



The Future of West Virginia Energy

West Virginia Land & Mineral Owner's Council

June 11, 2003

www.marshall.edu/cber

Michael J. Hicks, Ph.D.

Center for Business and Economic Research

Lewis College of Business



The Cure for Workers' Comp!





What is the Future of Energy in West Virginia?

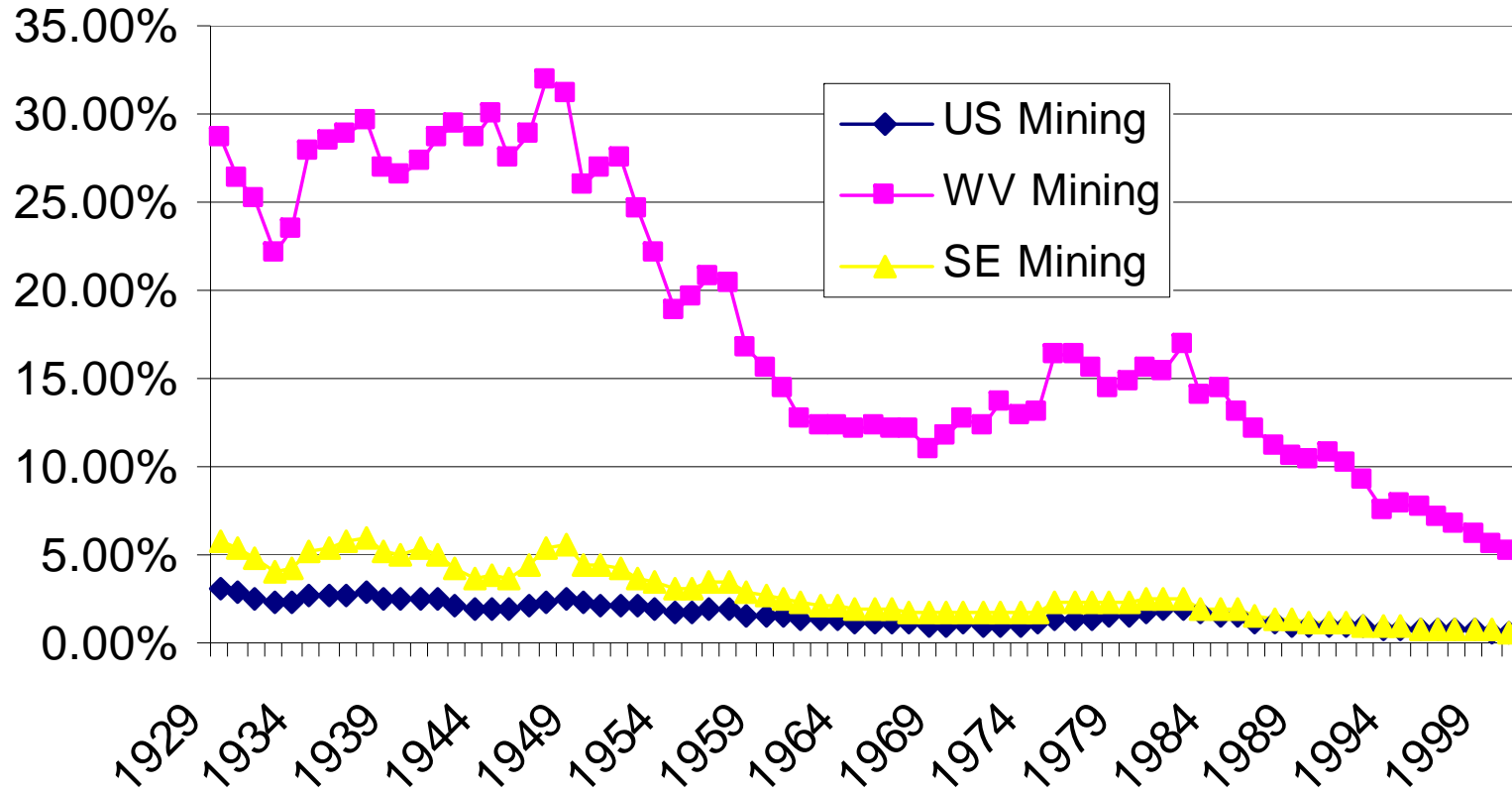
- ✓ Coal Production
 - ✓ Long term, regulation, prospects

- ✓ Natural Gas
 - ✓ Recent history, de-regulation, prospects

- ✓ Issues for both
 - ✓ Regulation, de-regulation and cartels

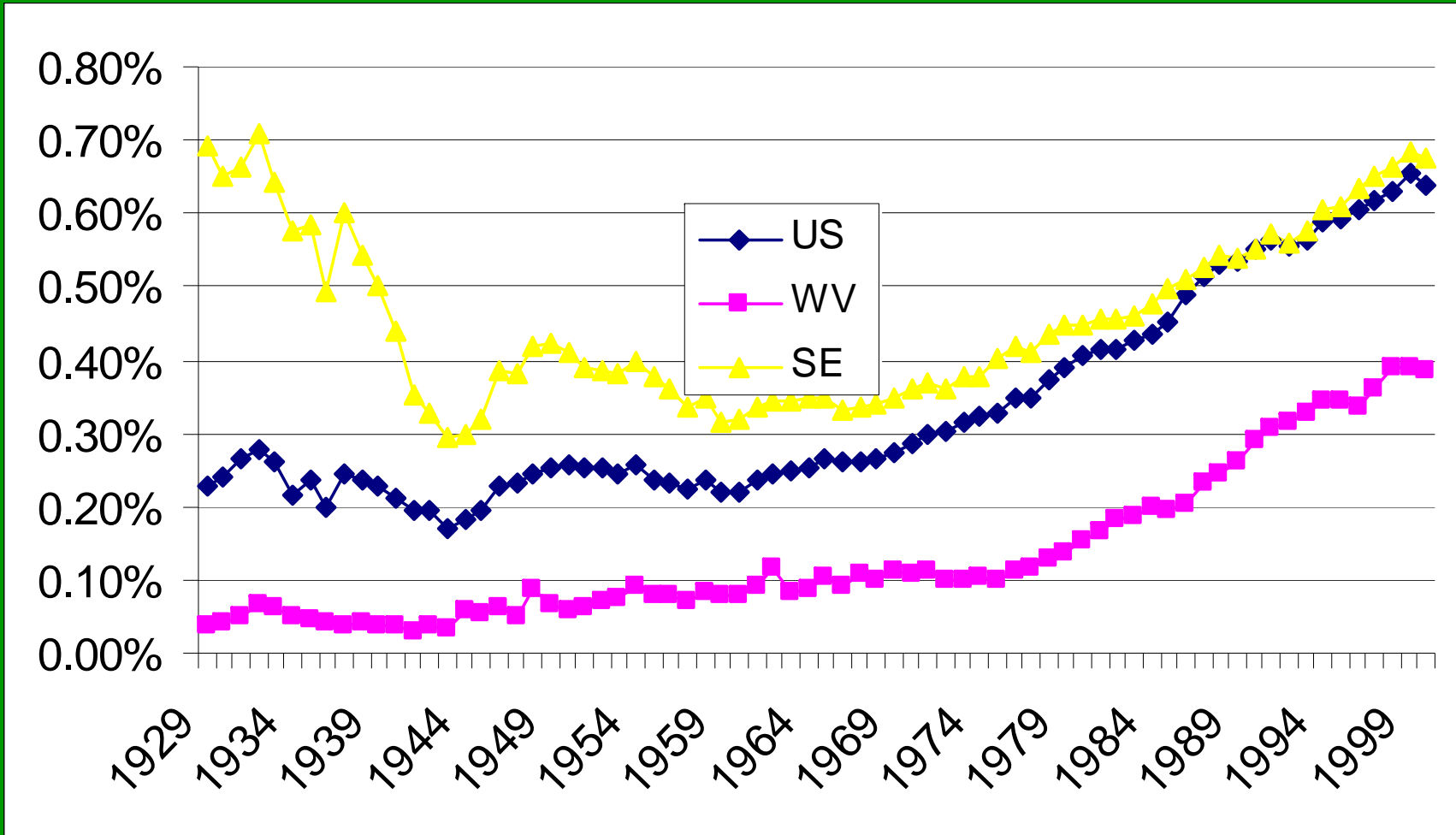


Mining as a percent of total income



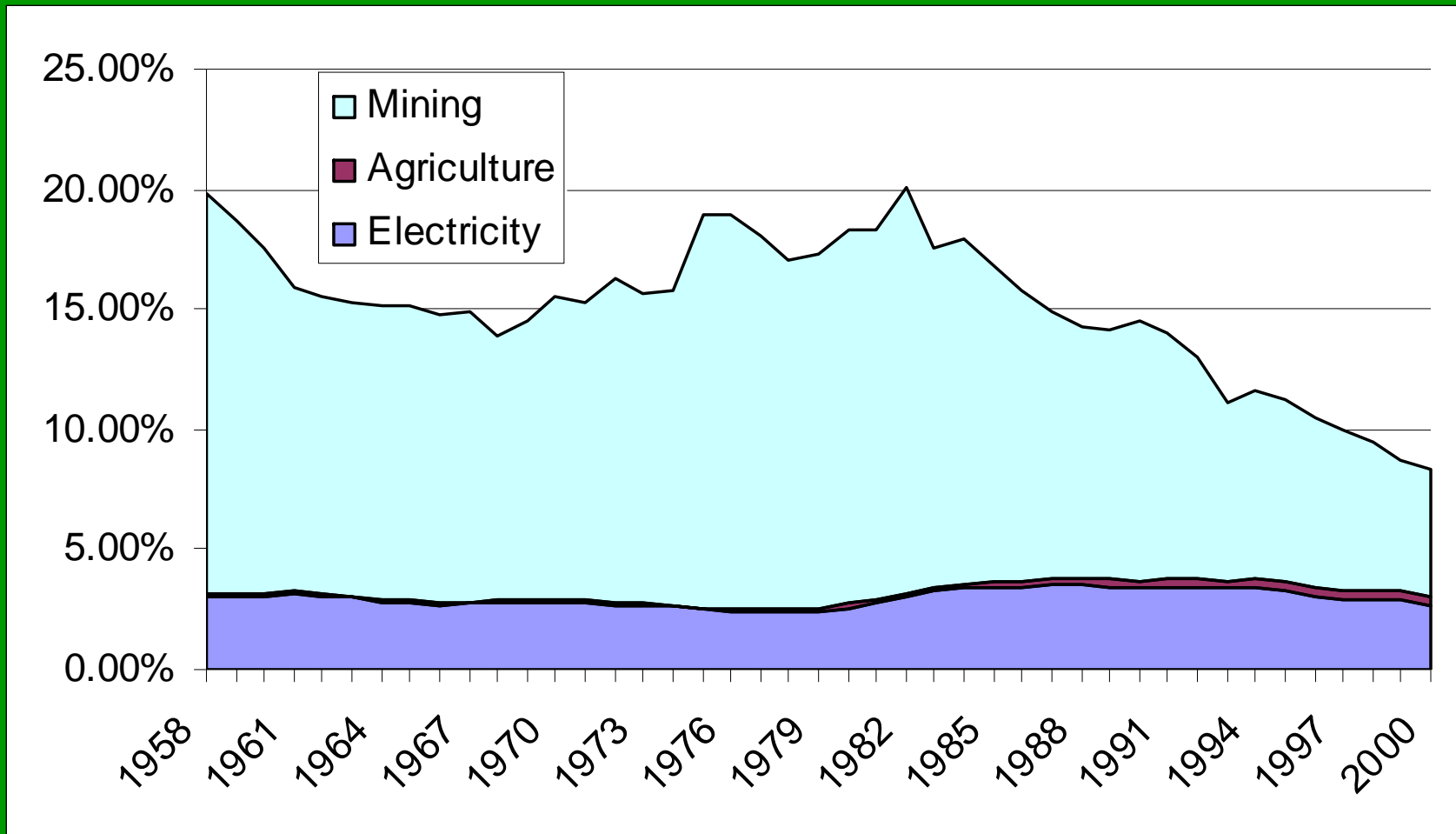


Agriculture (and Forestry) as a share of total income





Total Land & Energy Direct Impact



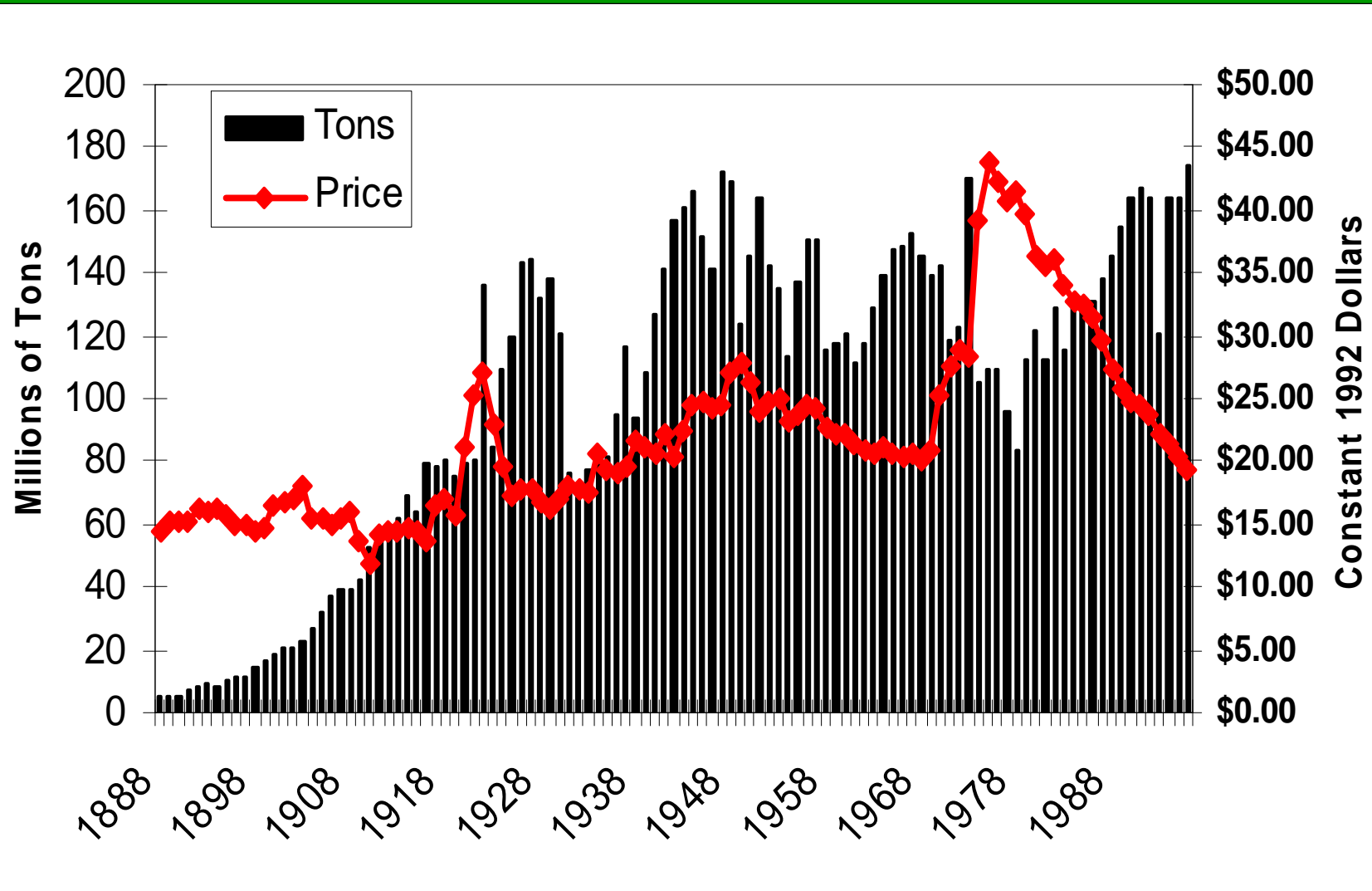


The Statewide Impact of 100 New Coal Jobs

- ✓ Statewide 172 additional jobs
- ✓ Roughly \$12 million in income (averaging over \$40k per job)
- ✓ Total economic impact of \$42 million
- ✓ Or, for every \$1 of coal miner income we can count on \$5.96 of total economic activity (wages, rents, profits, capital investment, etc.)



Coal Production and Price





What has happened to Coal in Past Year?

- Price spike in competing energy prices led to transient coal price increase in 2001, early 2002. They have since moderated and we've seen production/employment declines.
- California energy debacle likely slows national de-regulation trend. De-regulation likely favors natural gas over coal.
- Conflict in the Middle East (short-term/long-term outcomes may radically differ). OPEC may be in trouble!
- Federal Litigation in Kentucky (Haden 2) has seemingly passed through courts.
- EIS has been released. Everybody lost Bragg v. Robertson (except maybe slimy lawyers and cold-hearted economists).
- OSM approved some DEP permitting and reclamation rules. These are likely not permanent approvals.

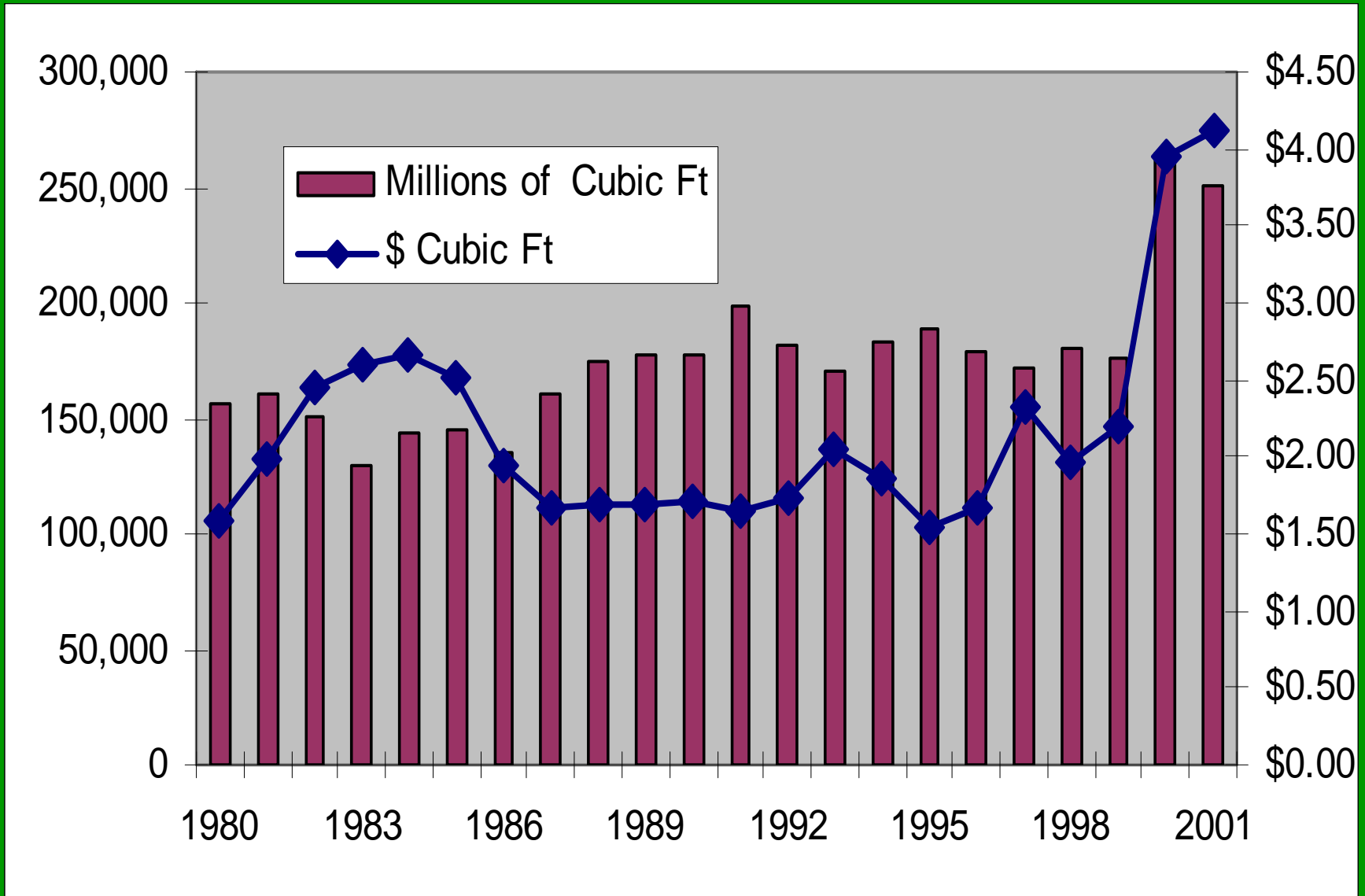


What Does the Future Hold?

- ✓ Uncertainty over Haden 1 & 2 apparently clobbered investment. The impact will be felt for some time.
- ✓ Trend Prices will continue to drop, not as fast, but just as sure.
- ✓ Natural gas price spikes will affect coal markets, but regional response may be muted due to muted investment.
- ✓ Productivity gains will be needed to keep Appalachian Coal viable. *This is the key industry issue, and recall much of productivity gains attributable to scale of mines.*
- ✓ The State, OSM and others will be sued again regarding permitting rules. This matters to everyone (note difference between coal and natural gas permitting lengths).
- ✓ Many voters in West Virginia view Coal Operators as having big pockets (think Workers' Comp, PEIA, Teachers Retirement, roads).
- ✓ SO₂ rules may lead to “threshold compliance” that reduces demand for clean coal.



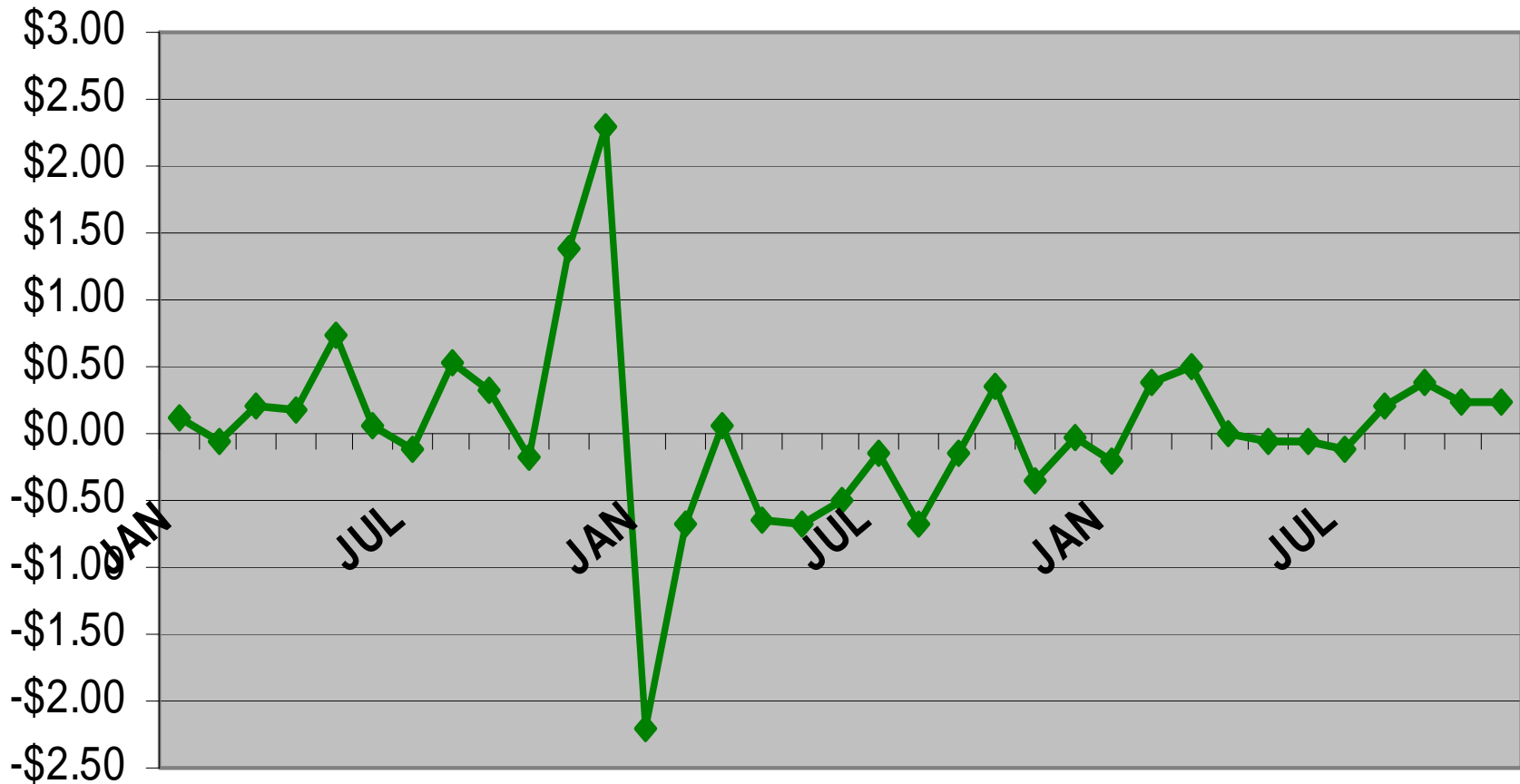
Natural Gas Production and U.S. Wellhead Price





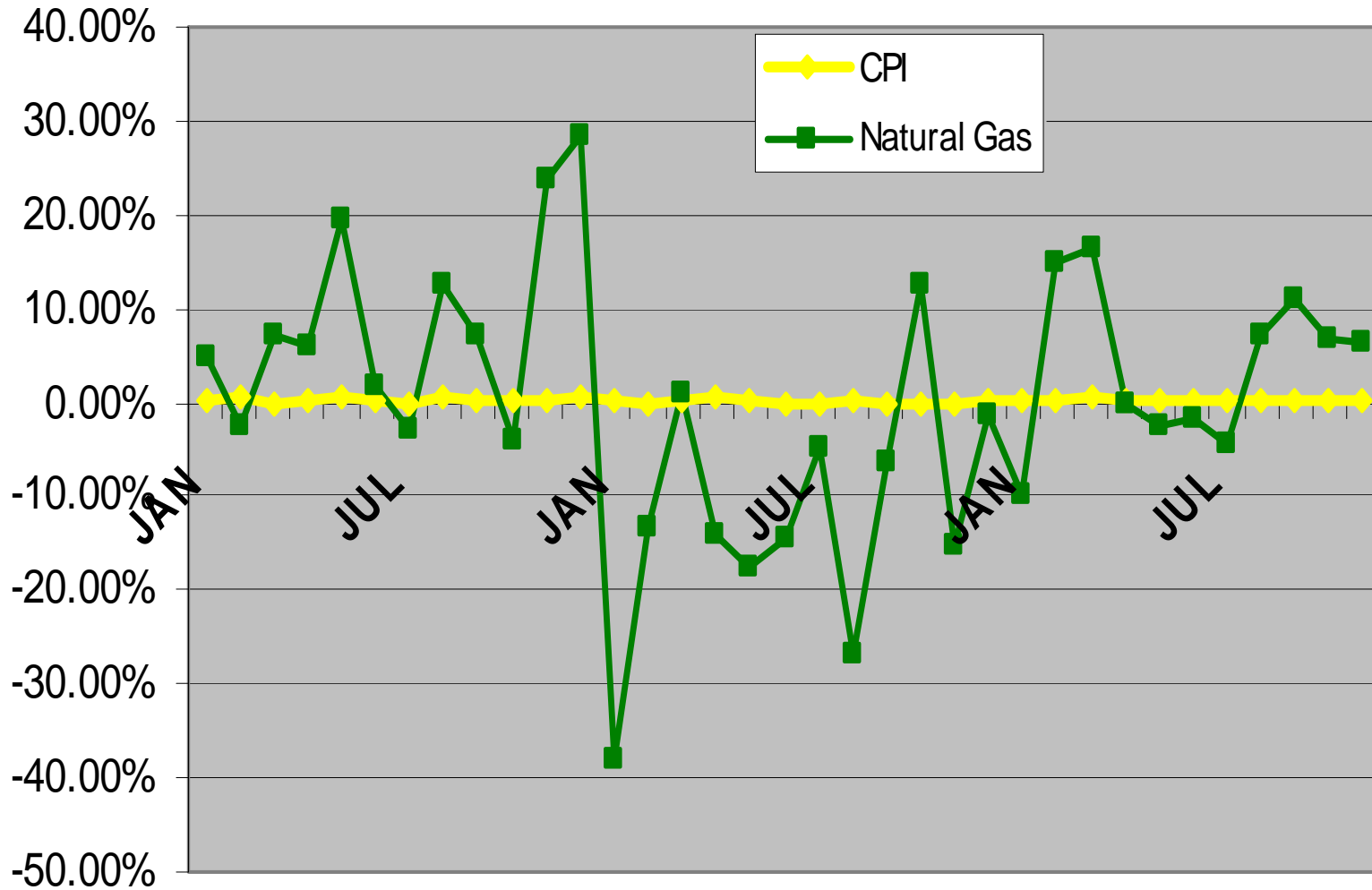
What a Wild Ride

Monthly Price Change at Wellhead (U.S.)





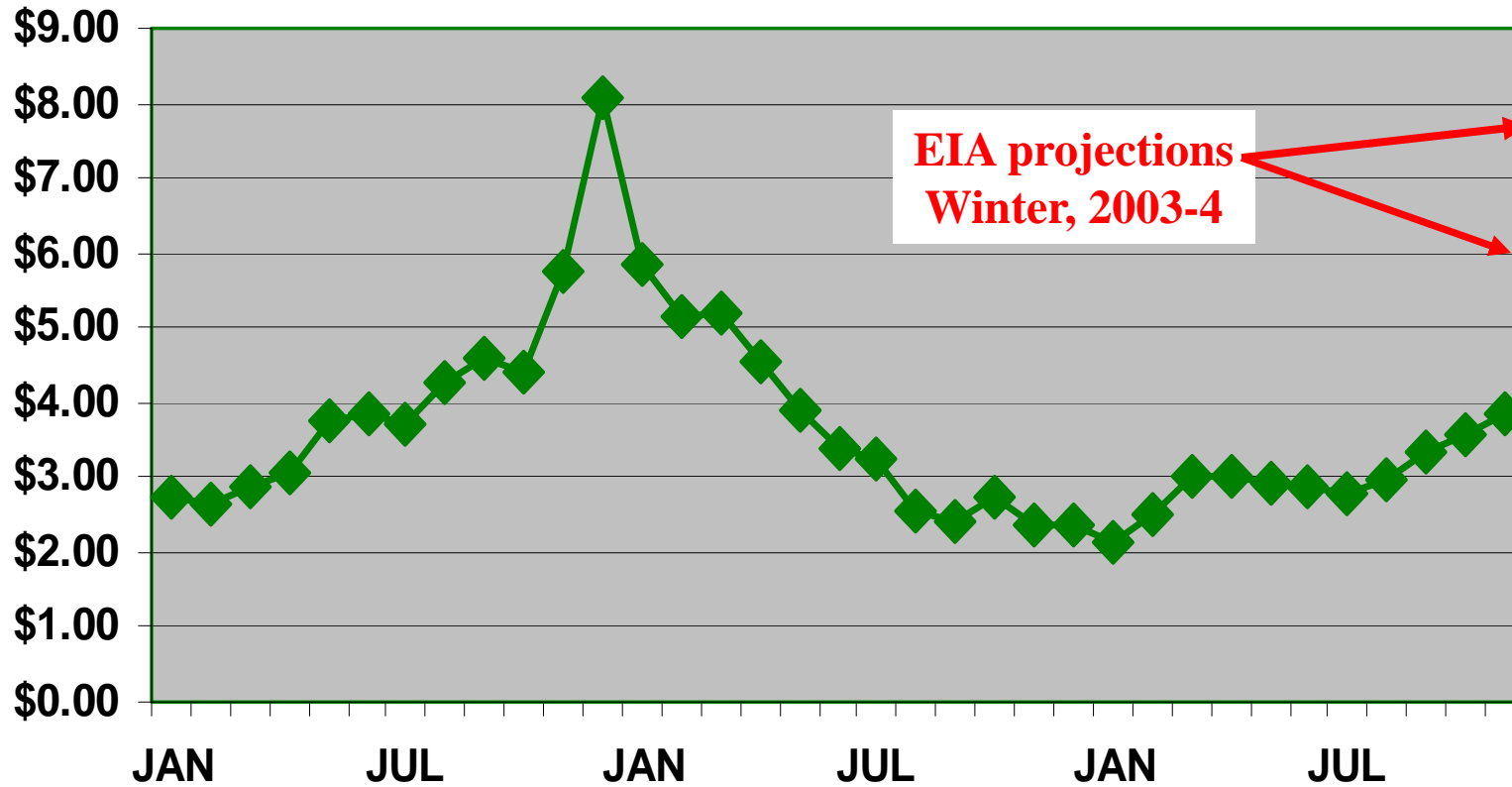
Compare % Change in Natural Gas to CPI





One peak has passed, but another one is coming.

Monthly Wellhead Price (U.S.)





Natural Gas in West Virginia

- ✓ Roughly \$500 million worth of natural gas
- ✓ Over 5,000 direct jobs
- ✓ Over 6,750 indirect jobs
- ✓ Total taxes just under \$50 million
- ✓ West Virginia's hidden jewel!



Issues in Natural Gas

- ✓ Electricity market deregulation is inevitable, even if slowed by ‘ill-devised’ regulatory changes in California.
- ✓ Increasing environmental restrictions likely favor natural gas over coal (but not nuclear power for reasons I cannot fathom).
- ✓ A potential weakening of OPEC (Iraq, California and Venezuela no longer share the goals of most cartel participants or Game Theory 101)
- ✓ Natural gas can be burdened by regulations aimed at point of extraction, not point of burn. This has slowed offshore drilling, leading to longer and more dramatic price swings.
- ✓ Regulation and investment lags contribute to slowing supply responsiveness to price while cleanliness contributes to demand. Sustained price is inevitable.
- ✓ Deregulation of pipelines will likely benefit WV producers even while overall prices may decline.



What are the looming economic issues for land owners in West Virginia?

- How badly did regulatory uncertainty affect mining in the state?
- How quickly will electricity de-regulation affect our State's energy producers and their suppliers?
- How quickly will de-regulation affect ability WV gas producers to reach western markets?
- What will be the affect on fuel prices of the 1990 Amendments to the CAA? How will future CAA rules influence steam plant decisions to invest in scrubbers?
- What changes to Workers' Comp are looming?
- How quickly will litigation again re-emerge to affect regulatory uncertainty?
 - Special Reclamation Fund, *Post-Mining Land Use*



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