The Shale Gale Blows In a New Industrial Revolution

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The First Gusts Blow

• Financial crisis and price collapse distracted.
• Few took notice, but natural gas production began to climb here and there, mostly Texas.
• LNG deliveries slowed, but terminals continued to build.
• By 2009, the predicted LNG tsunami had hit the shale wall, but predictions of soaring imports continued.
The Wily Greek Takes Credit

• George P. Mitchell was a man who did things his own way.
• He was fixated on exploiting the shale zones he’d been drilling through for decades.
• For 12 years, he and his team kept trying.
• In 1993, they cracked the code.
• The rest is history.
A Few More Hints Appear

• Shuttered fertilizer plants begin to reopen.
• Shale gas drilling spreads beyond the Barnett.
• The Haynesville gets hot.
• Fayetteville is known for more than football.
• Pennsylvania’s roots are remembered.
• And gas production continues to climb.
• Dow and others look at ethane economics.
The Revolution Gains Speed

• Cheniere Energy petitions to export LNG from Sabine Pass. Other LNG importers follow.
• Natural gas liquids production rises along with gas, providing ample petchem feedstock.
• Mothballed ethane crackers reopen.
• Proposals to build greenfield ethane crackers emerge. At least five now expected.
• Derivative petchem plants will be connected.
LNG Export Projects Grow

• About 20 projects, both existing import terminals and newbuilds, seeking approval.
• Energy Dept. study backs exports as a boon for the economy.
• Same study and others find little impact on domestic prices.
• Greater effects seen on global market where prices likely to fall.
Natural Gas for Transportation

• LNG and CNG become choice fleet fuels.
• First phases of America’s Natural Gas Highway with border-to-border chain of LNG/CNG fueling stations.
• Lower costs offset lower energy content.
• Cleaner burning, engines last longer.
• Strong growth potential.
More Exotic Gas Industries

• Two world-scale GTL plants proposed in US.
• Modular, micro-GTL plants in development.
• Could the US challenge Qatar in GTL output?
• First new US methanol plant in decades began construction last week.
• Proposal for methanol-to-gasoline under discussion in Louisiana.
Water the Major Challenge

• Does fracking contaminate water?
• Studies say no, but battles go on.
• Does water disposal cause earthquakes?
• Maybe. Industry, government, communities working to resolve issue.
• Moratoria continue in New York, New Jersey.
• Industry working to resolve water issues on a number of levels.
Low Prices Another Concern

• Low prices force asset sales, weaken companies financially.
• Spread between oil and natural gas prices more important than absolute gas price.
• Investments in gas-consuming industries say big companies believe low prices will be around for a long time.
What Do New Industries Mean

• In short, a lot more gas consumption.
• New industrial growth could add 10 Bcf/d of gas demand by 2020.
• The ripple effect through the rest of the economy could add more.
• It is the rebirth of American industry, based again on low-cost energy.