



QUARRY ACADEMY

Improving Processes. Instilling Expertise.



Welcome

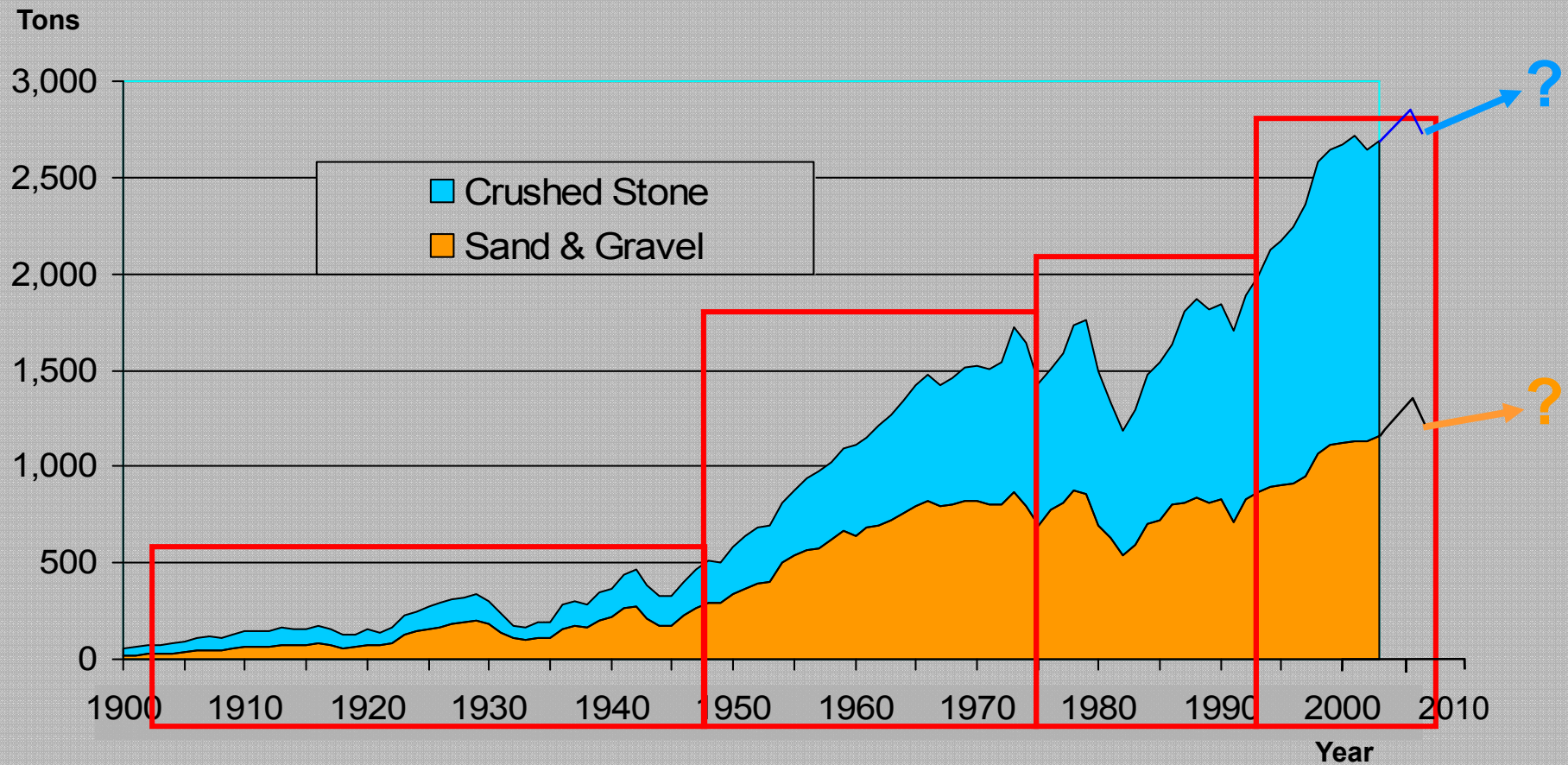
- **MC Hosts:**
 - ✓ Joe Antonelli - John Watson
- **Our Mission ...**
 - ✓ Improve process
 - ✓ Instill expertise
- **Program Notes/Anti-Trust Guidelines**
- **Current Assumptions & Value Chain Awareness**
 - ✓ Interaction – Feedback
 - ✓ Bill Hissem – Current Assumptions
- **Keynote Speaker – “The Shift Age” – David Houle**

Operations Improvement – What is needed now?



U.S. Aggregates Production

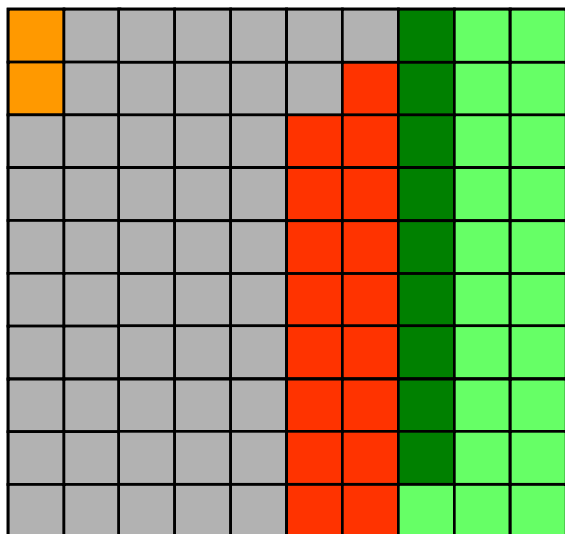
(Million Metric Tons)



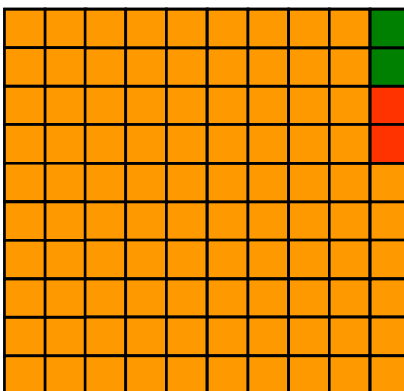
U.S. Energy Consumption by Source

106.96 Quadrillion Btu

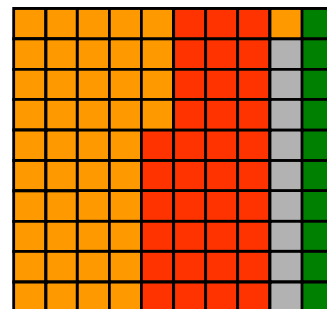
Electric Power - 40%



Transportation - 28.5%



Industrial - 21.1%



Coal

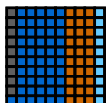
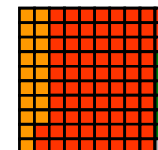
Natural Gas

Petroleum

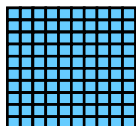
Renewable Energy

Nuclear

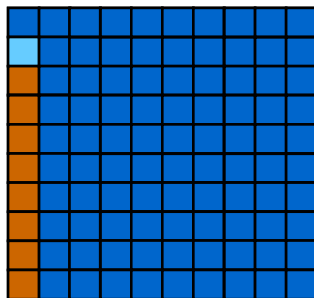
Residential & Commercial
10.4%



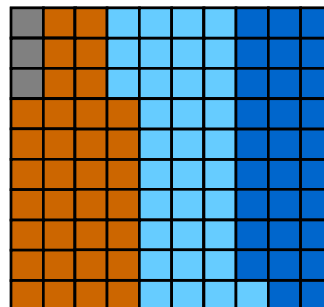
Renewable Energy
6.7%



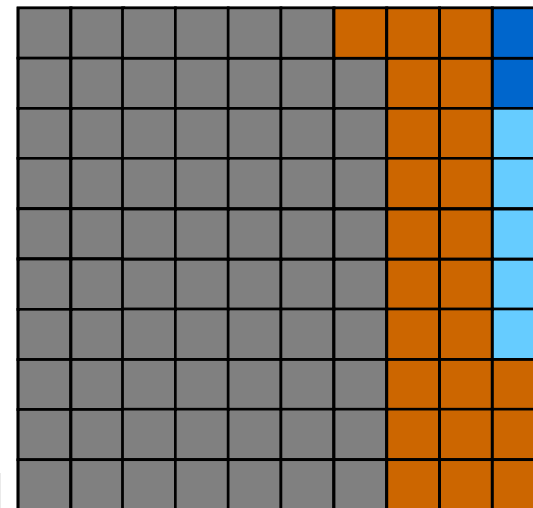
Nuclear Electric
8.3%



Coal
22.4%



Natural Gas
23.3%



Petroleum - 39.3%

Total Energy Sources by Consumption

106.96 Quadrillion Btu

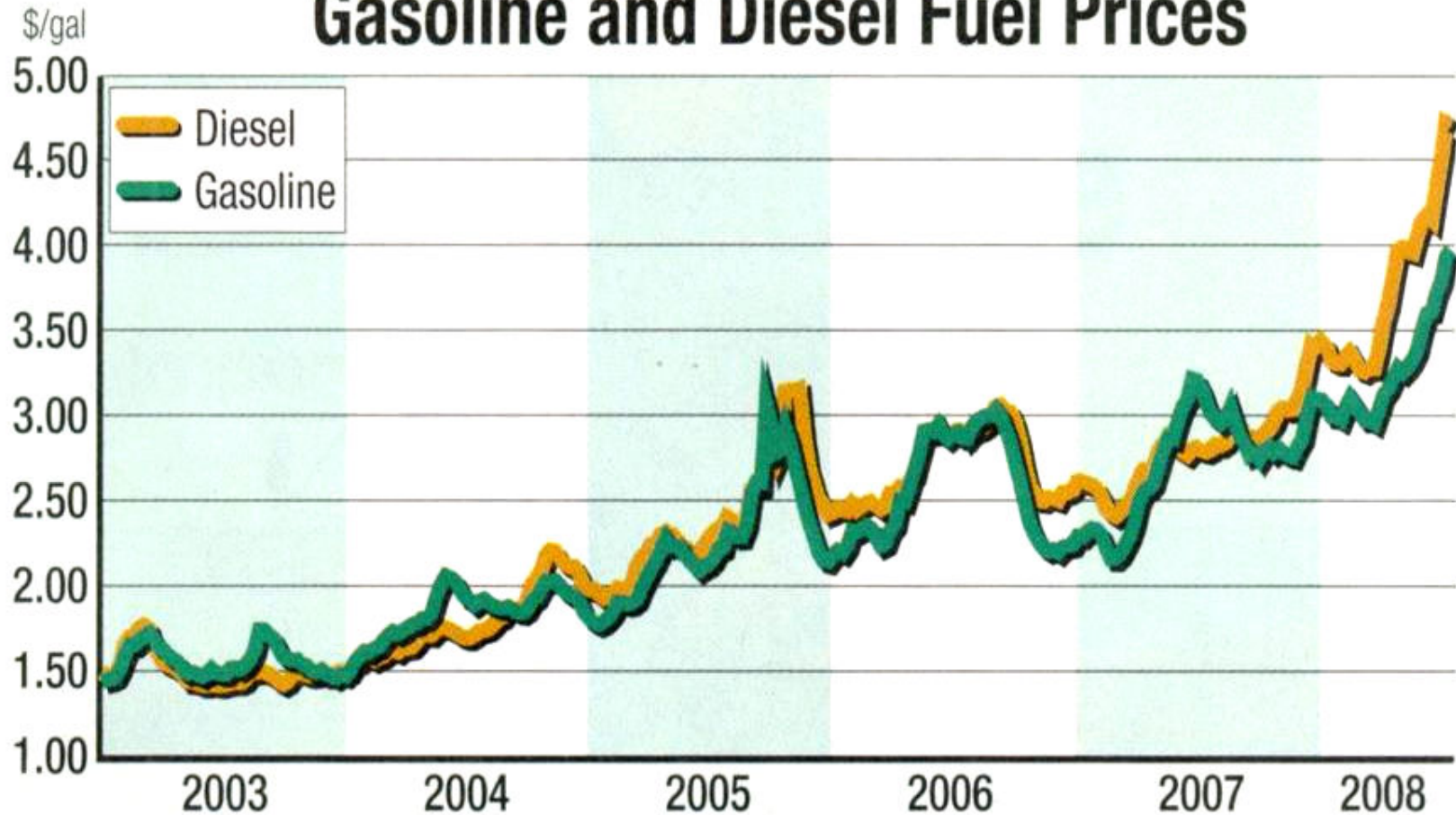
Industrial

Transportation

Residential & Commercial

Electric Power

Gasoline and Diesel Fuel Prices



SOURCE: TWIP MAIN. U.S. AVERAGE RETAIL PRICE FOR REGULAR GASOLINE, ALL FORMULATIONS, AND NO. 2 DIESEL FUEL.

Cars per 1000 people by Country:

USA/Canada: ...1023 cars/1000 persons

France:706 cars/1000 persons

Japan:..... 602 cars/1000 persons

India:.....11cars/1000 persons

China:9 cars/1000 persons

Increase in annual petroleum supply required to allow China to drive like the North Americans ? :

220 times the present level of global level

As the market/industry environment changes:

What has been the market service radius of the average mainland quarry?

Relative to a year ago, what % of fuel cost increase have you seen in your operating budget?

What is the right hole diameter to drill/blast with in quarry applications?