



# Coal Production and the Regional Economy: what lies ahead?

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## *A Symptom of Inadequate Infrastructure Investment!*



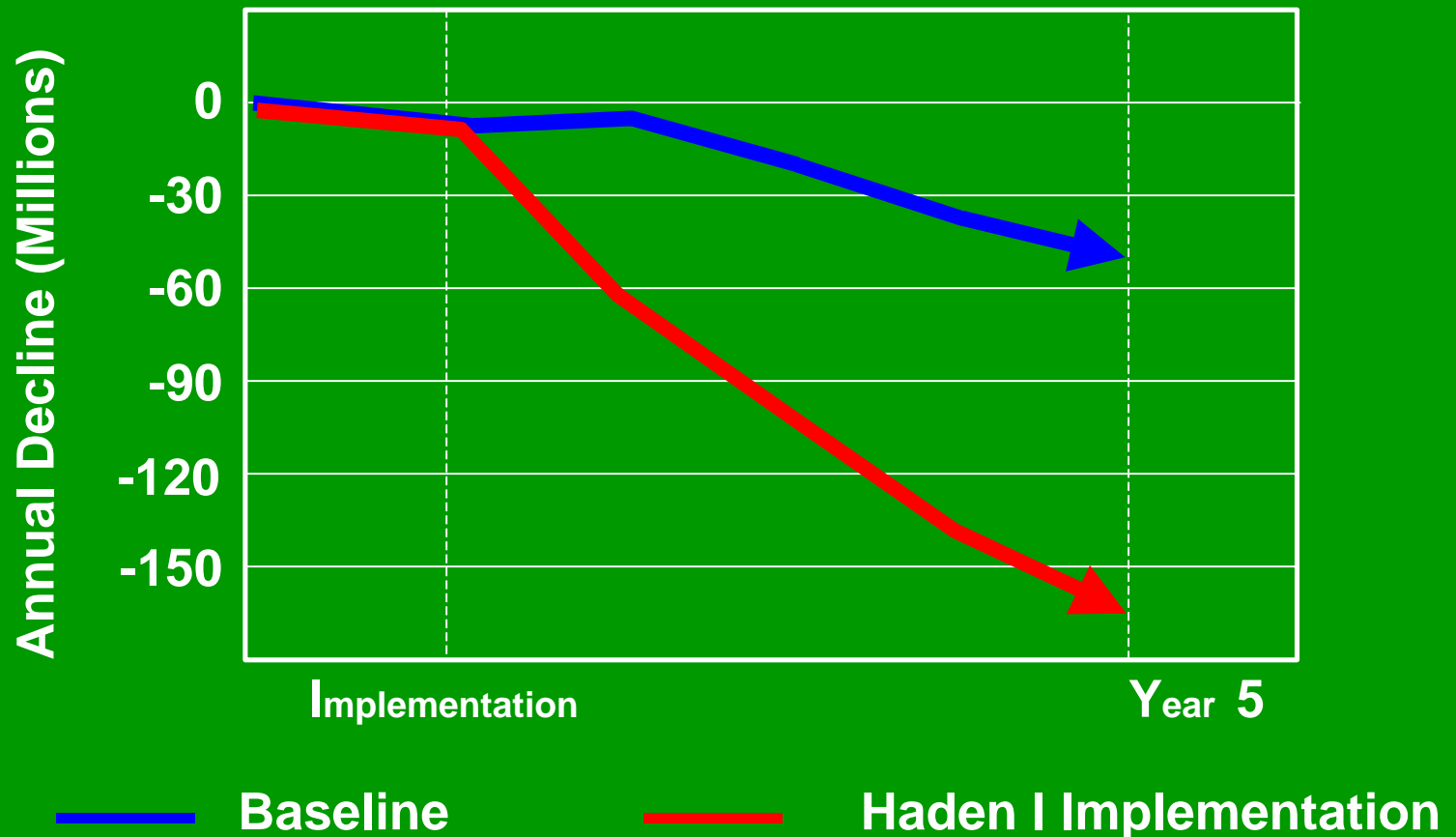


# Coal Production Forecasts





# Coal-Related Revenue Collections





# What has happened since Haden 1?

- Price spike in competing energy prices led to transient coal price increase in 2001.
- California energy debacle likely slows national de-regulation trend. De-regulation likely favors natural gas.
- Conflict in the Middle East (short-term/long-term outcomes may radically differ, e.g. long-term oil price reductions if Iraq again becomes significant exporter).
- Continued moderation in seasonal weather (130 million tons of inventory at Coal fired power plants in December 2001).
- Federal Litigation in Kentucky with *very* uncertain outcomes (Haden 2).



# How does time alter our earlier projections?

- Coal prices resume trend (which is currently at 130 year average price when adjusted for inflation).
- Production changes back to where MU said they'd be (-3.9% year so far).
- Even with slowed electricity restructuring we will not see price increases (notably 3 most recently permitted electricity generating facilities in WV are natural gas and wind turbine).
- If oil and natural gas markets are disrupted by new battles in current war we may see coal price effects.
- Continuation of moderate weather will dampen demand (*I predict both coal miners and kids will pray for snow this winter!*).
- Nobody has good science-based predictions for Haden 2 that are “ready for prime time.”



# What are the looming economic issues?

- What are the magnitude of environmental damages associated with valley fills? (the MU study specifically did not address this, taxpayers should demand federally funded studies aggregate and quantify these data!)
- What proportion of production will be reduced by the certain loss of scale economies in mining?
- What proportion of underground production will be reduced by the certain loss of scope economies across different types of mining operations (surface, underground, preparation and transport)?
- What regulatory changes are in store from Haden 2?



Q: Can't coal companies simply operate smaller mines with more coal miners? So, won't regulatory changes actually create more jobs?

A: Yes under any three circumstances:

- 1) If they can violate the laws of economics.
- 2) Coal miner wages are downwardly flexible.
- 3) Coal becomes subsidized by the government.

in other words, no!

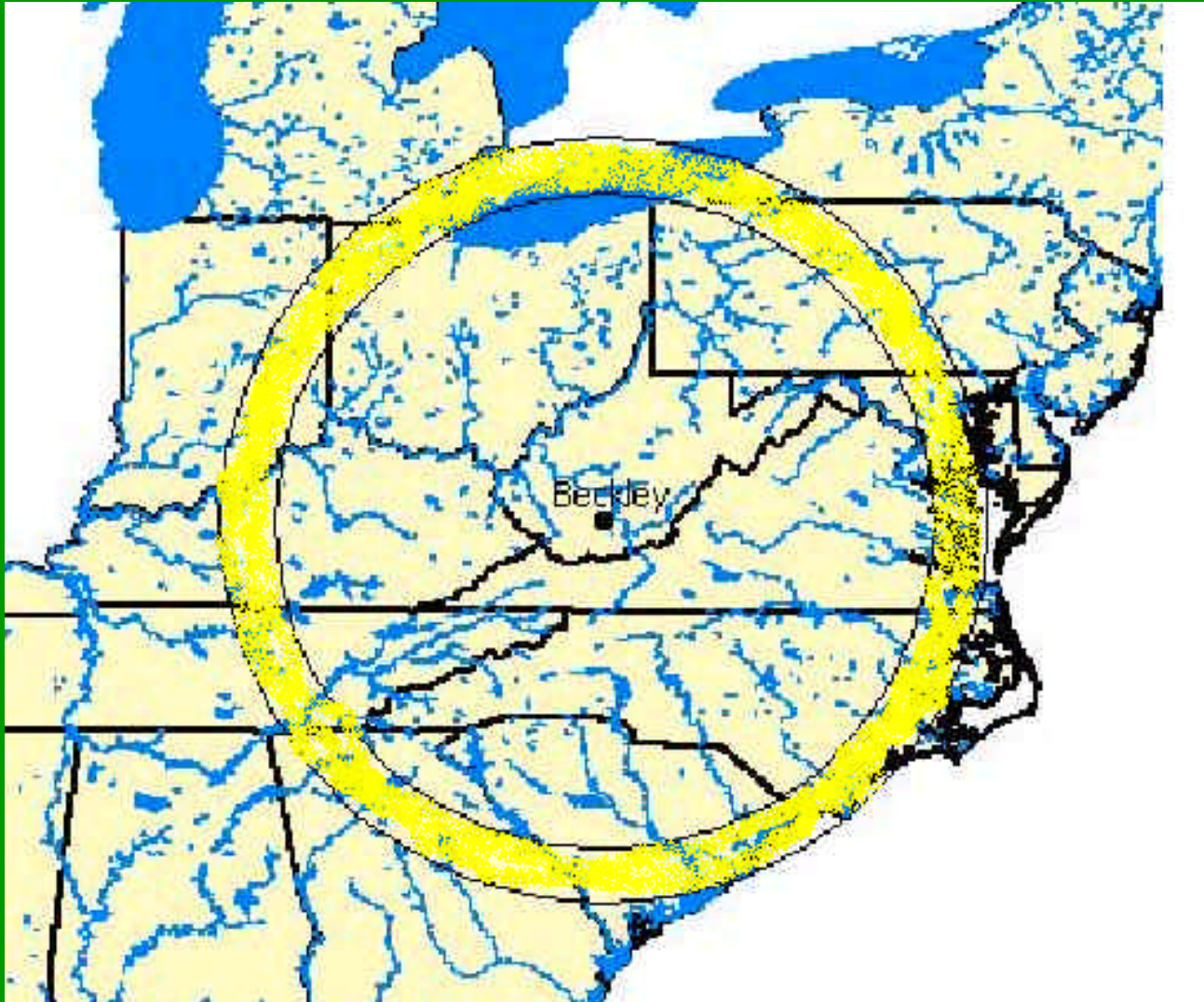




# The \$1.00 Marginal Cost Ring

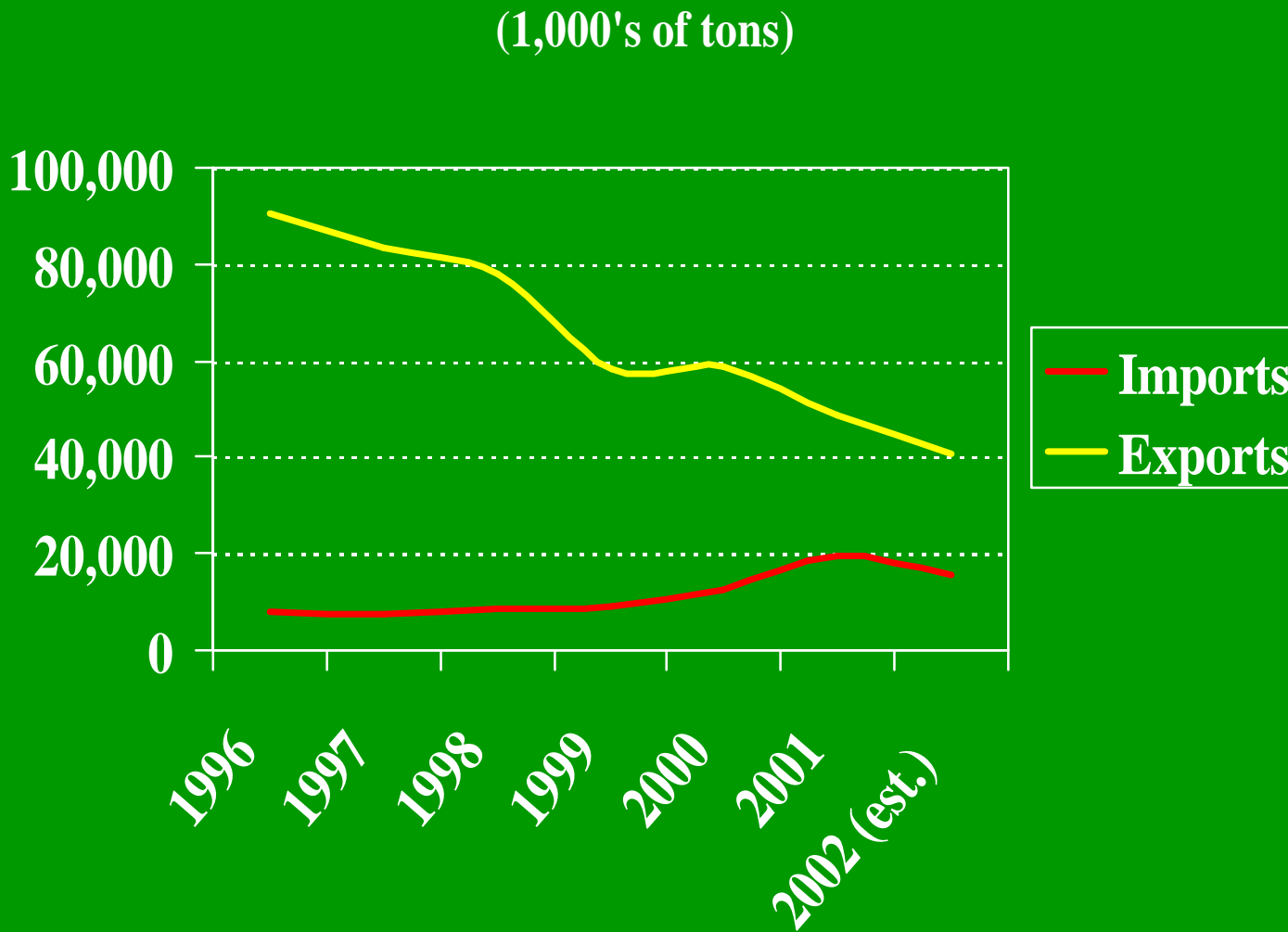
(or where a \$1.00 price change makes our region's coal un-competitive?)

Also known as a “back of the envelope spatial equilibrium model!”





# So what's happening with Coal Imports and Exports?





## What does this really mean?

- Firm or regionally specific *cost* increases cannot be translated into *price* increases in the competitive coal markets.
- Hence local cost increases will not result in widespread price changes -- there will be no impact in electricity prices.
- Local regions will experience a wide range of economic disruptions.



# What will be the extent of regional disruptions?

- It depends entirely on regulatory changes associated with new ruling.
- If consistent with Haden 1, then employment impacts in 12-18 KY, VA and WV counties will be similar to U.S. great depression level. All other regional impacts worse than employment loss since coal wages dominate the region
- Fiscal impacts severe -- statewide in WV (less elsewhere), local bond defaults potentially threatening to WV's bond rating.
- We cannot know for sure until ruling is spelled out in regulatory response.



# Changing Coal Production and the Regional Economy

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