

The Market Moves in the Direction that \_\_\_\_\_ the most people

Looking at the NatGas Chart, we are pretty bad at predicting prices.

One Molecule long or short has huge pricing implications

### Natural Gas Tomorrow

#### Fundamentals

##### Black Swan

- Middle East Nuclear War
- Oil Bacteria
- Cold Fusion
- Weather Extremes
- Government
- Oil to Gas Spread

##### Government

- Economy
- Energy Tax
- Environmental Regulations
- Incentives
- Export Permits
- Pollution Controls
- Fracturing

##### Technology

- Ultra Deep Water
- Methane Hydrates
- Buried/Engine Developments
- Gas To Liquids
  - Diesel
  - Gasoline
  - Alcohol
  - Hydrogen
- Nano Technology
  - Storage Advancement
  - Fuel Cells
  - LNG Manufacturing Costs

#### Economics

- Distribution Infrastructure & Conversion/Development of NatGas Vehicles
- Cost/MMBtu of Shale Gas
- Need for new NatGas infrastructure and repair of existing facilities
  - Processing
  - Pipeline
  - Storage

#### How fast is Energy Investment?

- Decision Analysis - Drill NatGas
  - Geology Studies
  - Fundamental Analysis
  - Business Plan
  - 5 Year Plan
  - Capital Budget
  - Contingencies
  - ROD Approval
  - Land Acquisition
  - Permits
- Logistics
  - Drilling Rigs
  - Crews
  - Materials
  - Mobilize
  - Market

#### Supply

- Deliverability, not supply, drives price
- Shale Gas
  - Decline Curve
    - More Wells
  - Cost/MMBtu
    - More Pipeline
    - More Regulation
- Traditional Supply Declining
- Peak Gas, Peak Oil
- Where & What's Next
  - Ultra Deep Water
  - North & South Poles
  - Methane Hydrates

#### Demand

- Traditional Demand
  - Commercial/Residential
  - Industrial
  - Power Generation
- New Demand
  - Power Generation
    - Displaces Coal
    - New Generation uses NatGas
    - Wind & Solar
  - Industrial Resurgence
  - NatGas Vehicles
    - LNG
      - Mining
      - Locomotives
      - Marine
      - Long haul trucking
    - CNG
      - Passenger Cars
      - Light Trucks
  - LNG Export
  - New Technologies

#### Observations

- NatGas Market is Stable, Volatility In Check
- The Market is cyclical, and potentially fragile

Antifragile - Current price stability is threatening our NatGas future.