some analysts speculate that near-term retail prices in some localities could be pushed as high as \$6 a gallon. Retailers have responded to the potential of severe near-term supply curtailments by increasing current prices to ration existing supplies.
- Based on futures data, traders believe that gasoline prices could be close to 20% higher in October than they would have been without the storm.
- Also based on futures data, traders believe that natural gas prices could be close to 18% higher in October than they would have been without the storm.

- The administration has responded to the energy difficulties that have arisen as a result of Katrina's damage by using the Strategic Petroleum Reserve, as it was designed to be used, to ease temporary but serious production and delivery shortfalls resulting from a catastrophe.
- However, more crude will not provide much help in the near term from difficulties derived from the Katrina-induced shutdown of 8 refineries.
    - Exemption of all 50 states from federal fuel volatility and sulfur standards through September 15, as announced by the Environmental Protection Agency (EPA), will help ease effects of the refinery shutdowns.
    - The exemptions will help get usable gasoline produced and distributed in a more integrated national gasoline market (vs. the patchwork of isolated retail markets under the EPA standards). Available gasoline can more easily flow to where it is needed the most.
- Will the energy price effects of Katrina put the U.S. into a recession?
    - Most analysts agree that the answer is "probably not." The event was a tragic special event. Historically, while difficult to measure, the impacts of major regional hurricane damage on the national economy have been minor. Lost production from the damage is often, over time, offset by increased production from rebuilding.
    - However, in contrast to most hurricanes, Katrina imposed substantial disruption in a region that accounts for around 25% of the nation's oil and gas production.
    - In addition, the event came in an environment in which there was already concern about elevated energy prices and a possible resulting slowdown in consumer spending and, hence, growth in the gross domestic product (GDP), even without Katrina.
    - In light of Katrina, markets have reassessed the interest rate policy of the Federal Reserve (Fed), assigning a significant probability to the Fed taking a break at its September 20 monetary policymaking committee meeting from its recent policy of successively increasing short-term interest rates.
    - Potential effects of heightened energy costs on consumer spending, which accounts for roughly 70% of GDP, present an increased risk of a significant slowdown in economic growth in coming quarters.
    - Katrina-induced energy price spikes have sharpened the focus of consumers and businesses on already-elevated energy prices. Prices in long-dated energy futures suggest that elevated energy prices are expected to be more than just a temporary phenomenon.
    - To the extent that persistently elevated energy prices are born out in the future, we will increasingly see purchasing patterns in consumer durable-goods spending and business investment spending change, with substitutions occurring away from relatively energy-intensive goods toward more energy-efficient goods.