



Clean Energy Action
Accelerating the transition to a post-fossil fuel, clean energy economy

Trends in
U.S. Delivered Coal Costs:
2004-2012
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By Teresa Foster and Leslie Glustrom

*Inquiries or corrections to
info@cleanenergyaction.org*

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Introduction

Since 2004, U.S. delivered coal costs have begun increasing substantially. The data and graphs in this short report are intended to help increase awareness of these recent increases in the cost of coal.

The data used in this report come from the Energy Information Administration in the U.S. Department of Energy. Delivered coal costs are reported in the EIA's Electric Power Monthly Table 4.10B available from <http://www.eia.gov/electricity/monthly/index.cfm>. Year-end data for any given year are typically found in the March or April Electric Power Monthly for the following year.

There are some minor inconsistencies in coal costs reported in different years for the same state. For complete accuracy, please refer to the original source data for the state of interest. These inconsistencies are usually a matter of pennies and are not expected to have a significant impact on the trends shown in the graphs in this report.

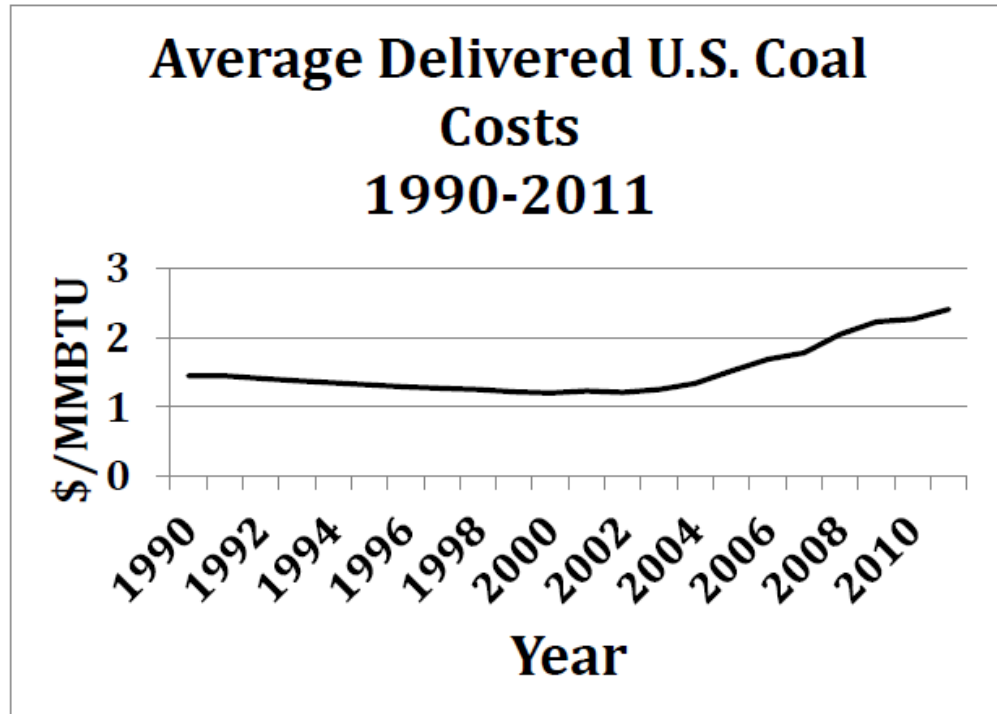
Coal costs can be reported in \$/ton or in \$/MMBTU. Costs reported in \$/MMBTU are usually preferred as they account for differences in the heat content (i.e. BTUs—or British Thermal Units) of the coal.

From Figure 1 on the next page, it can be seen that 2004 was a pivotal year with respect to U.S. coal costs. While the cost/MMBTU was falling during the 1990's due in large part to the increased use of lower cost coal from large western surface mines with lower production costs than the older underground mines of the east, this trend began reversing around 2004 and coal costs started on an upward trend that can be tracked for the state of your choice using the graphs in this report.

Coal cost for 2004 and 2012 as well as the percentage increase per year over that period by state can be found in Table 1 on page 9. Average delivered coal US coal costs from 2004-2012 are graphed on page 11. Graphs of coal costs from 2004 to 2012 for each state that reports coal costs can be found in alphabetical order starting on page 12.

Figure 1

Data from U.S. Energy Information Administration Electric Power Monthly, Table 4.10B
<http://www.eia.gov/electricity/monthly/index.cfm>



From Figure 1, it can be seen that U.S. coal costs began a steady upward trend in 2004. While the cost of any fossil fuel is the result of complex forces of supply and demand, it appears that the recent rises in the cost of coal are largely due to the following three key factors:

- Increased Production Costs
- Increased Transportation Costs
- Increased Export Pressure

Production costs for mining coal are increasing as coal companies have to move increasing amounts of dirt (and in some cases whole mountain tops) to access the coal. The easily accessible coal has already been mined and burned. Now reaching the remaining coal is becoming increasingly difficult and expensive. These increasing production costs are one factor that is driving U.S. coal costs upward.

Transportation costs for coal are also increasing as the diesel fuel that runs the trains that transport most U.S. coal are rising. These increased

transportation costs are a second factor that is driving U.S. delivered coal costs upward.

Export pressure is another factor that can increase coal costs. Countries in Europe, South America and Asia are often willing to pay more for coal as they experience increasingly serious coal supply constraints. Export pressure is a third factor that is driving U.S. coal costs upward.

No one can predict how the complex forces of supply and demand will affect future prices of coal, but it appears that production costs, transportation costs and export pressure will tend to drive U.S. coal costs generally upward in the coming years—at least until US demand for coal drops significantly. Citizens and decision-makers are encouraged to begin monitoring coal costs for their state using the publicly available data from the Energy Information Administration.

To track current coal and fuel costs for individual power plants in your state, refer to the Energy Information Administration “923” database at <http://www.eia.gov/electricity/data/eia923/>. You can download the spreadsheet and search it for the power plants in your state.

From data available on recent wind and solar bids in the western United States, it is becoming clear that once coal costs rise above about \$1.50 per MMBTU, it can no longer be assumed that coal is the lowest cost way to generate electricity—even without consideration of the climate change impacts and the other external environmental and health costs of coal. When reviewing cost comparisons for your state, check to see whether your utility is discounting future fuel costs—a practice that can greatly diminish the impact of future fuel costs in any comparison.

Citizens and decision-makers in every state are encouraged to start asking questions about coal costs, the future of the mines that are providing coal to your state and the possibility that your state will be better off investing its energy dollars in fuel-free renewable resources rather than in upgrades to aging coal plants.

For background information on U.S. coal supplies, refer to “Coal: Cheap and Abundant..., Or Is It? Why Americans Should Stop Assuming that the U.S. has a 200 Year Supply of Coal.” This 2009 report is available from http://cleanenergyaction.files.wordpress.com/2011/10/coal_supply_constraints_cea_0212091.pdf.

Clean Energy Action will issue updated reports on coal cost and supply issues in late 2013. These will be available at www.cleanenergyaction.org.

For information on the amount of money many states are spending to import coal into their state, see “Burning Coal, Burning Cash” by the Union of Concerned Scientists available from the link below. Compare the amount of money (often hundreds of millions of dollars or more) spent on coal in your state in 2008 with the increase in the average cost of coal between 2008 and 2011. The amount of money spent on coal will have gone up quite dramatically. This is money that is literally “going up the stack” rather than being invested in clean, fuel-free resources that will help to stabilize future utility bills. This report is available at http://www.ucsusa.org/clean_energy_old/technology_and_impacts/impacts/burning-coal-burning-cash.html

The environmental and health costs of coal have been written about extensively. The reader is referred to the following for more information.

- The Physicians for Social Responsibility report “Coal’s Assault on Human Health” available at <http://www.psr.org/assets/pdfs/psr-coal-fullreport.pdf>
- The Harvard Study “Full Cost Accounting for the Life Cycle of Coal” available from <http://onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.2010.05890.x/full> .
- The U.S. Global Change Research Program report “Global Climate Change Impacts in the United States,” available from <http://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf> .

After reviewing the information on the cost of coal as well as the serious environmental and health impacts of coal burning, citizens and decision makers are encouraged to raise the question of whether your state will be best served by spending money on aging coal plants or finding a cleaner, fuel-free path to the future that will begin to stabilize utility bills.

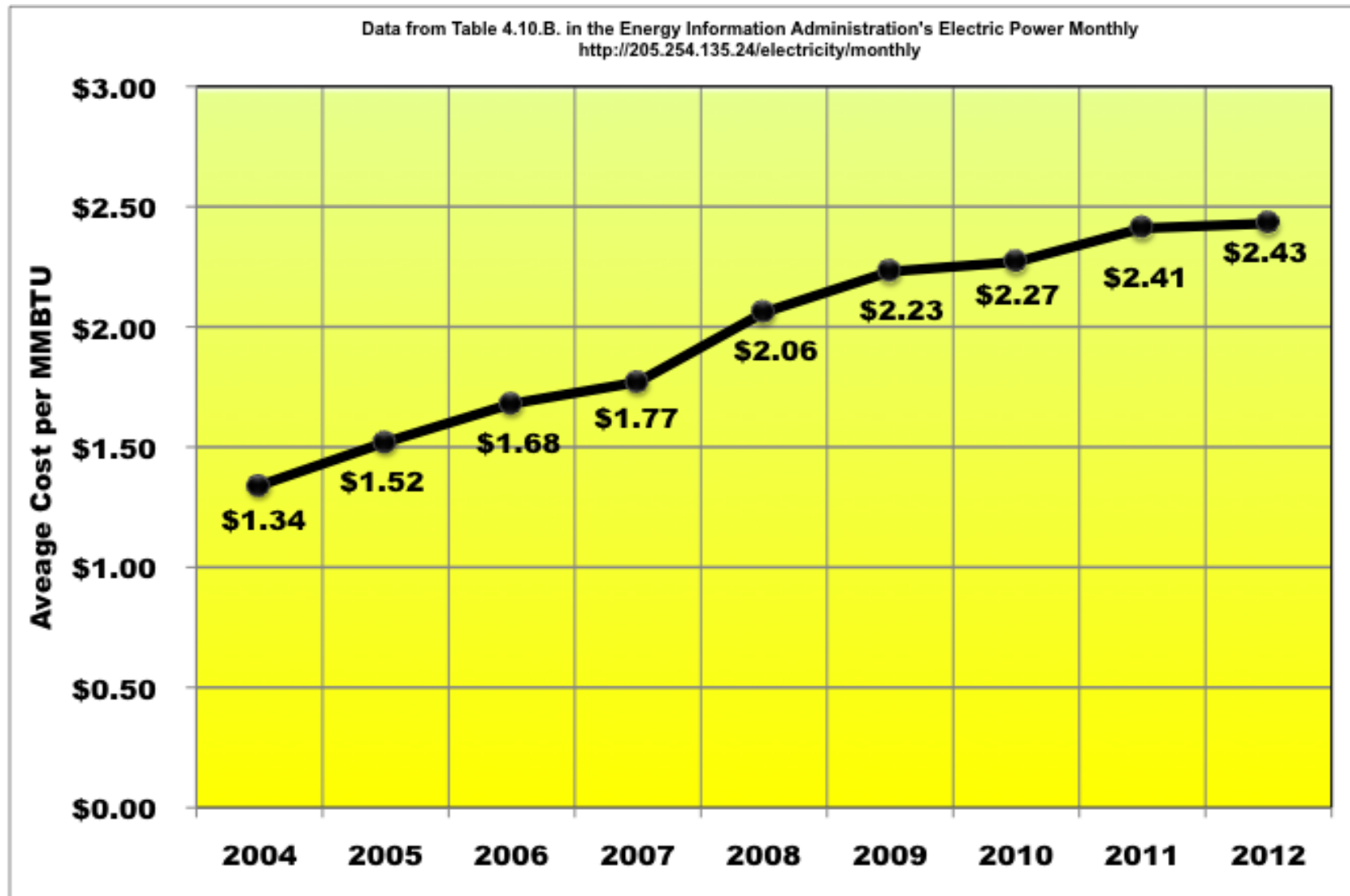
Table 1
Delivered Coal Cost by State 2004-2012

*Data from Table 4.10.B. in the Energy Information Administration's Electric Power Monthly.
There are some inconsistencies in EPM reported costs. These are not expected to change the conclusions.
Please refer to source data to validate data when needed. <http://205.254.135.24/electricity/monthly/>*

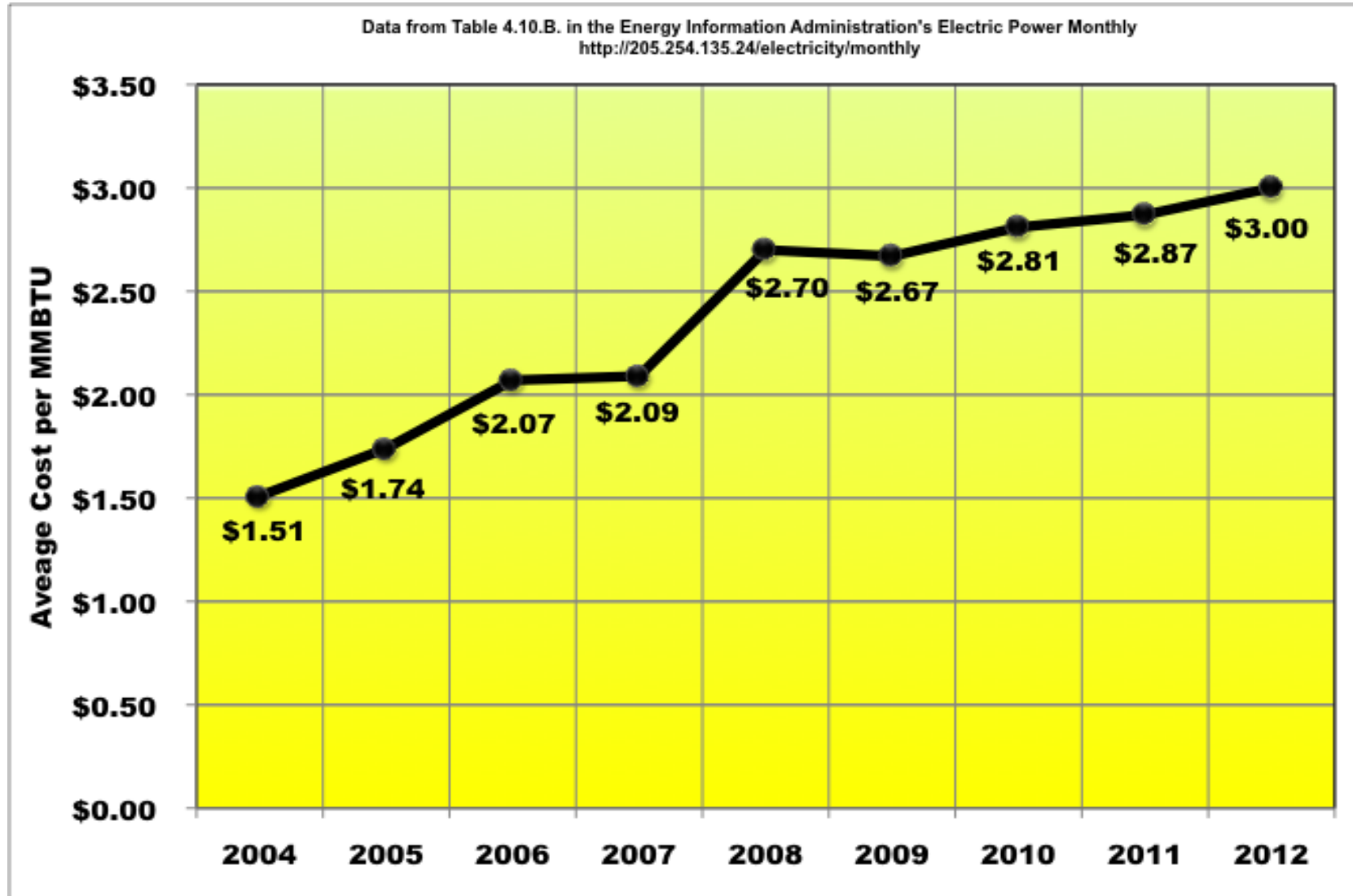
State	2004 Coal Cost \$/MMBTU	2012 Coal Cost \$/MMBTU	2004-2012 Compound Increase/Yr
Alabama	\$1.51	\$3.00	8.96%
Arizona	\$1.28	\$2.07	6.19%
Arkansas	\$1.23	\$2.25	7.84%
Colorado	\$0.97	\$1.85	8.41%
Florida	\$1.89	\$3.49	7.97%
Georgia	\$1.79	\$3.47	8.63%
Illinois	\$1.16	\$2.08	7.57%
Indiana	\$1.21	\$2.60	10.03%
Iowa	\$0.90	\$1.48	6.41%
Kansas	\$1.03	\$1.83	7.45%
Kentucky	\$1.39	\$2.44	7.29%
Louisiana	\$1.37	\$2.87	9.68%
Maryland	\$1.74	\$3.62	9.59%
Michigan	\$1.37	\$2.92	9.92%
Minnesota	\$1.06	\$1.98	8.12%
Mississippi	\$1.73	\$4.45	12.54%
Missouri	\$0.92	\$1.86	9.20%
Montana	\$0.63	\$1.52	11.64%
Nebraska	\$0.66	\$1.54	11.17%
Nevada	\$1.36	\$2.55	8.17%
New Hampshire	\$2.01	\$4.01	9.02%
New Jersey	\$2.27	\$4.05	7.50%
New Mexico	\$1.48	\$2.18	4.96%
New York	\$1.58	\$3.20	9.22%
North Carolina	\$2.00	\$3.82	8.42%
North Dakota	\$0.77	\$1.50	8.69%
Ohio	\$1.32	\$2.41	7.81%
Oklahoma	\$1.01	\$1.97	8.71%
Oregon	\$1.19	\$1.89	5.95%
Pennsylvania	\$1.23	\$2.46	9.05%
South Carolina	\$1.91	\$3.97	9.58%
South Dakota	\$1.38	\$2.16	5.76%
Tennessee	\$1.33	\$2.61	8.79%
Texas	\$1.34	\$1.99	5.06%
Utah	\$1.10	\$1.91	7.14%
Virginia	\$1.90	\$3.61	8.35%
West Virginia	\$1.41	\$2.70	8.46%
Wisconsin	\$1.16	\$2.37	9.34%
Wyoming	\$0.86	\$1.44	6.65%
U.S. Total	\$1.34	\$2.43	7.72%

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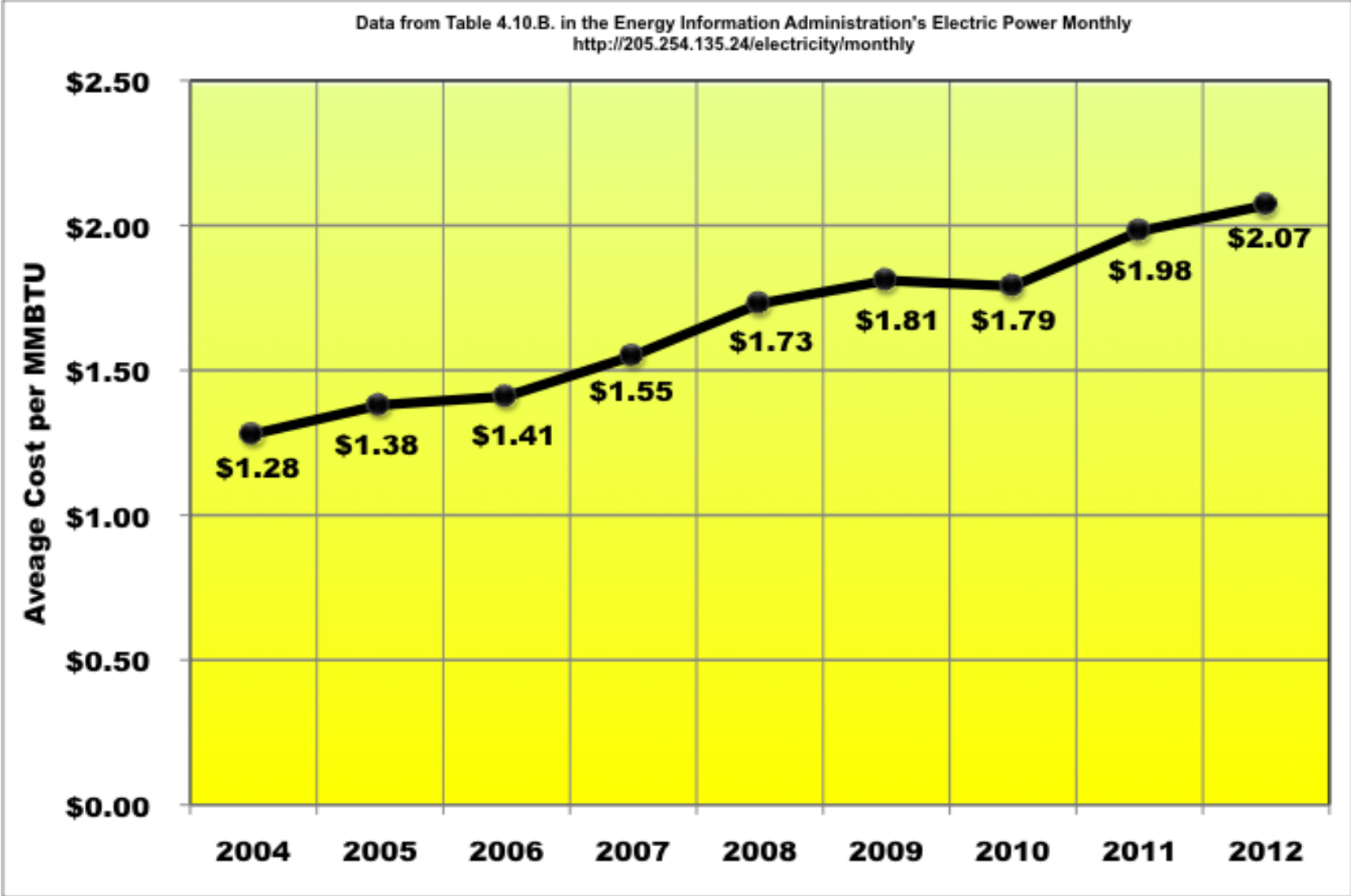
UNITED STATES AVERAGE COAL COSTS 2004-2012



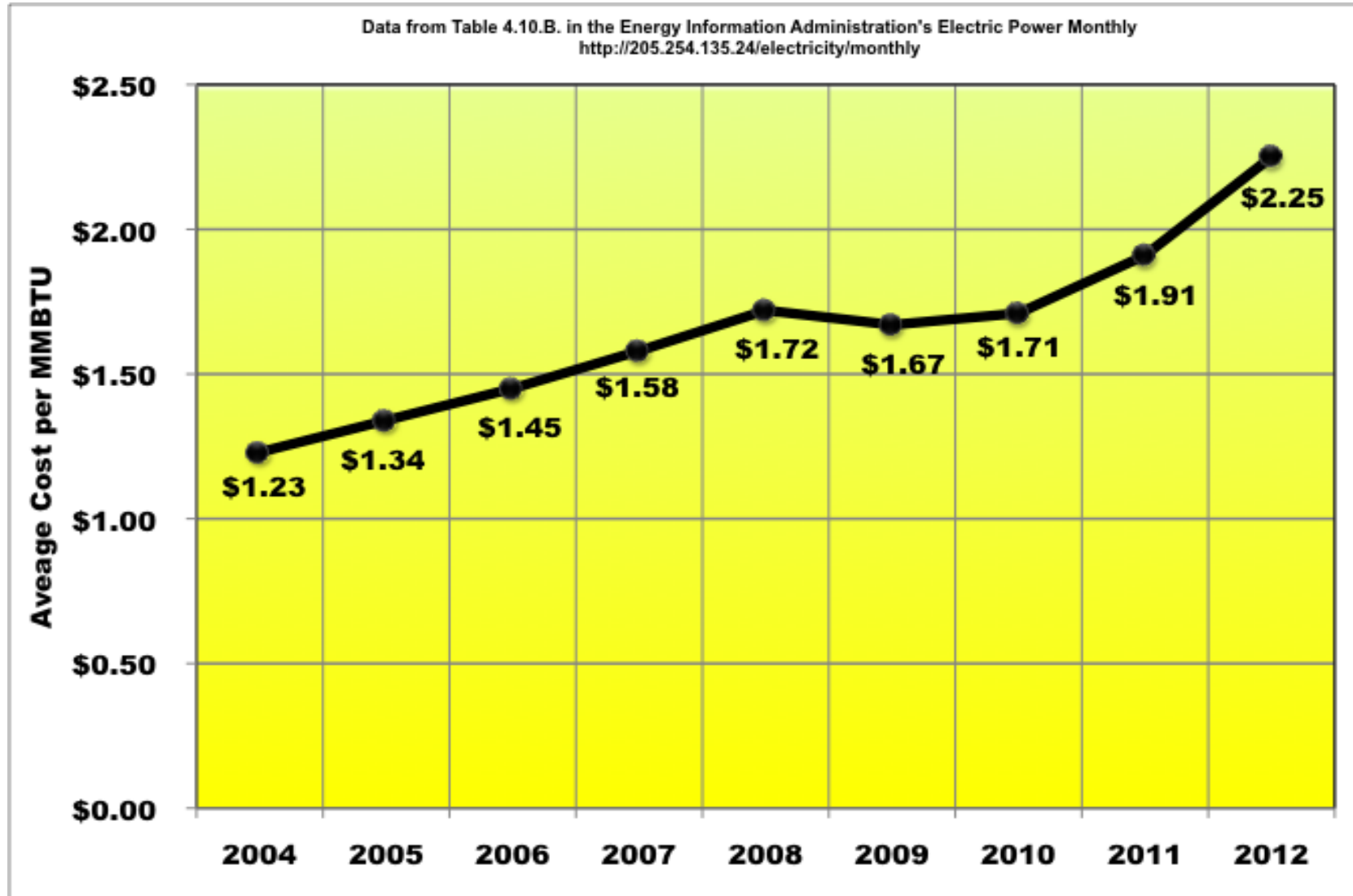
ALABAMA AVERAGE COAL COSTS 2004-2012



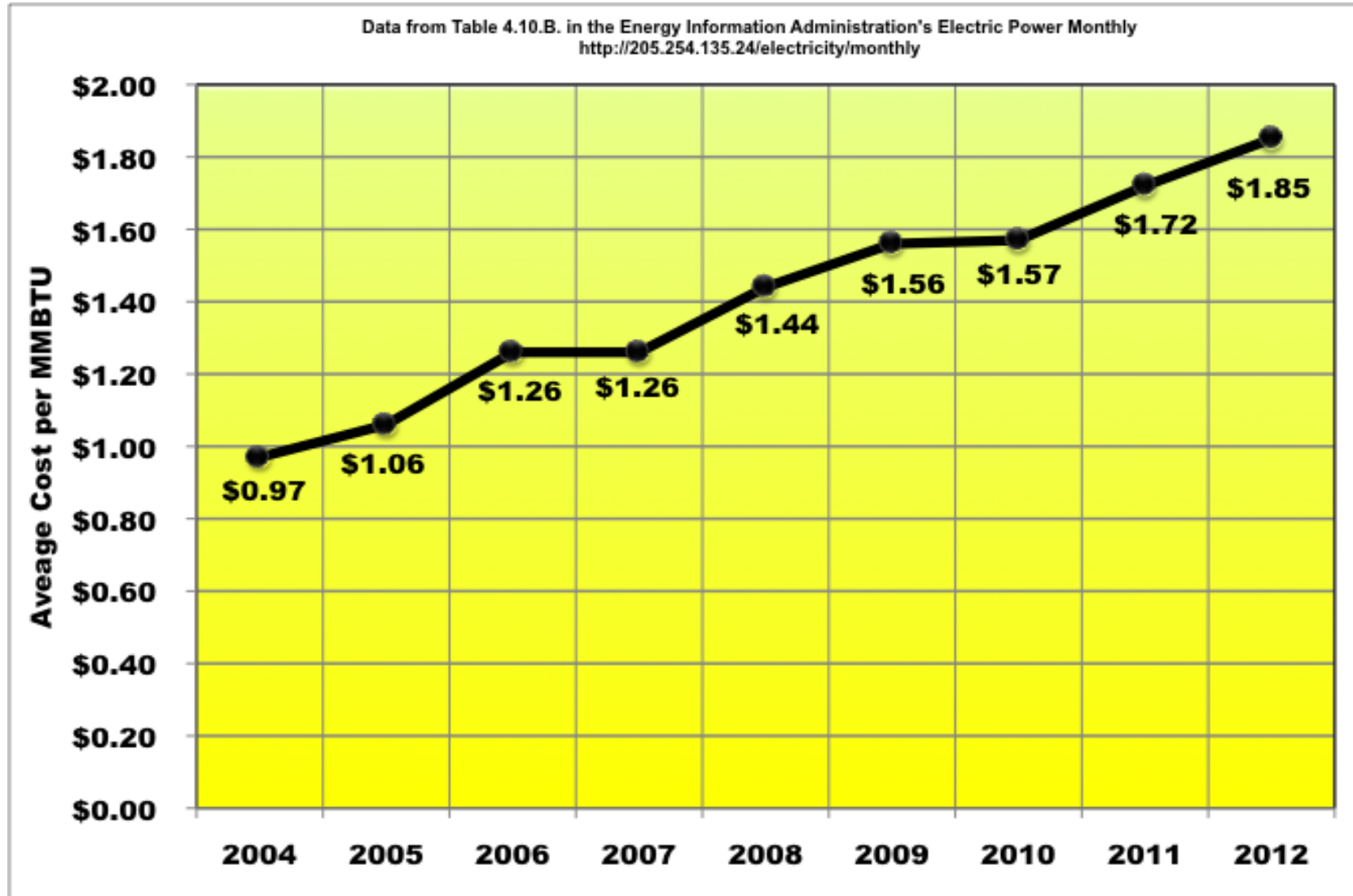
ARIZONA AVERAGE COAL COSTS 2004-2012



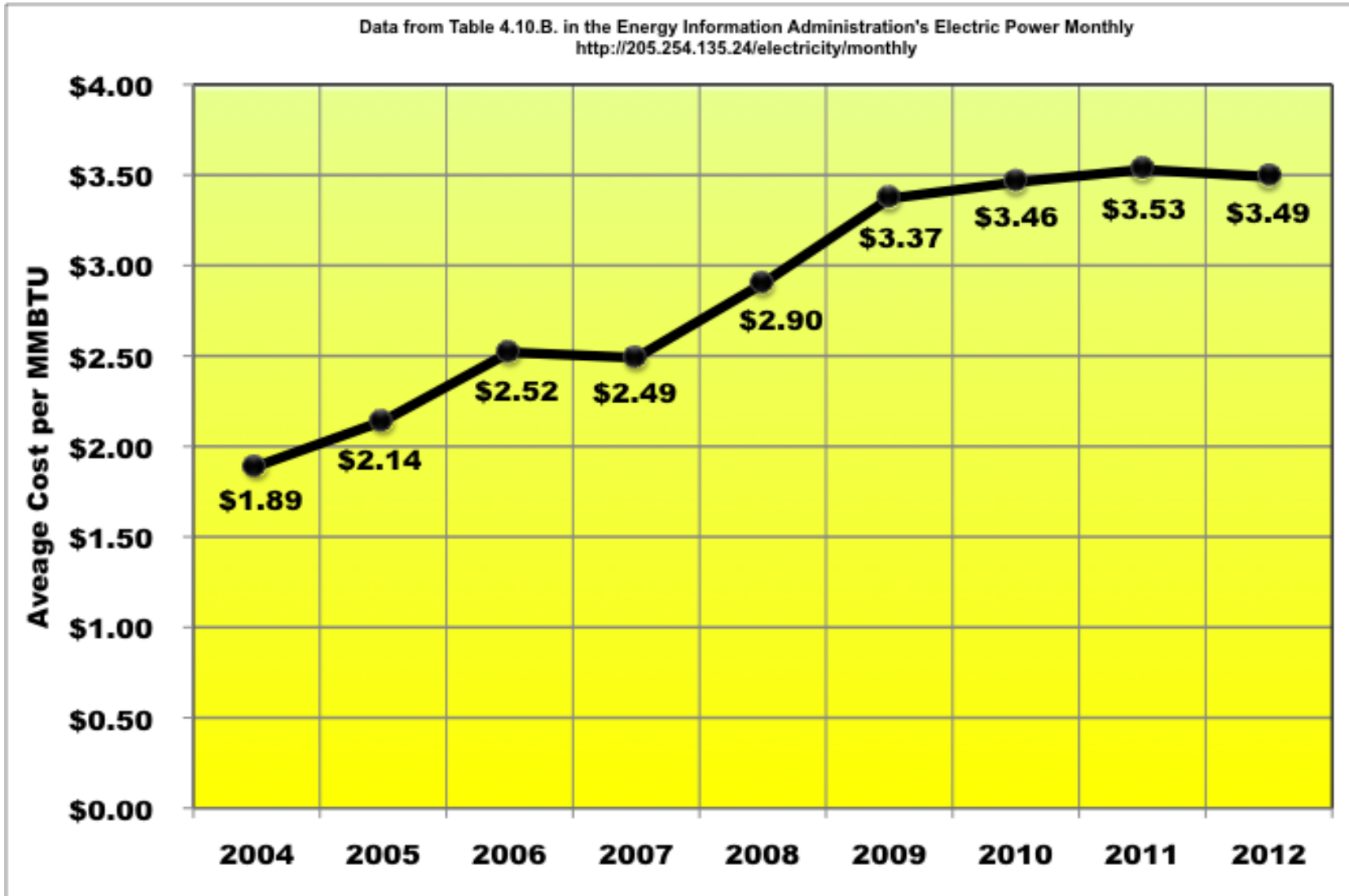
ARKANSAS AVERAGE COAL COSTS 2004-2012



COLORADO AVERAGE COAL COSTS 2004-2012



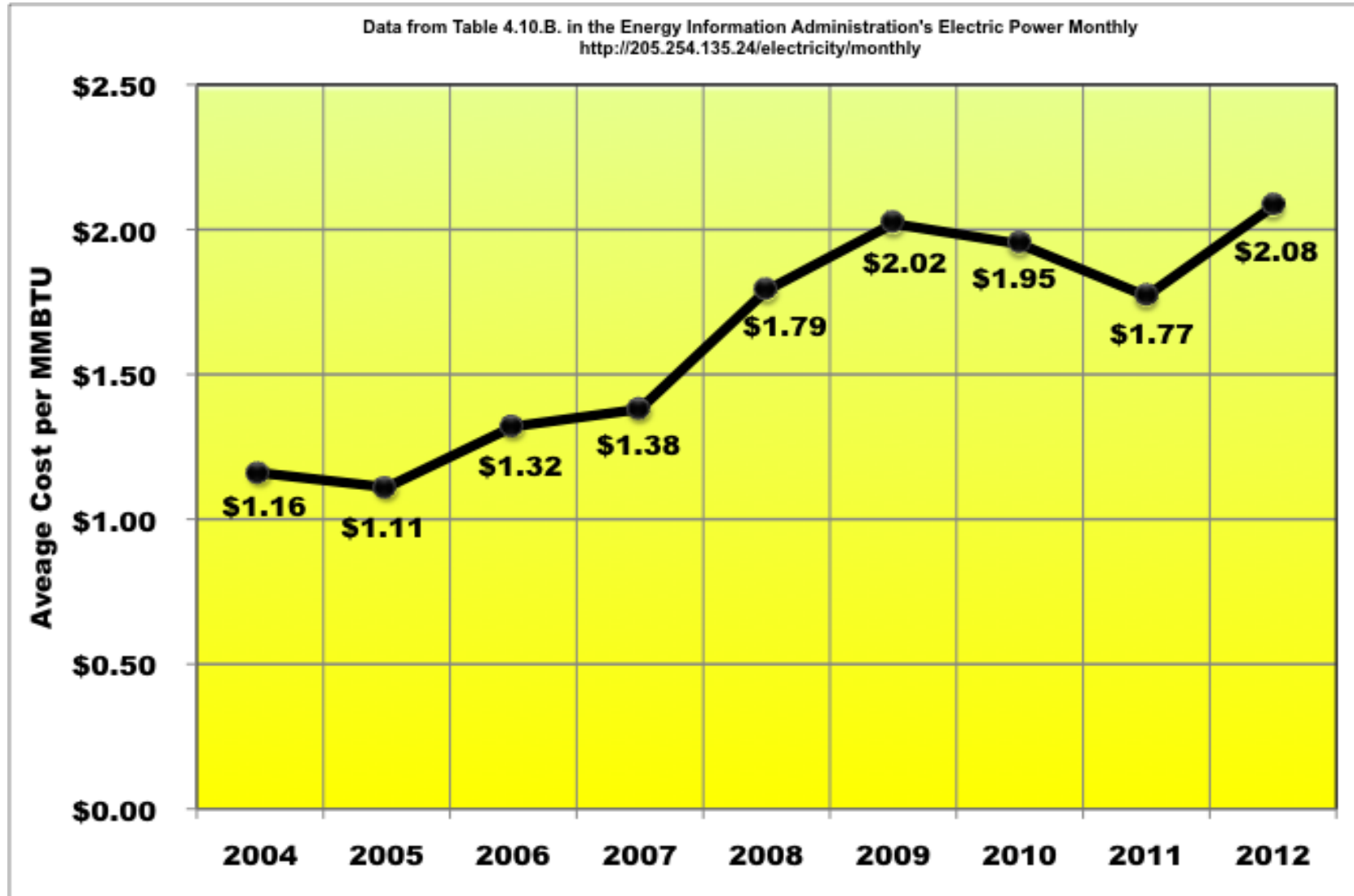
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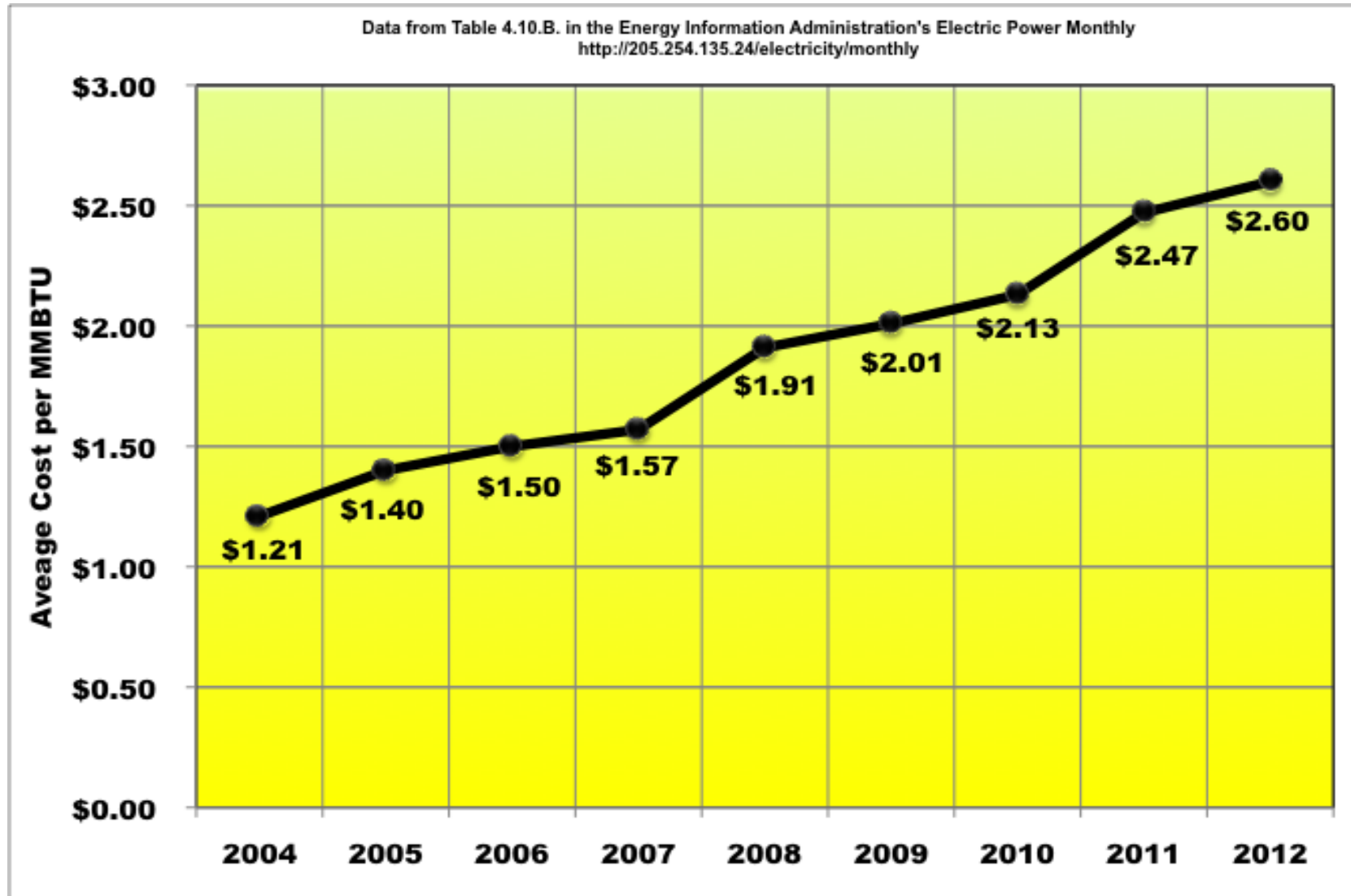
GEORGIA AVERAGE COAL COSTS 2004-2012



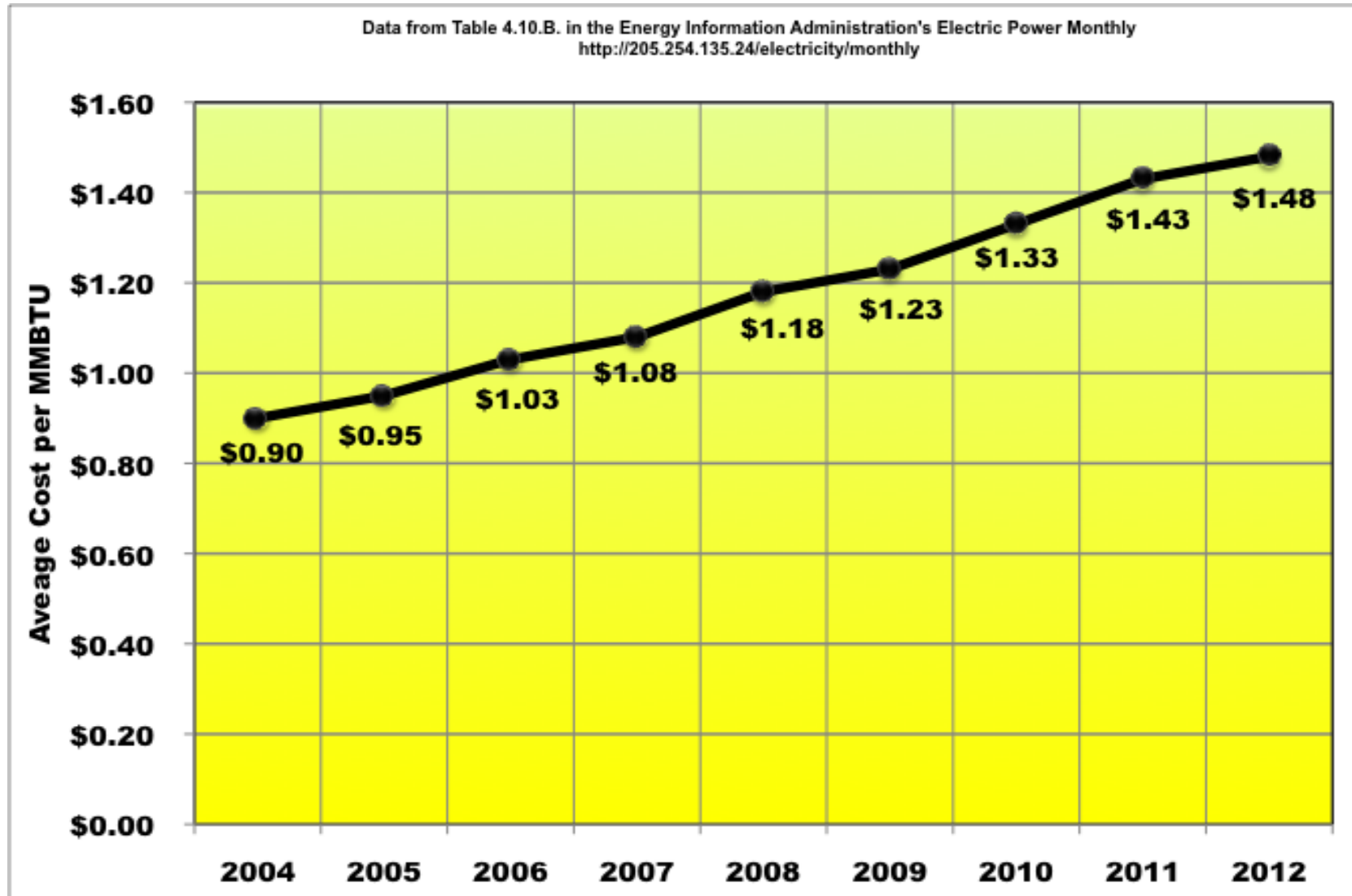
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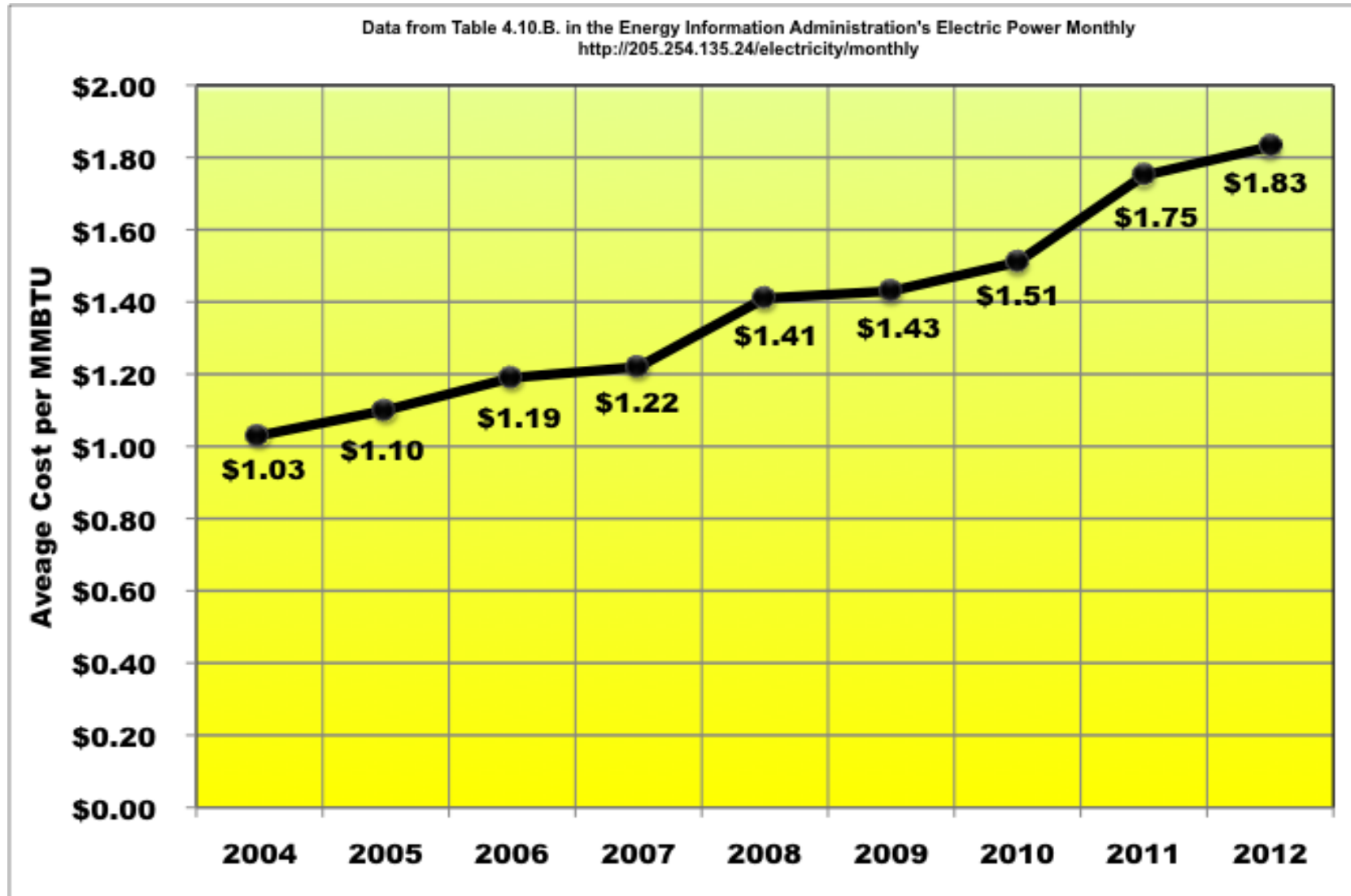
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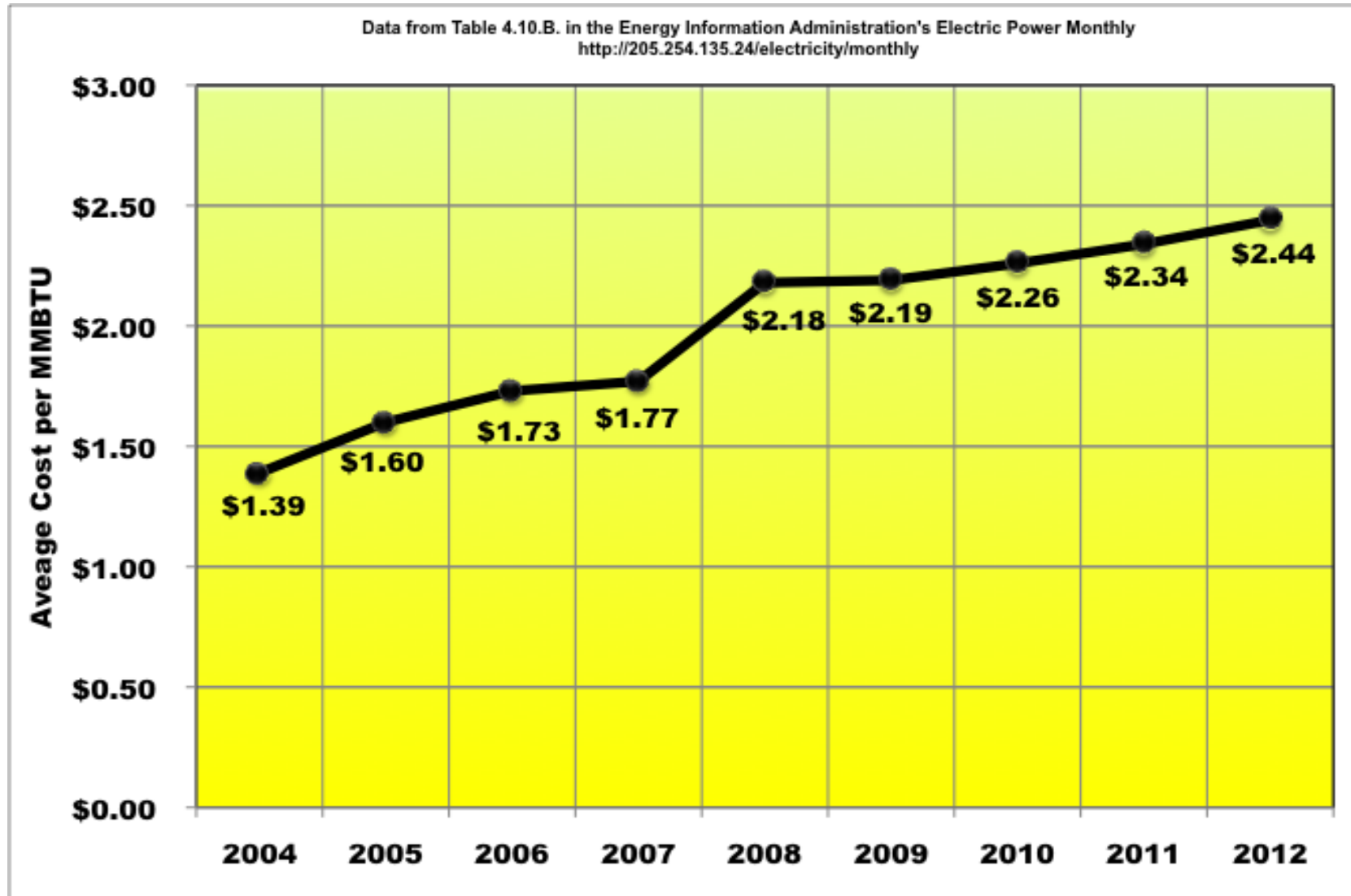
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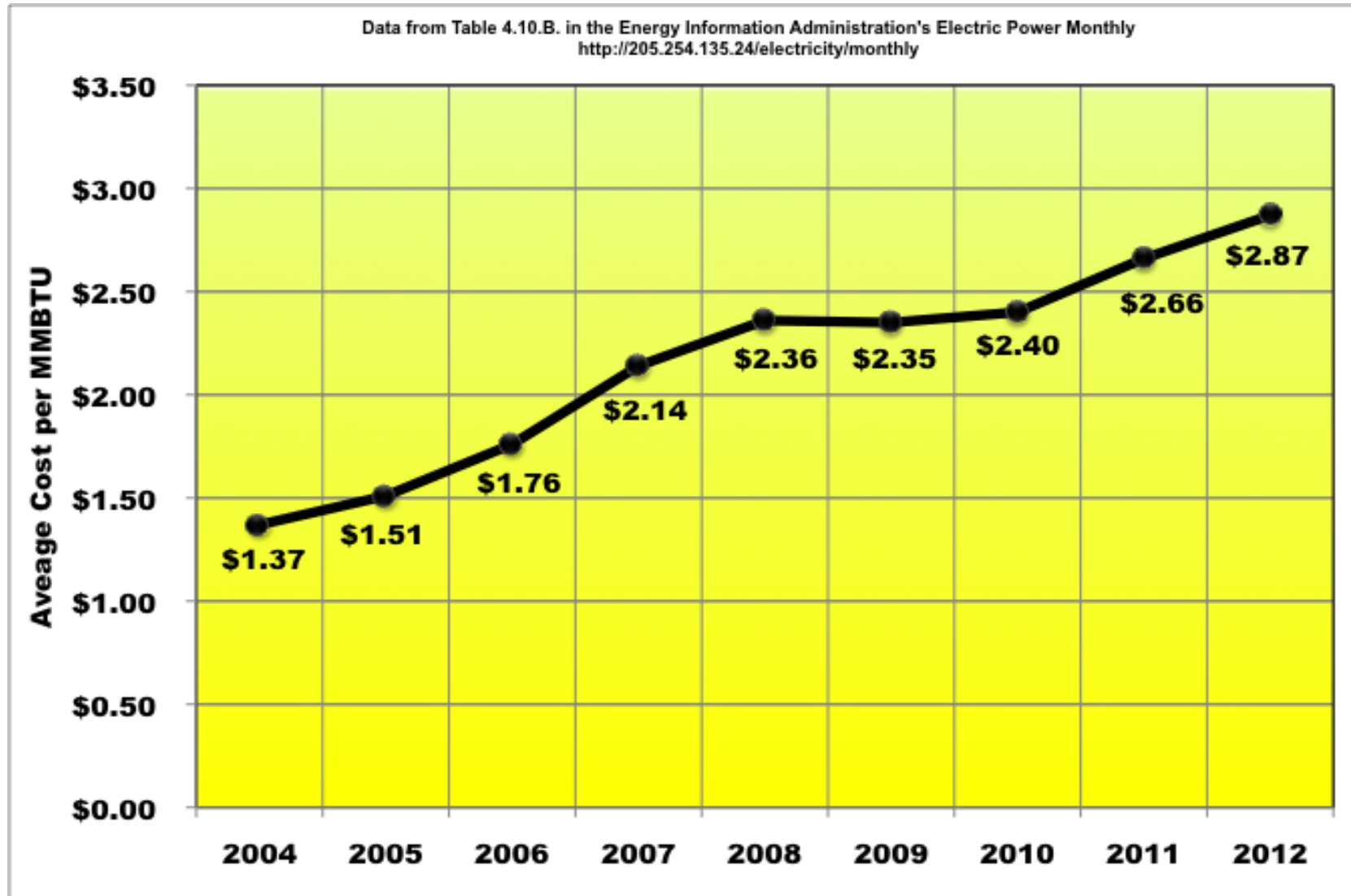
KANSAS AVERAGE COAL COSTS 2004-2012



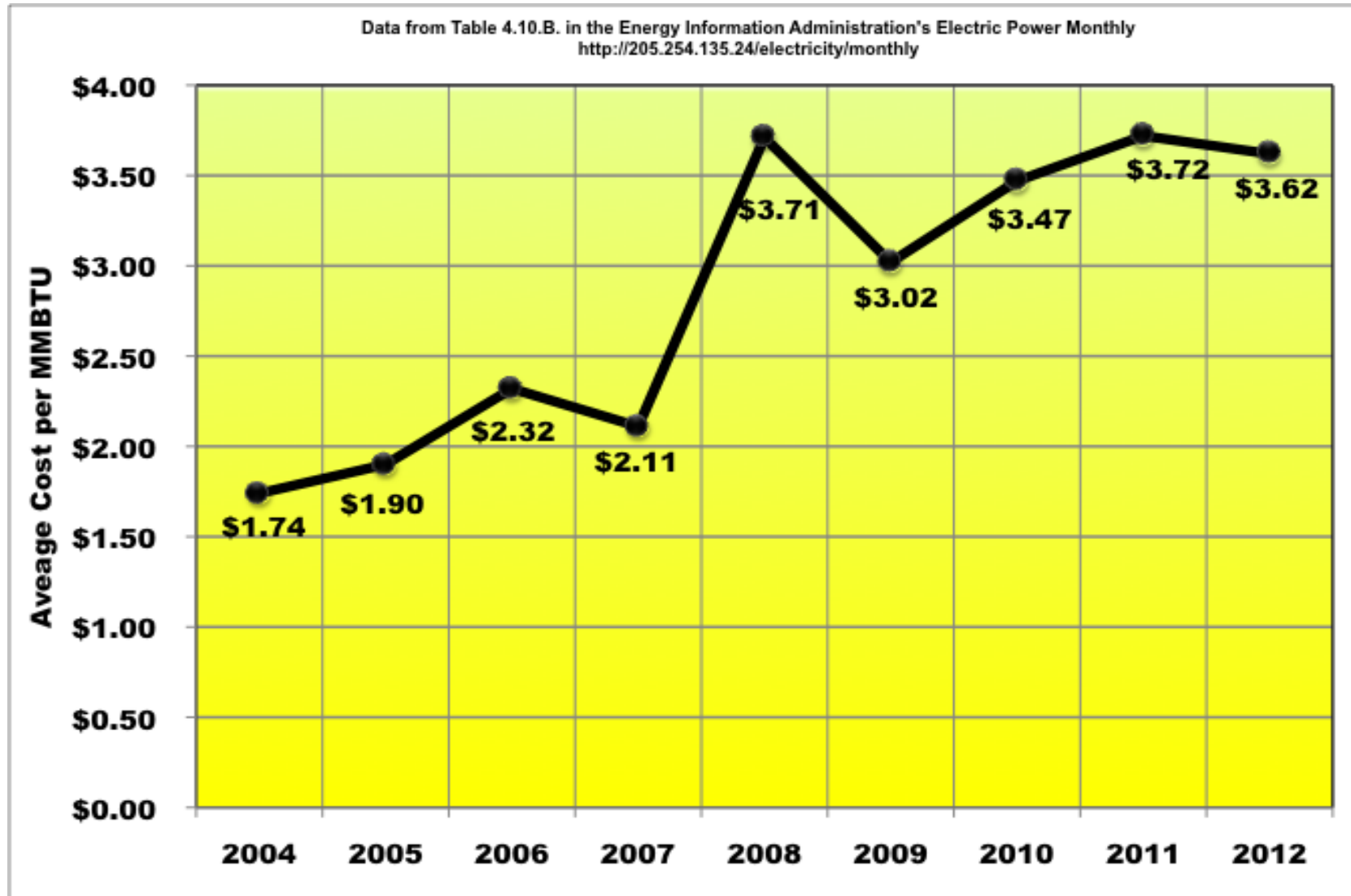
KENTUCKY AVERAGE COAL COSTS 2004-2012



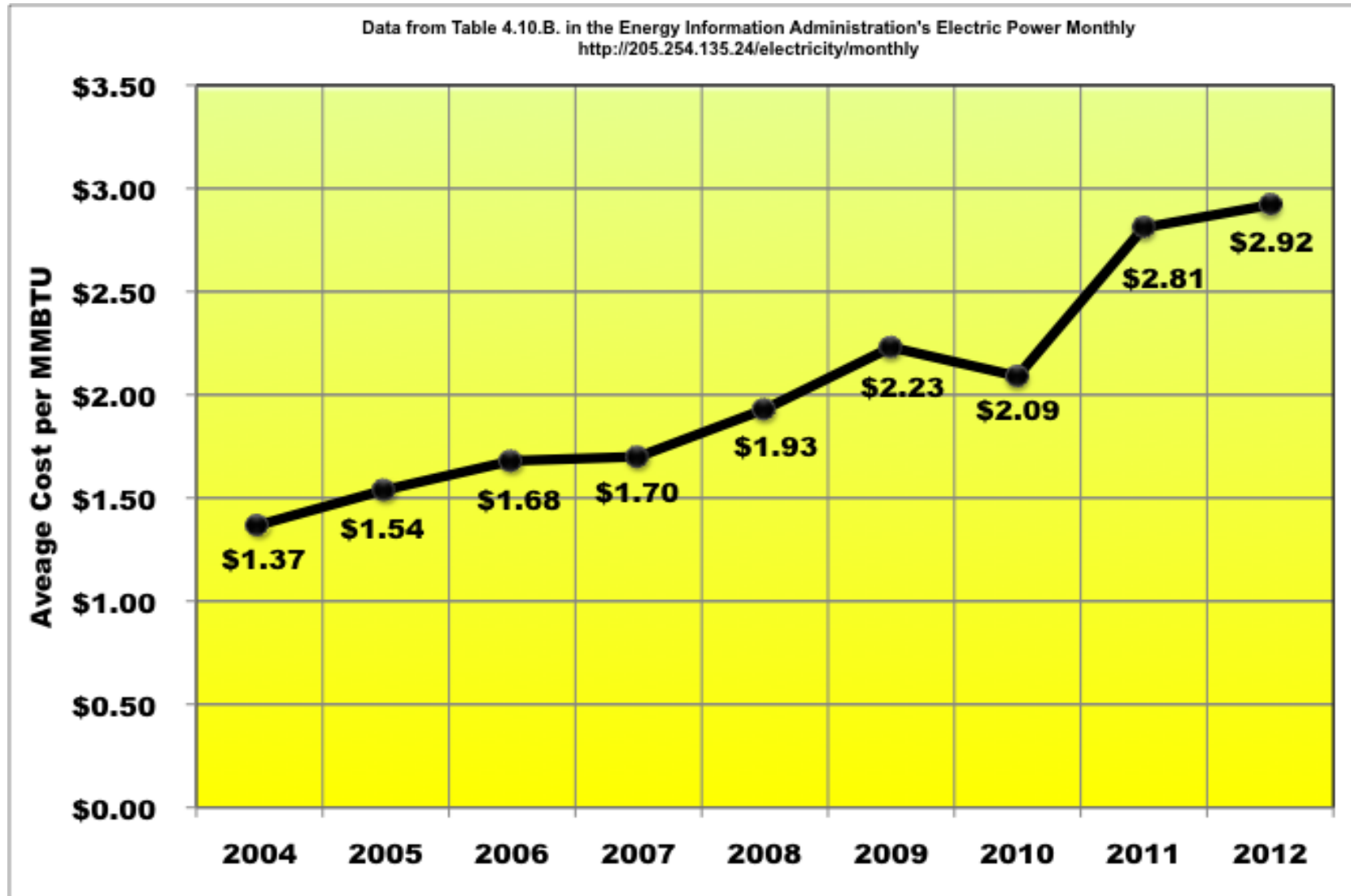
LOUISIANA AVERAGE COAL COSTS 2004-2012



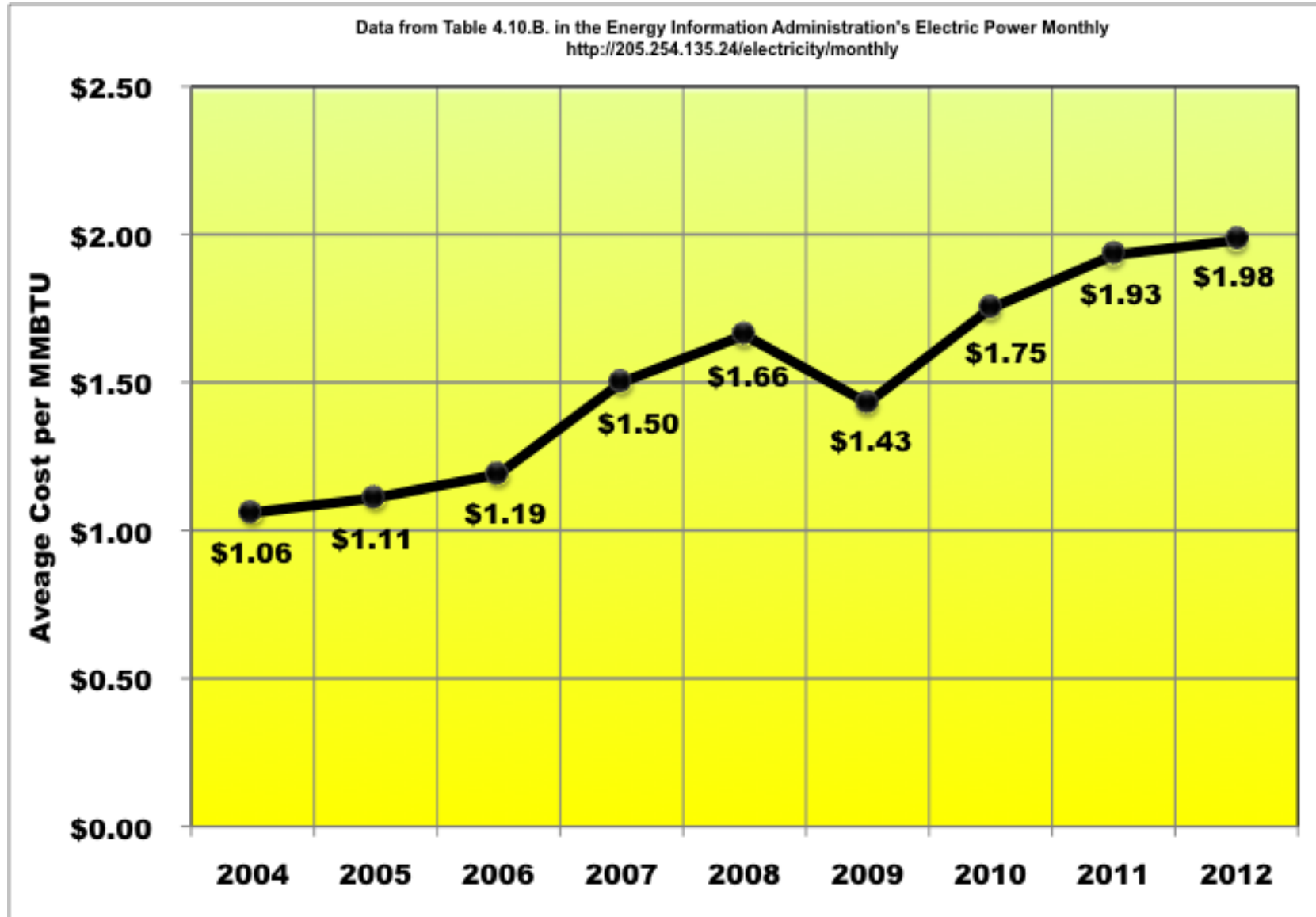
MARYLAND AVERAGE COAL COSTS 2004-2012



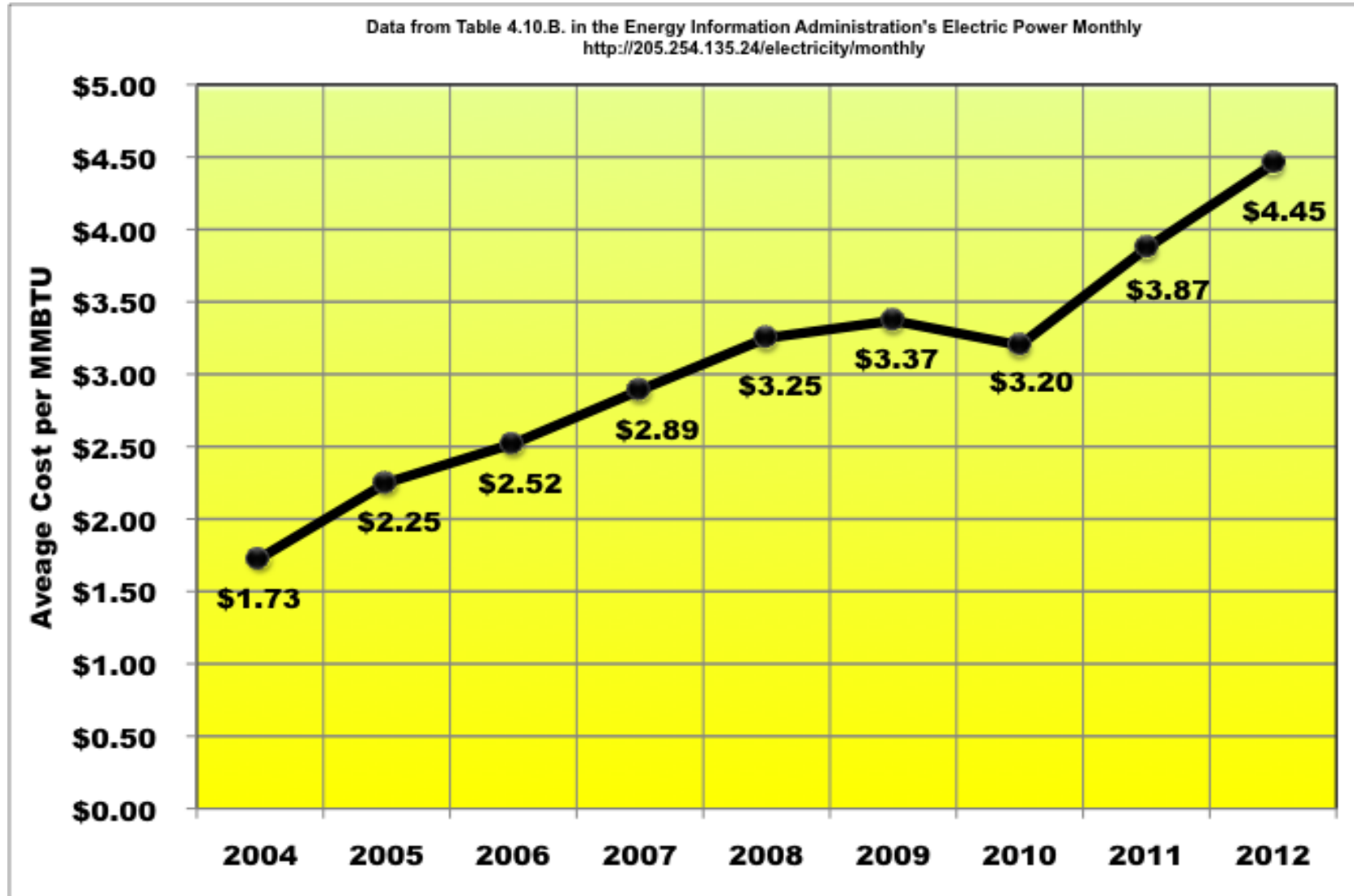
MICHIGAN AVERAGE COAL COSTS 2004-2012



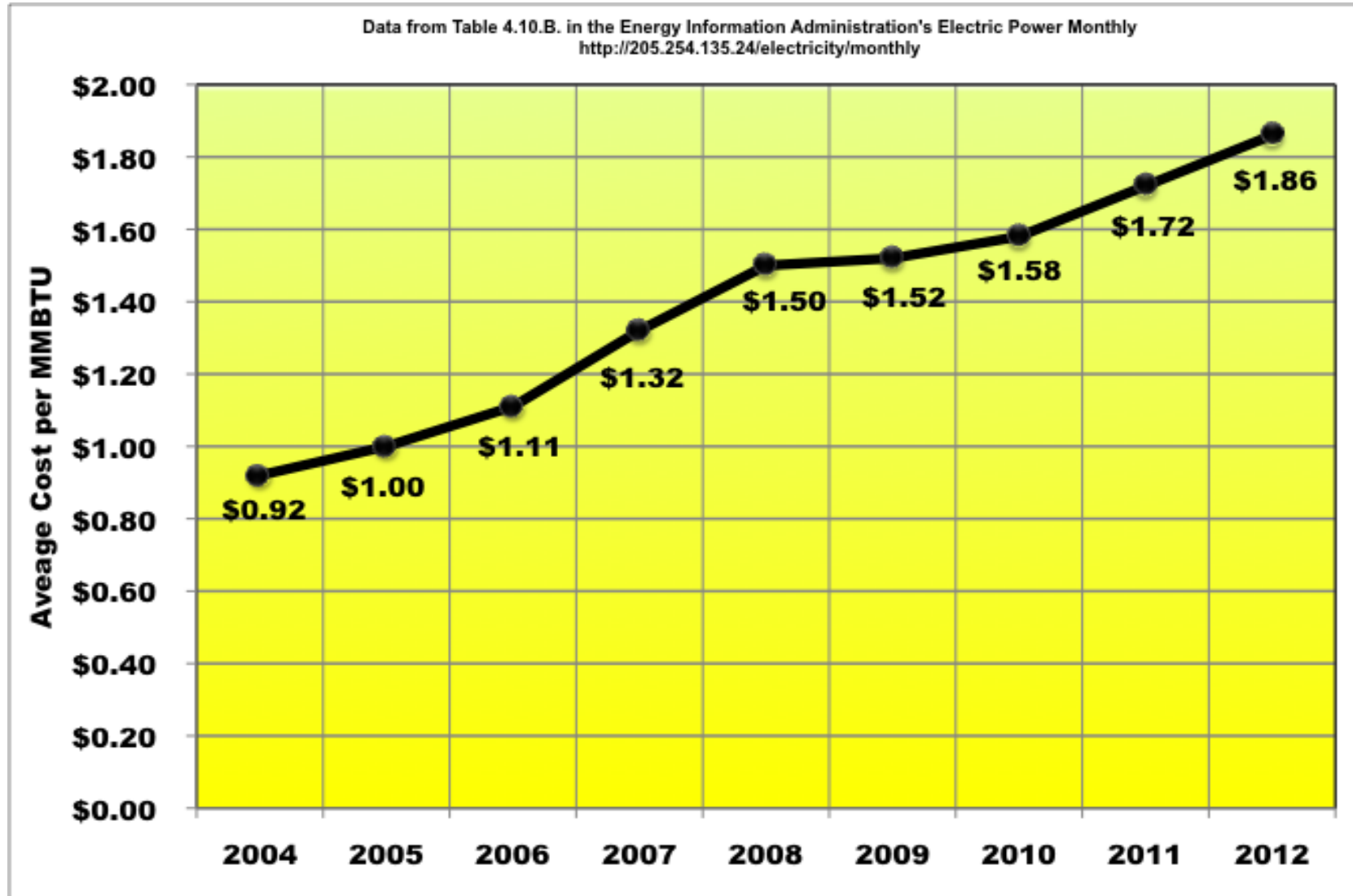
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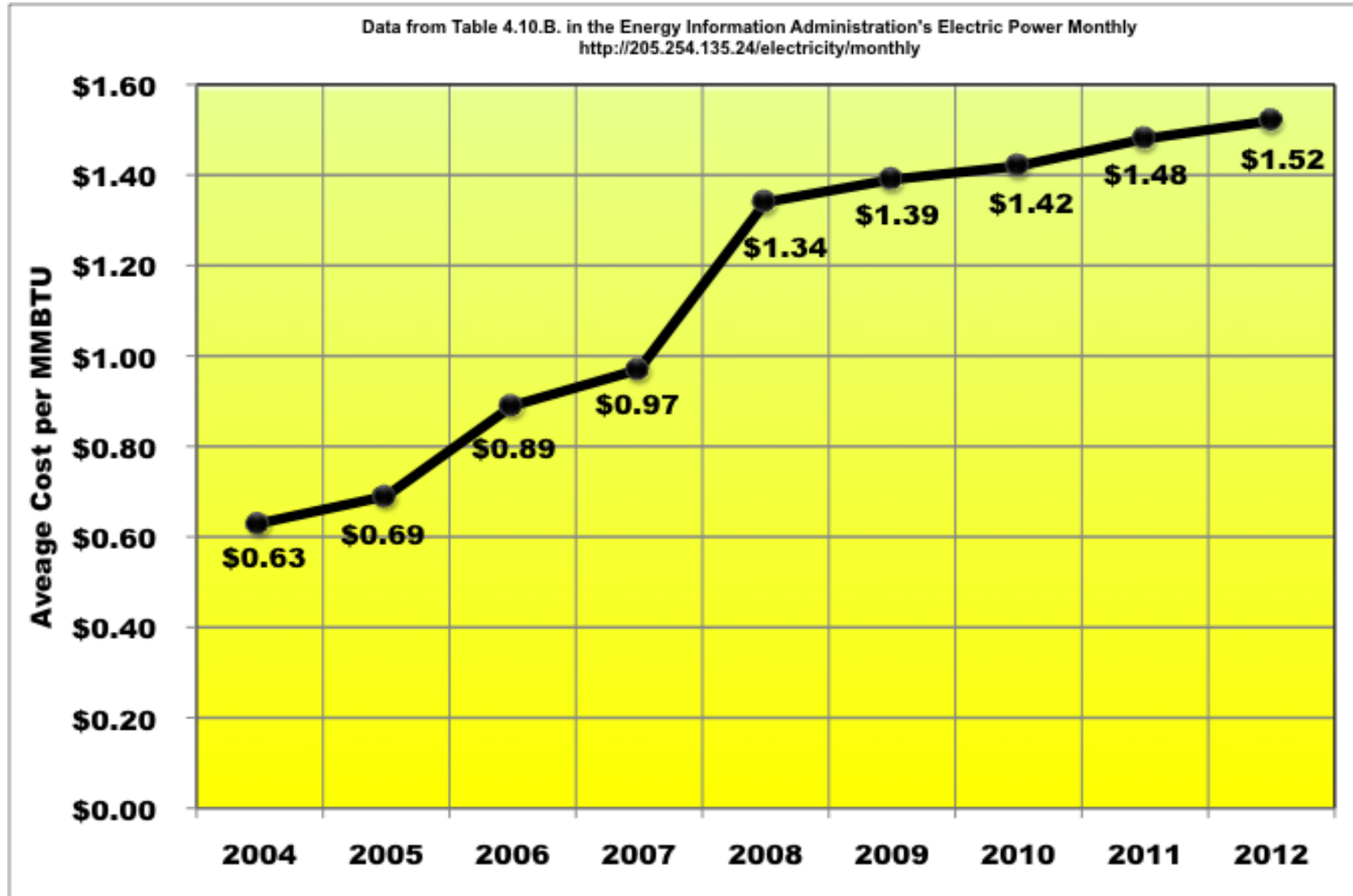
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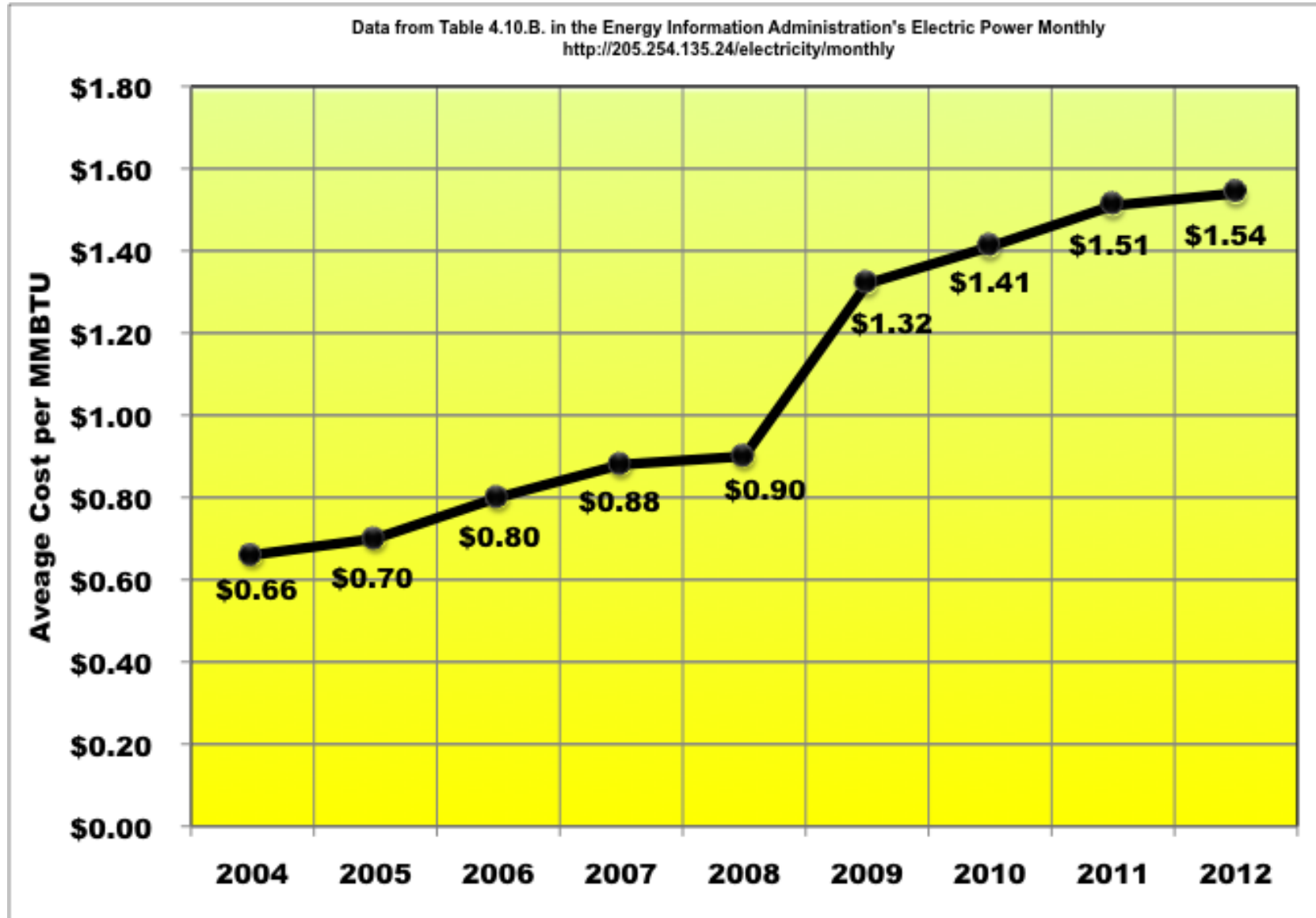
MISSOURI AVERAGE COAL COSTS 2004-2012



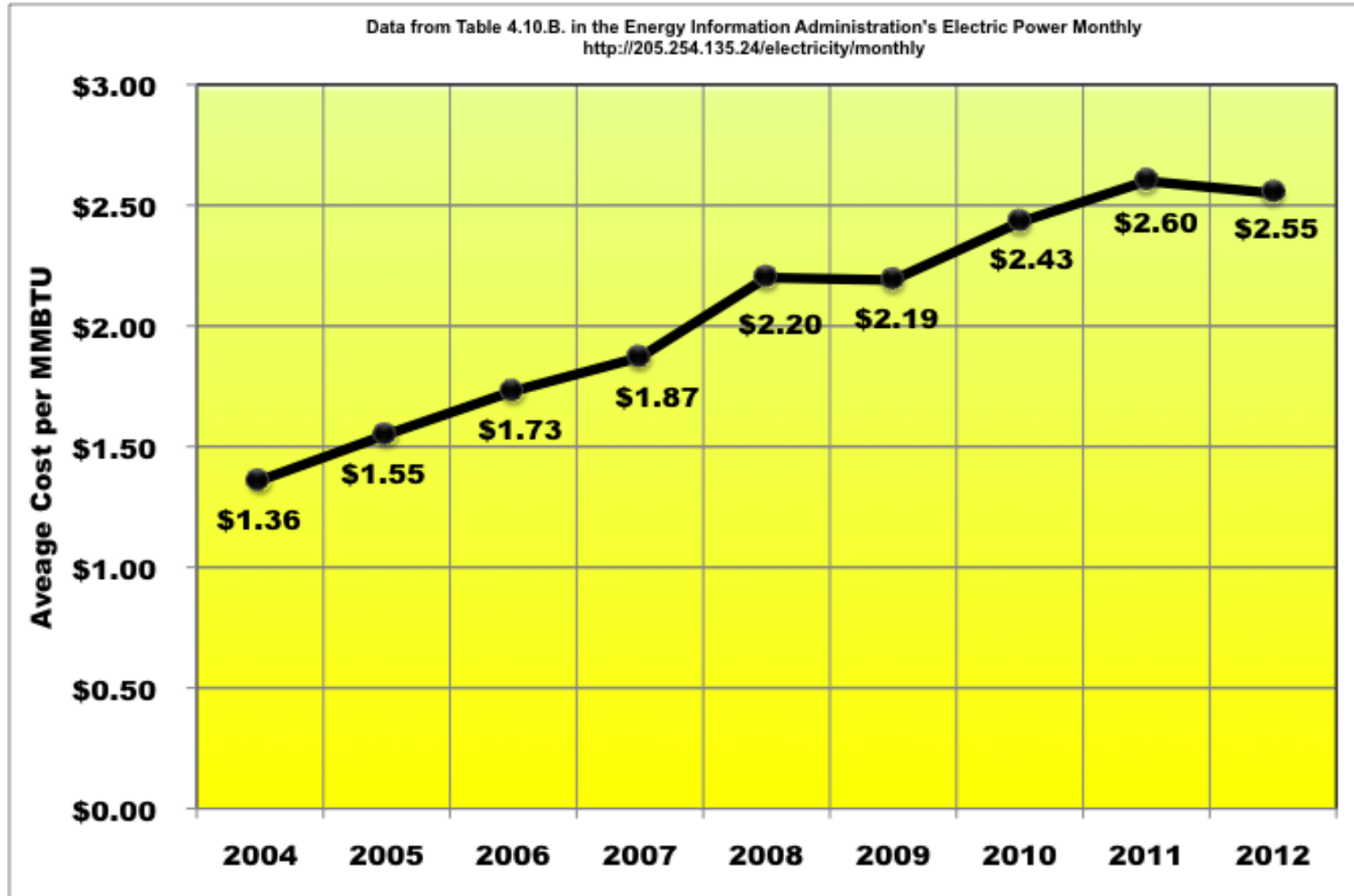
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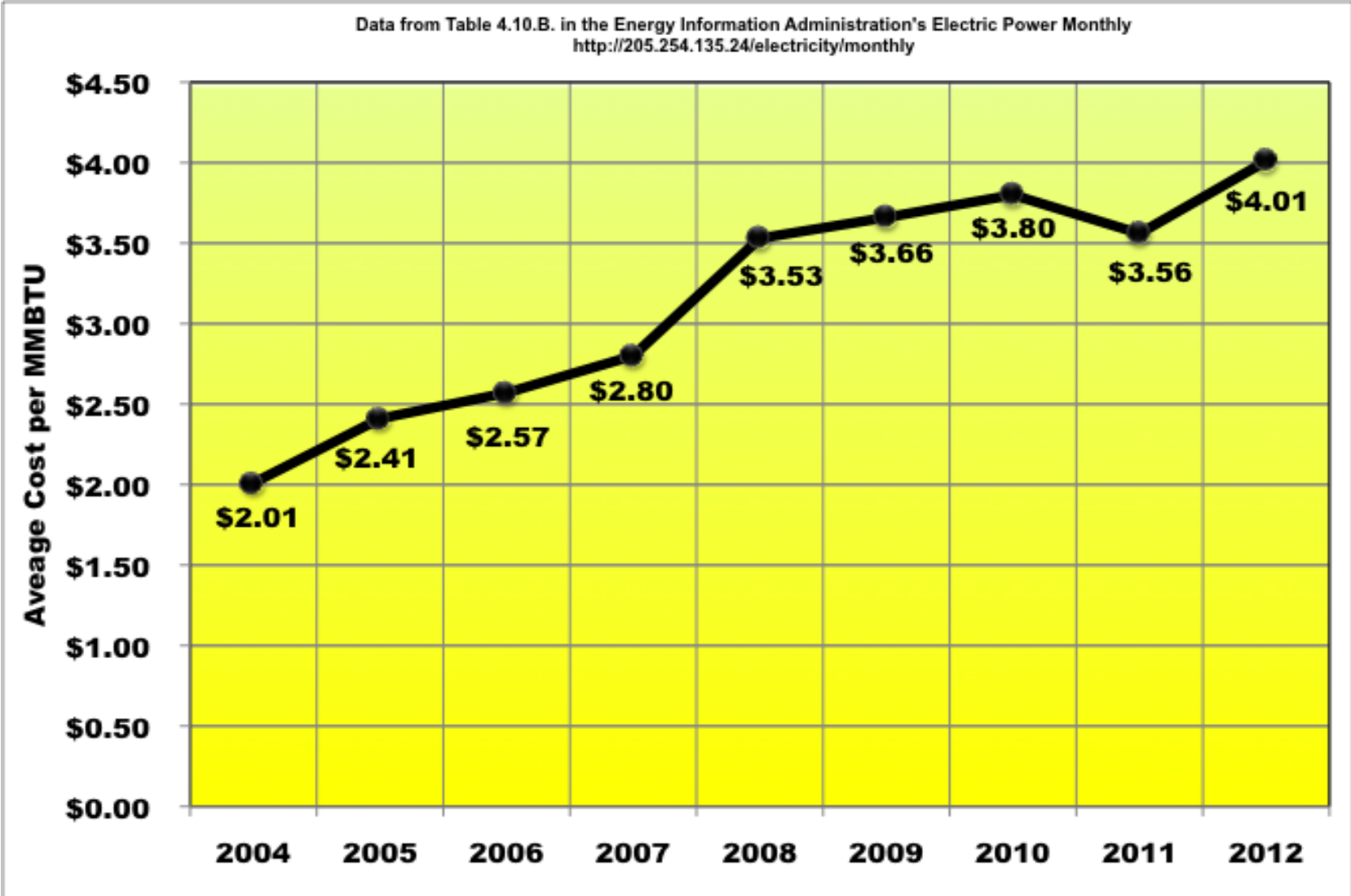
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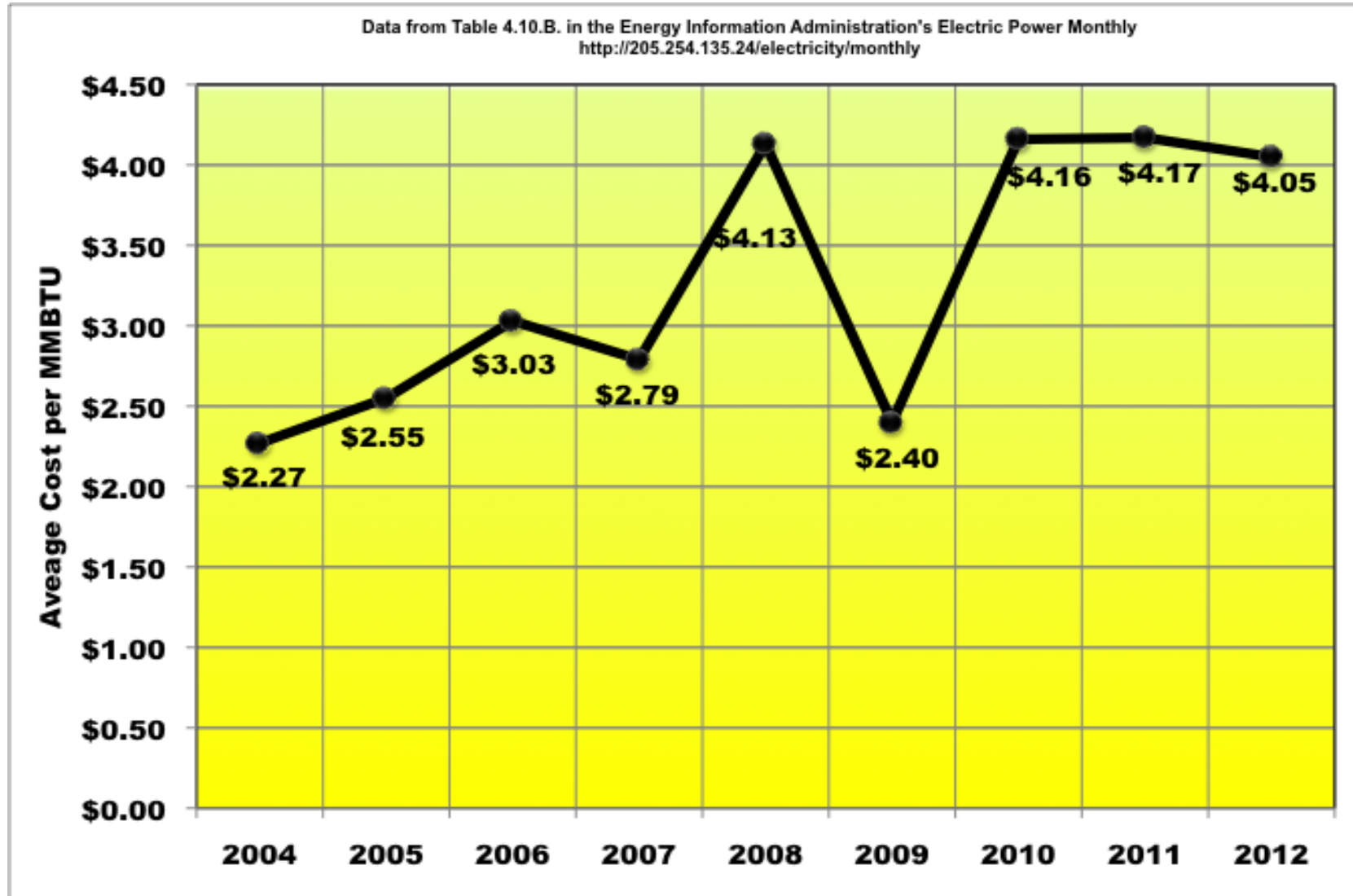
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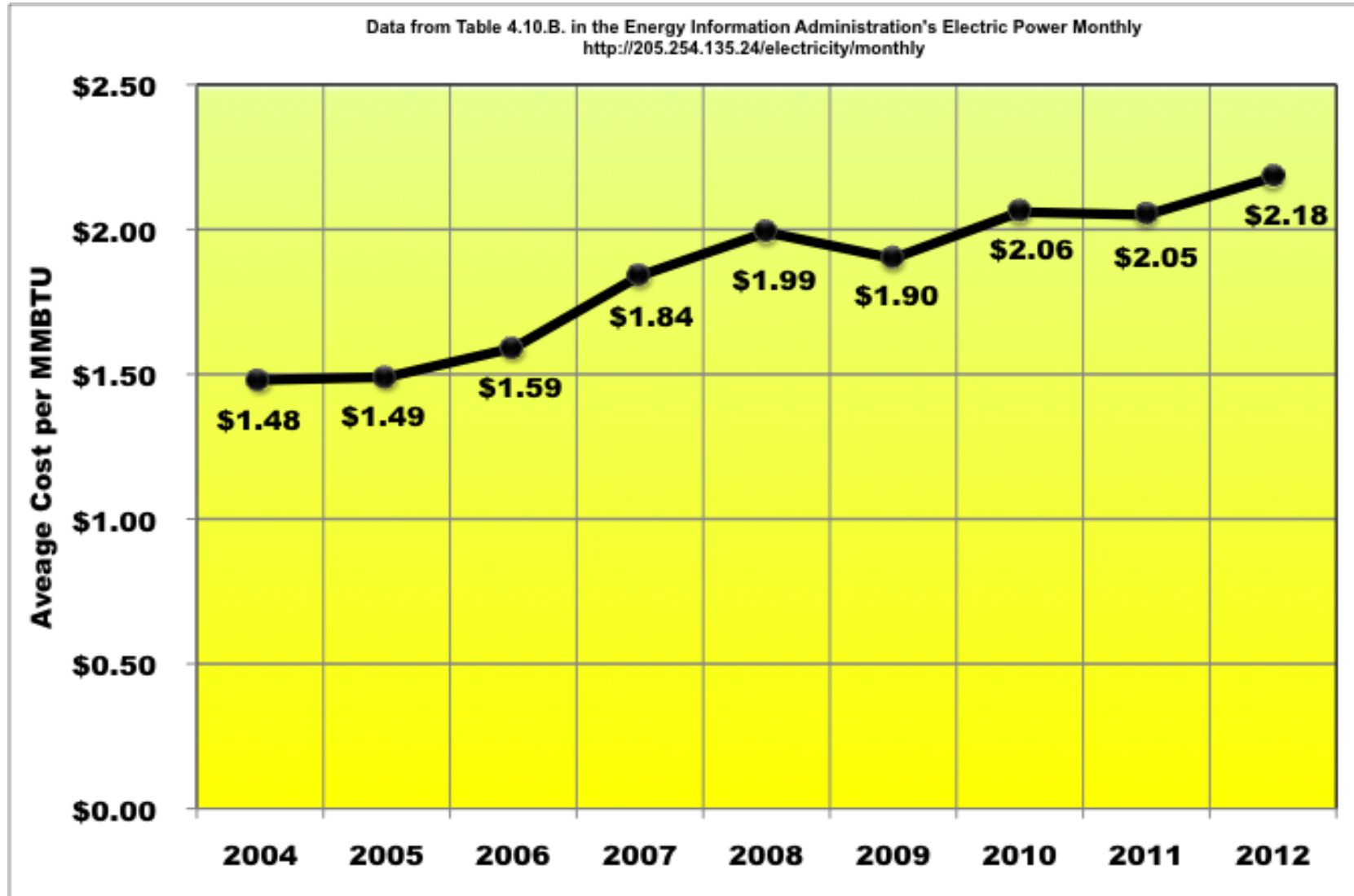
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NEW JERSEY AVERAGE COAL COSTS 2004-2012



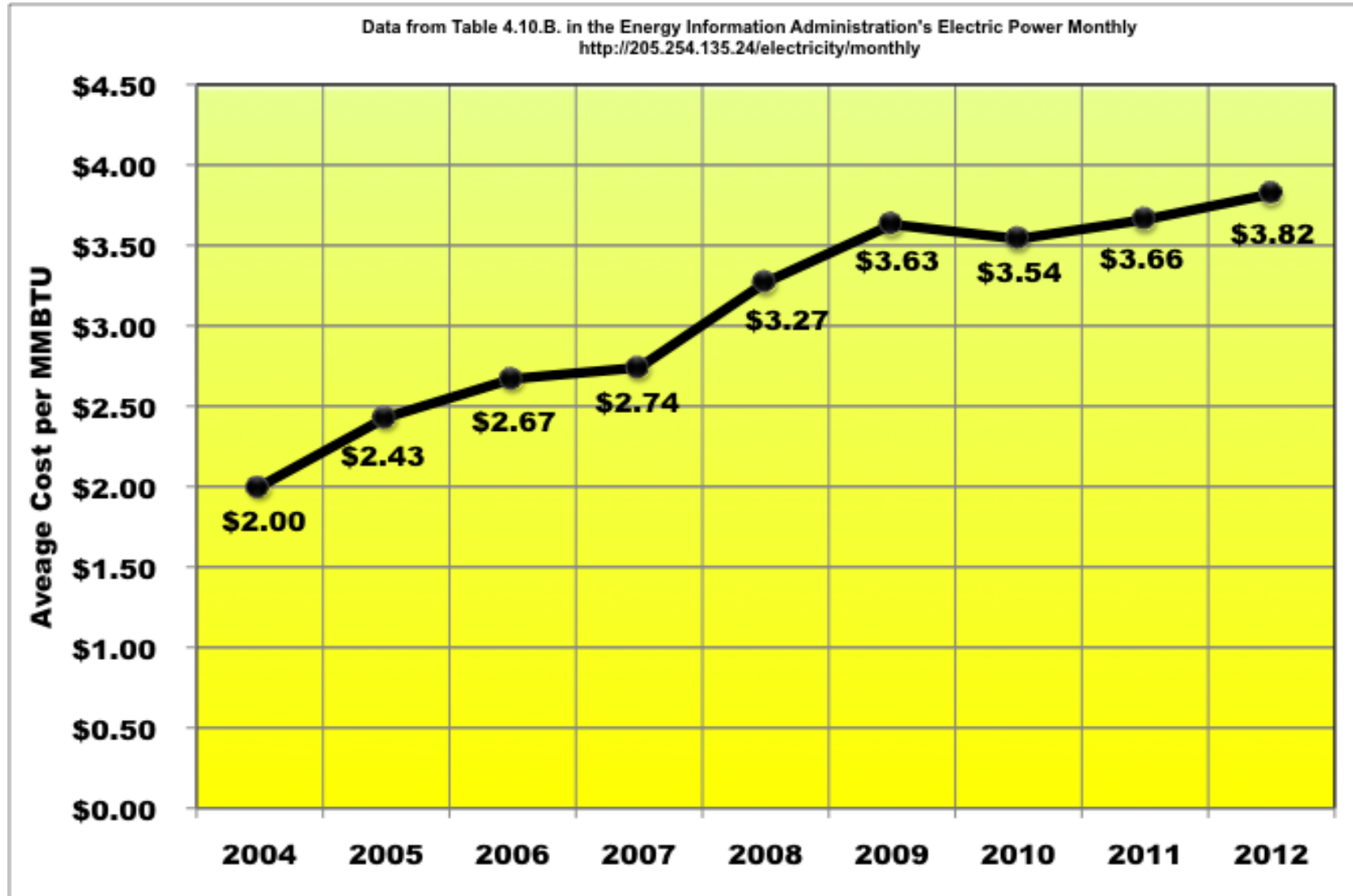
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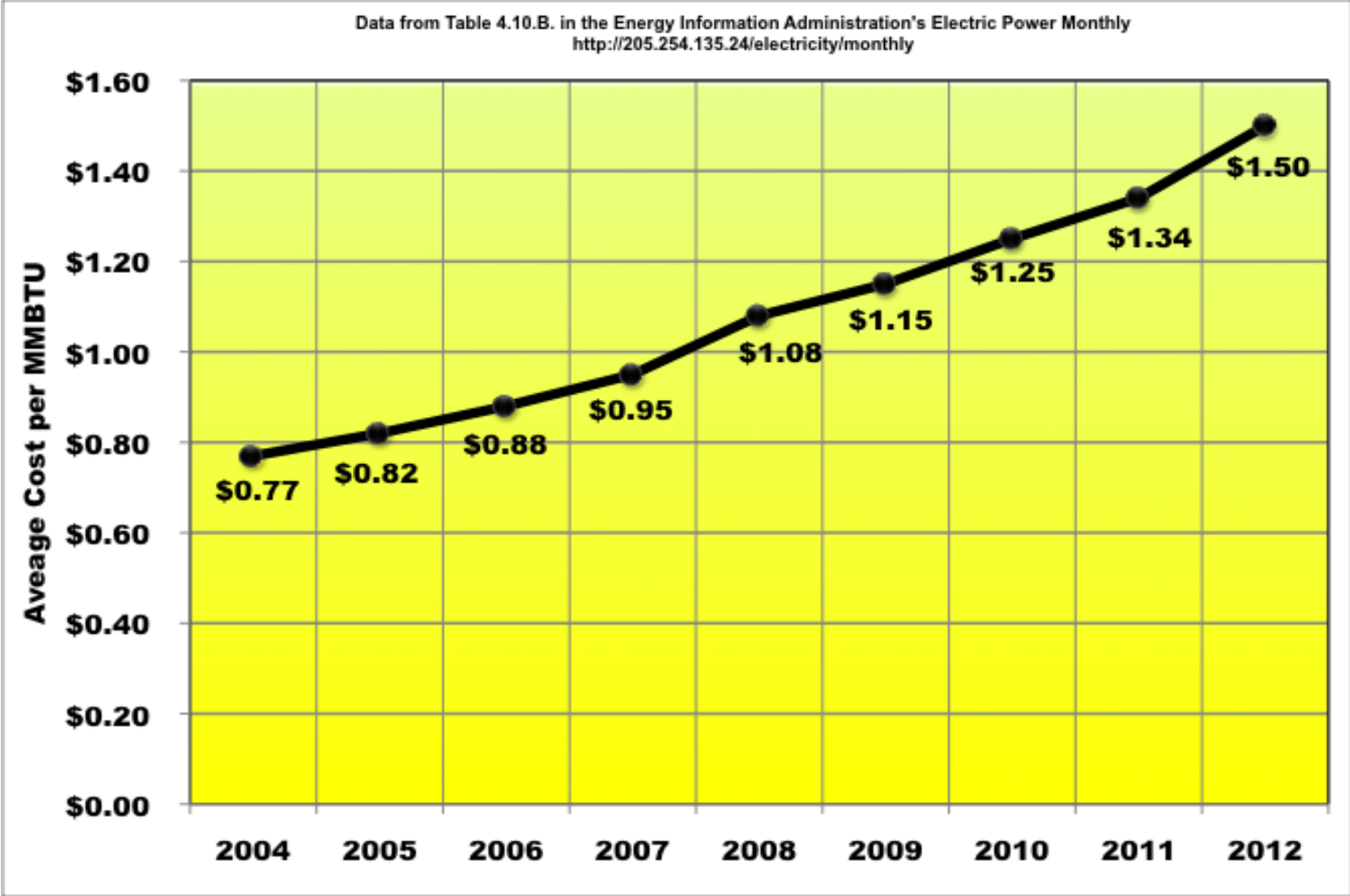
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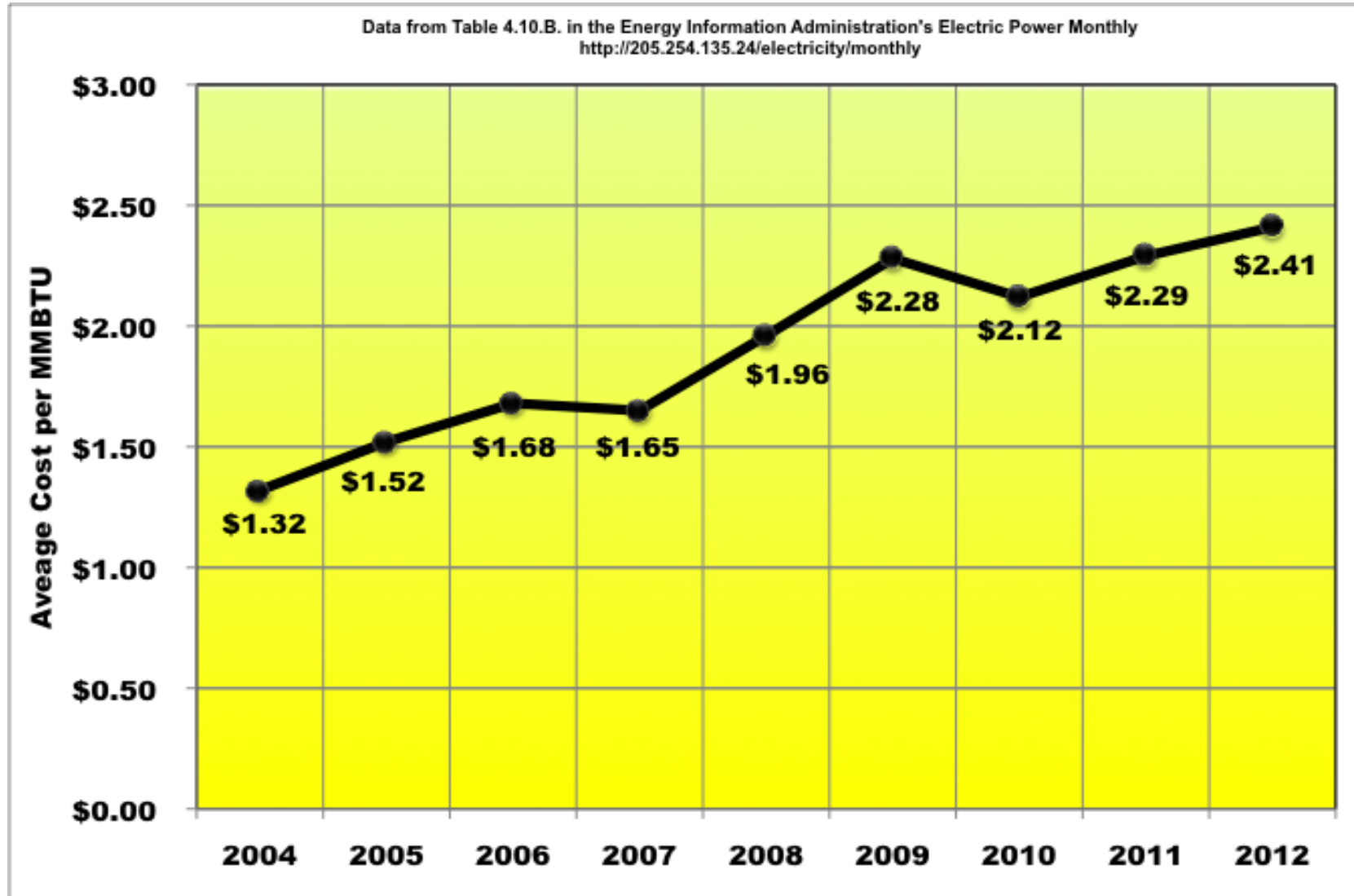
NORTH CAROLINA AVERAGE COAL COSTS 2004-2012



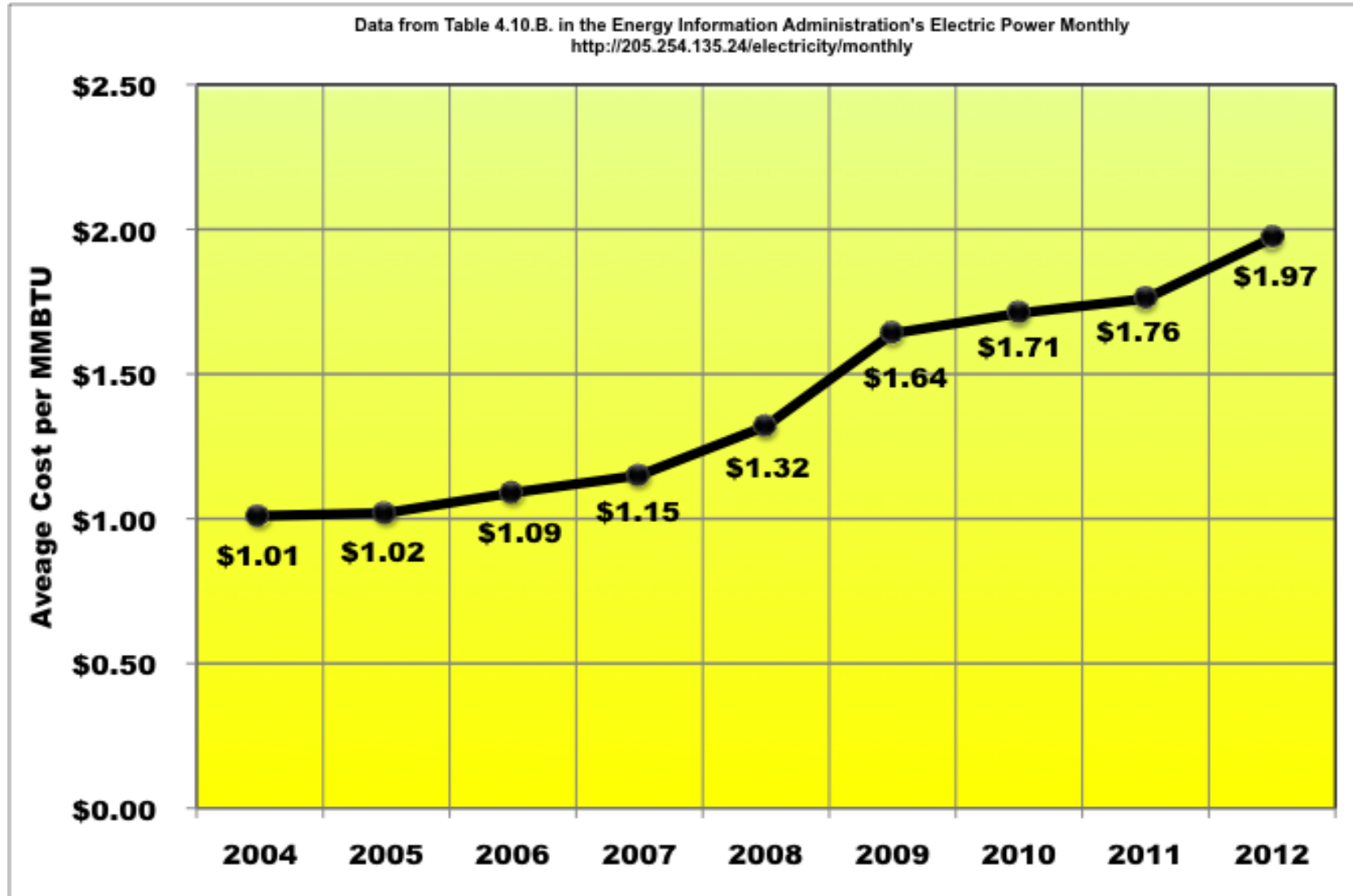
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OHIO AVERAGE COAL COSTS 2004-2012



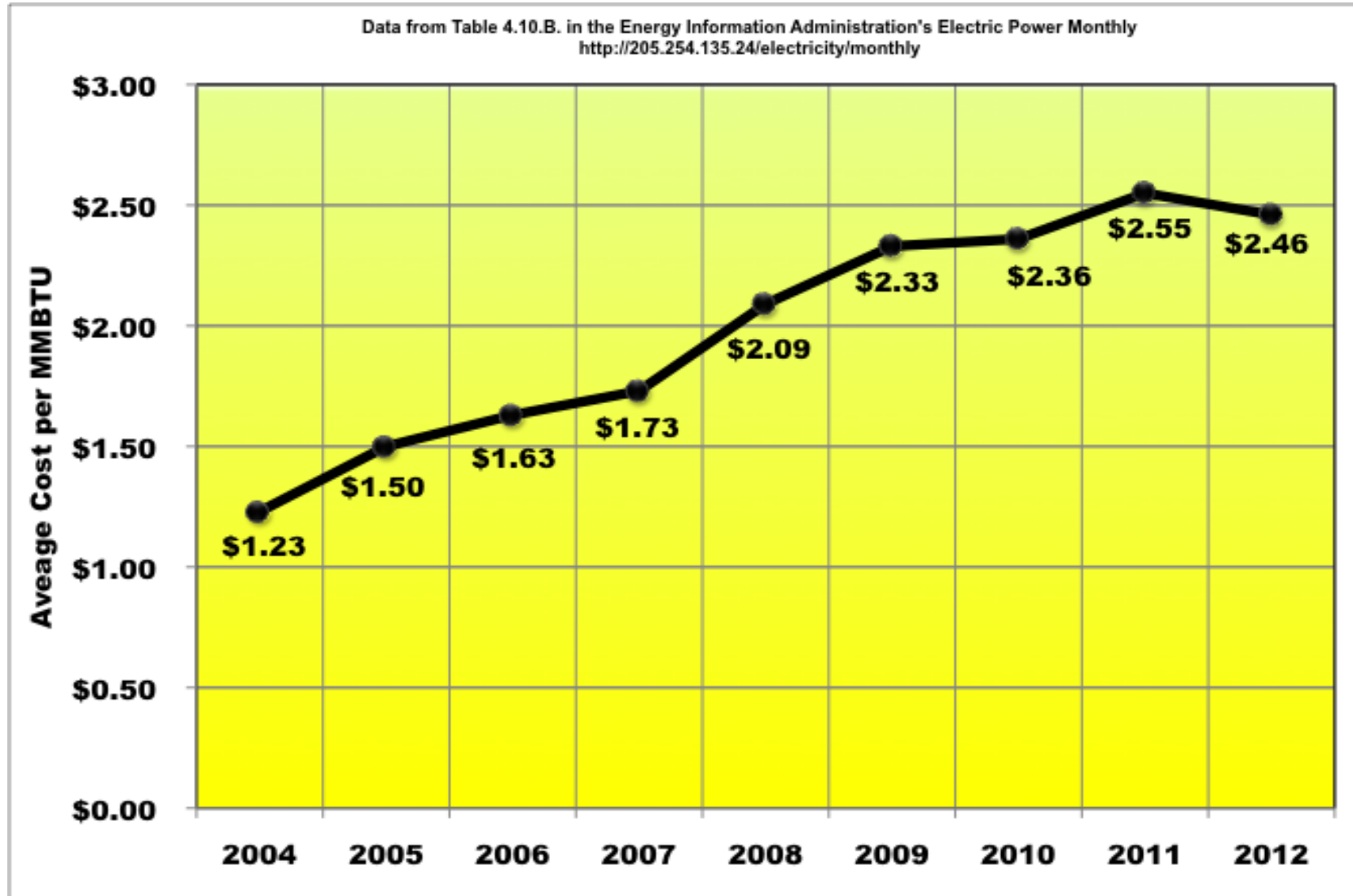
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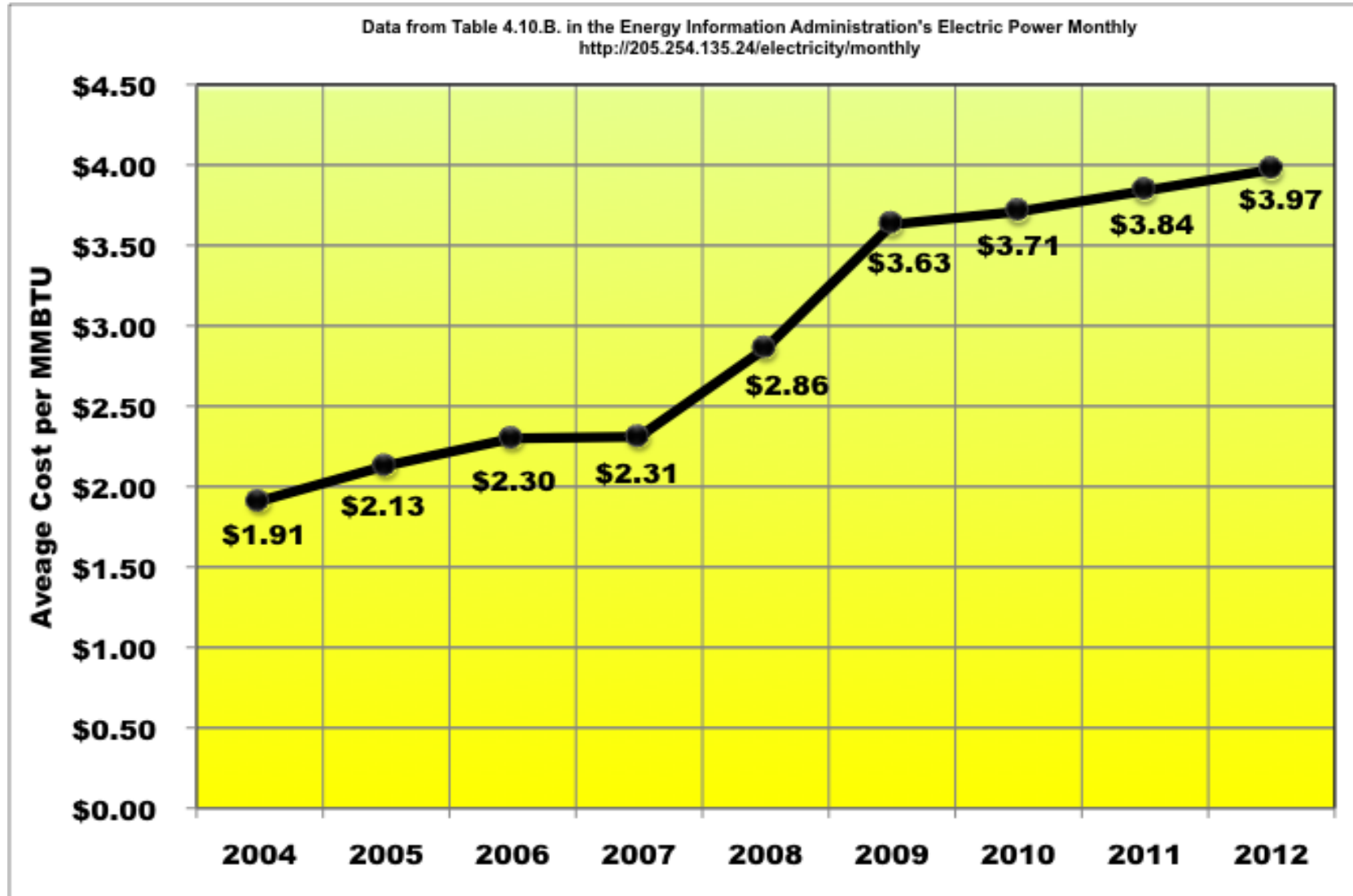
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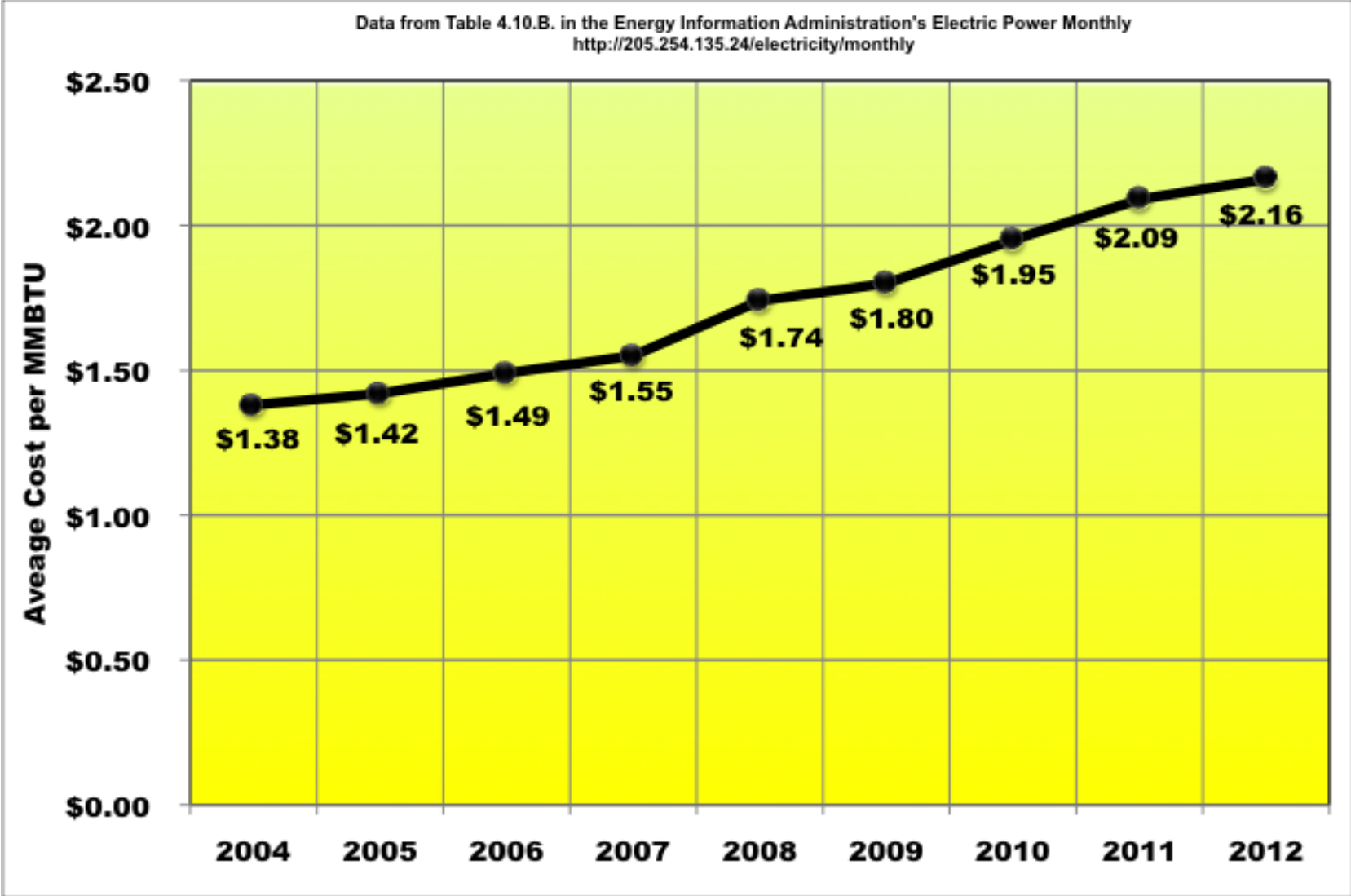
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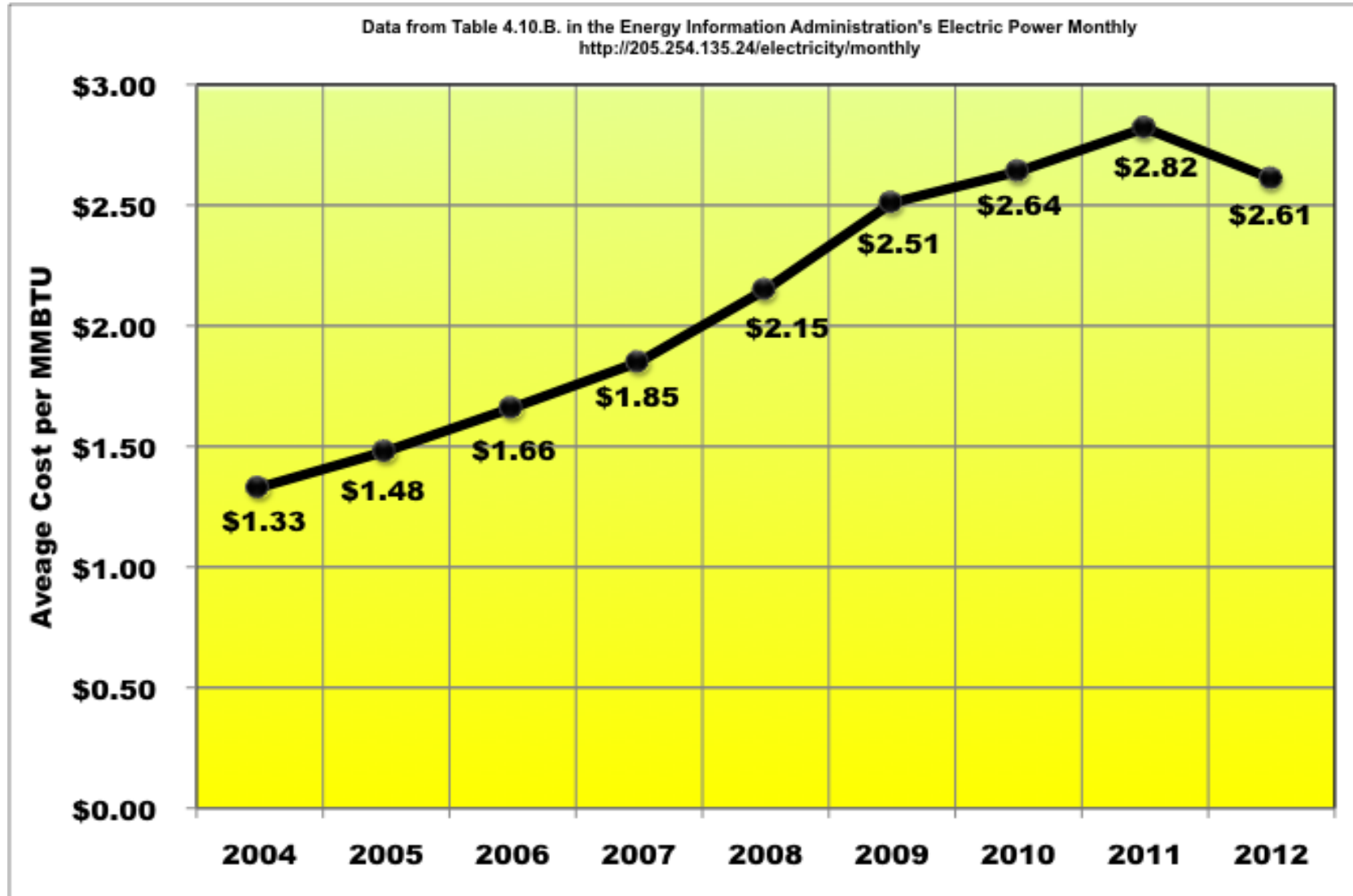
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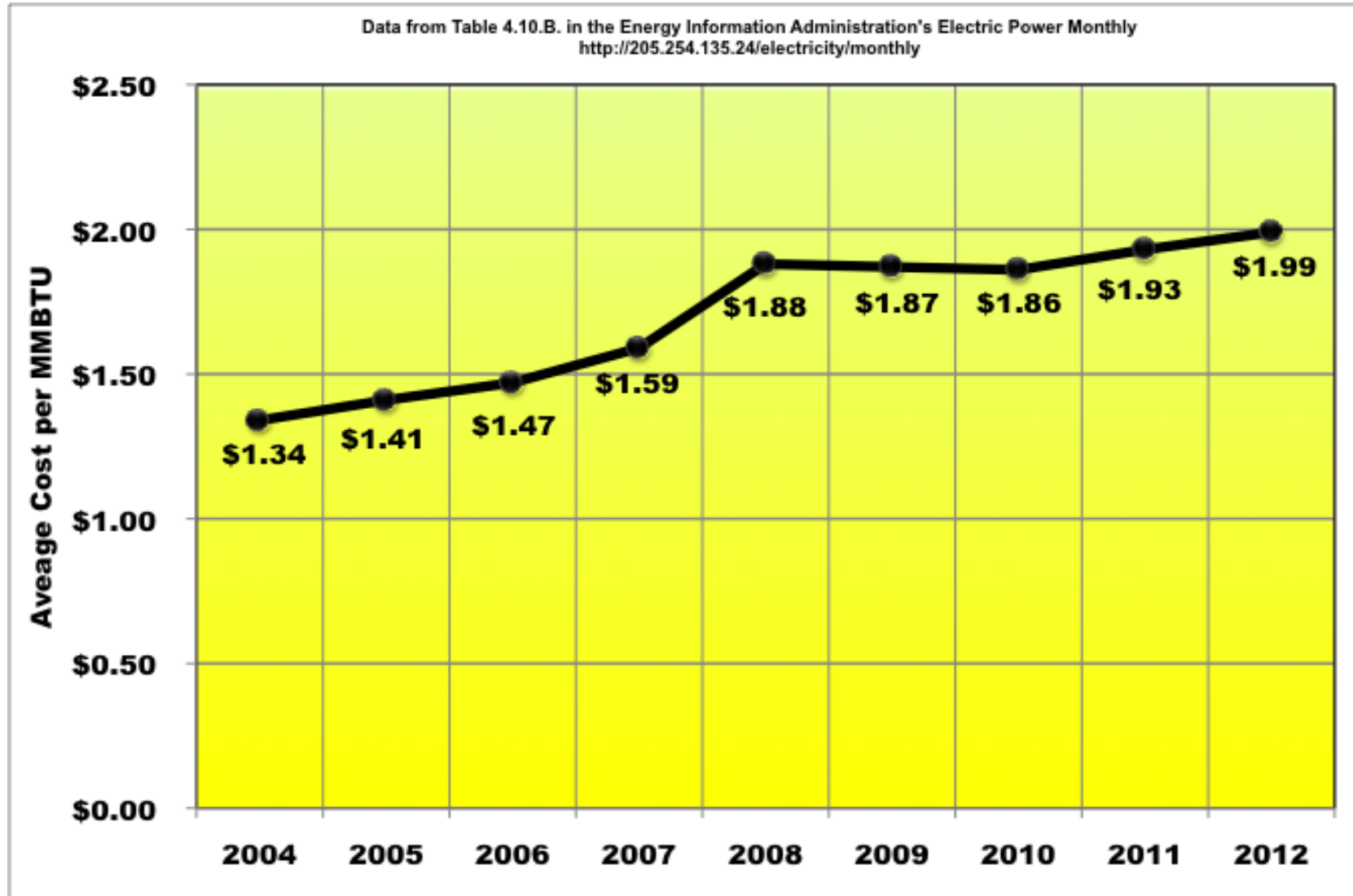
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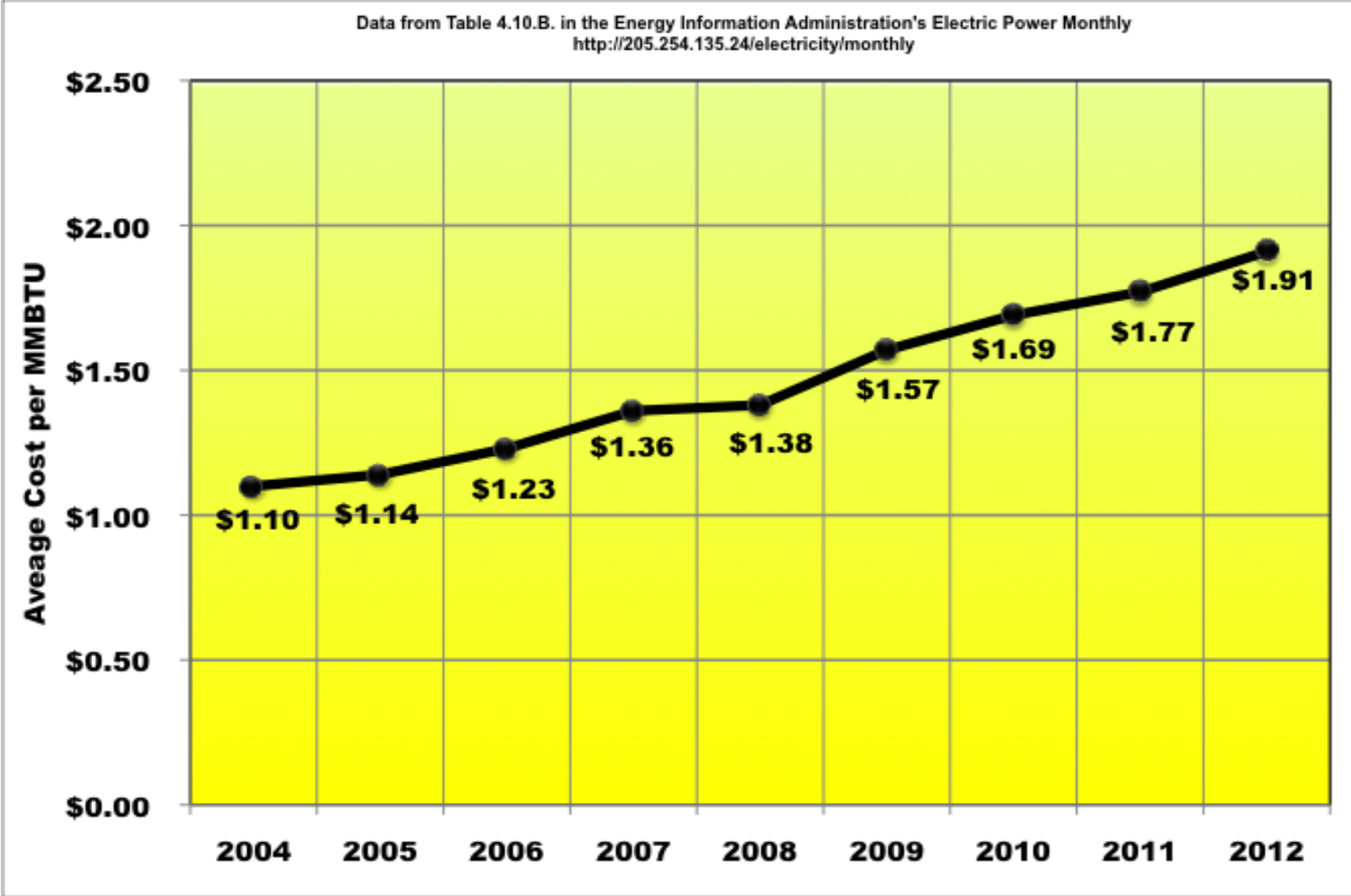
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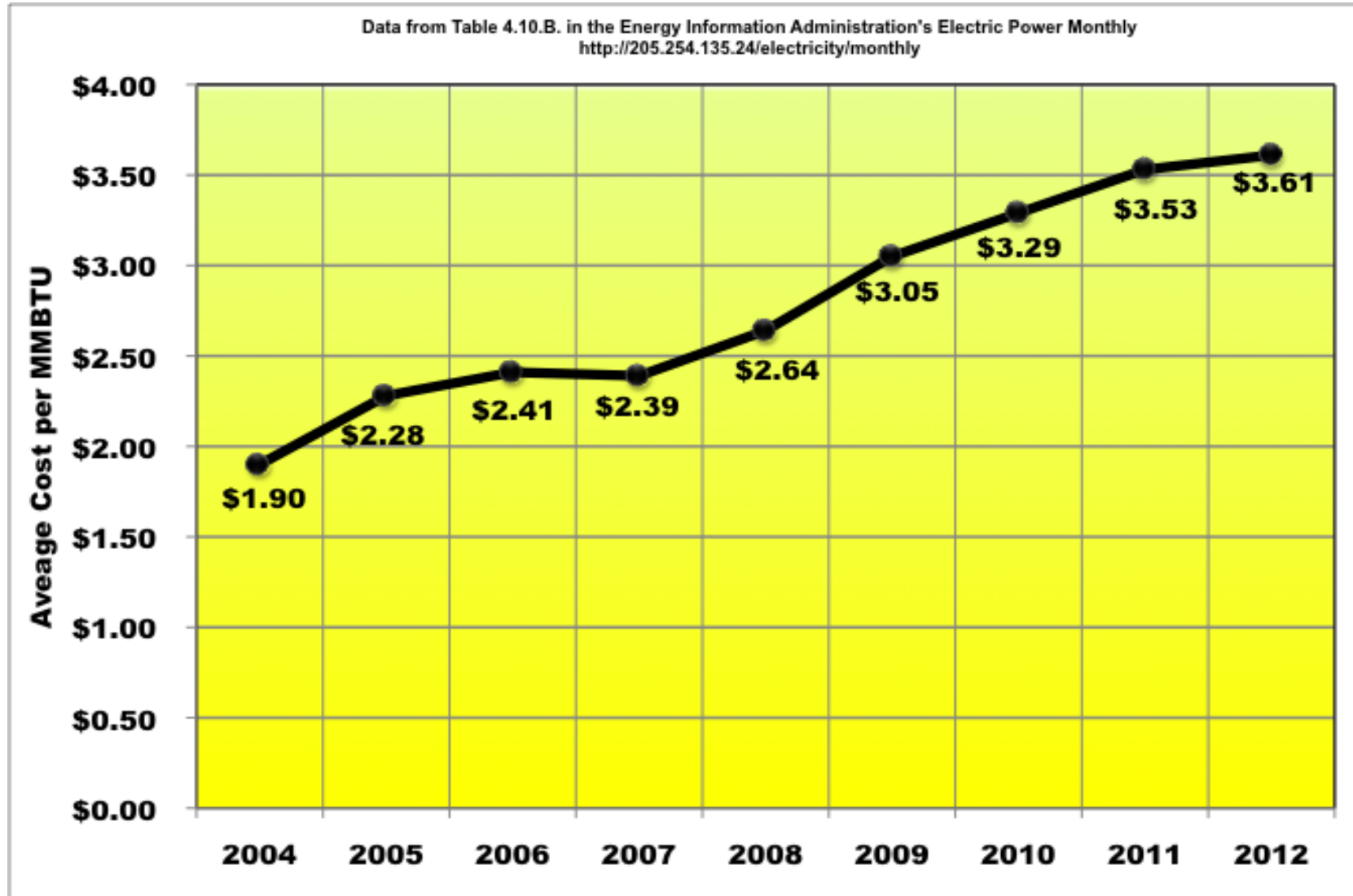
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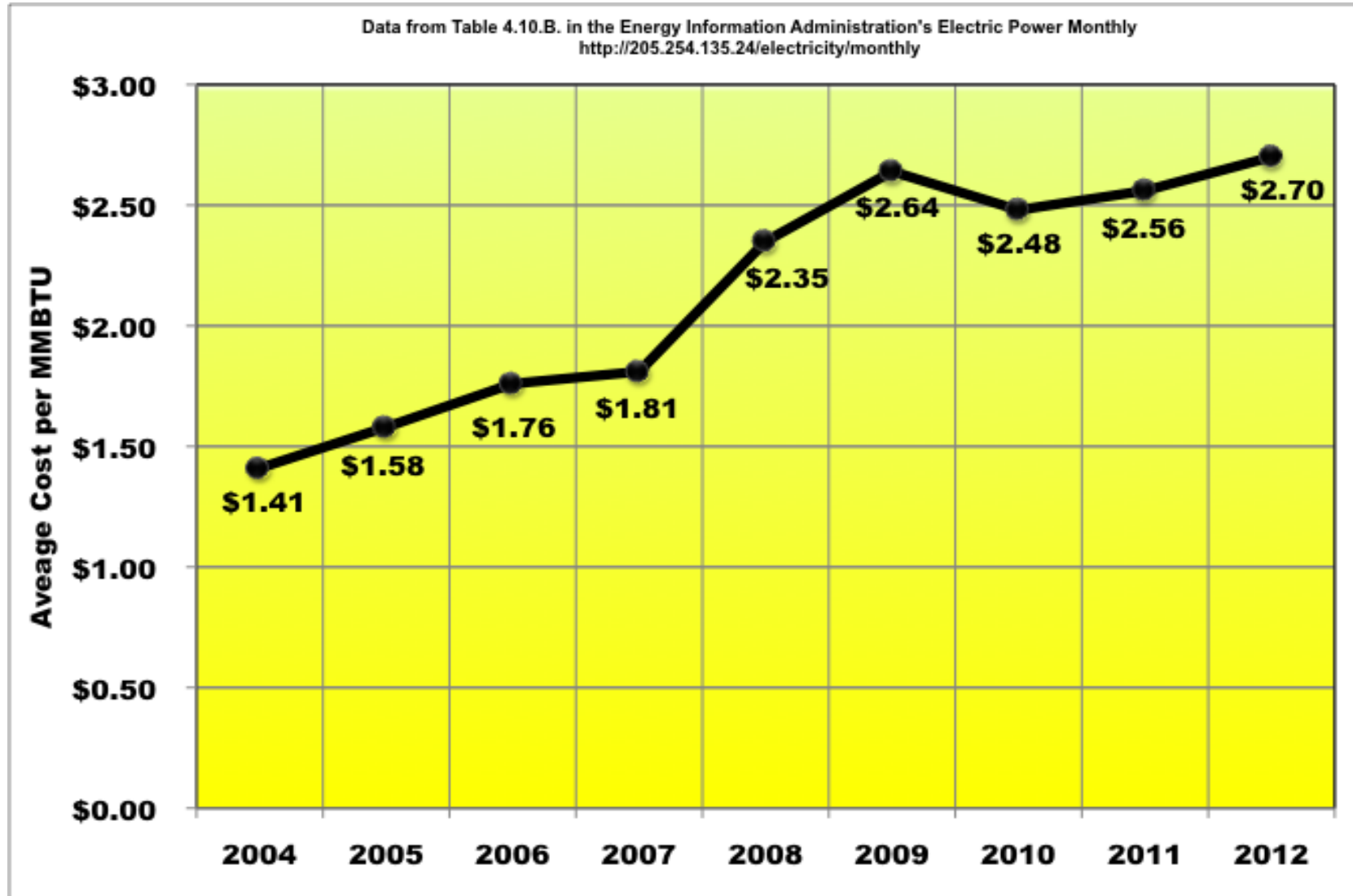
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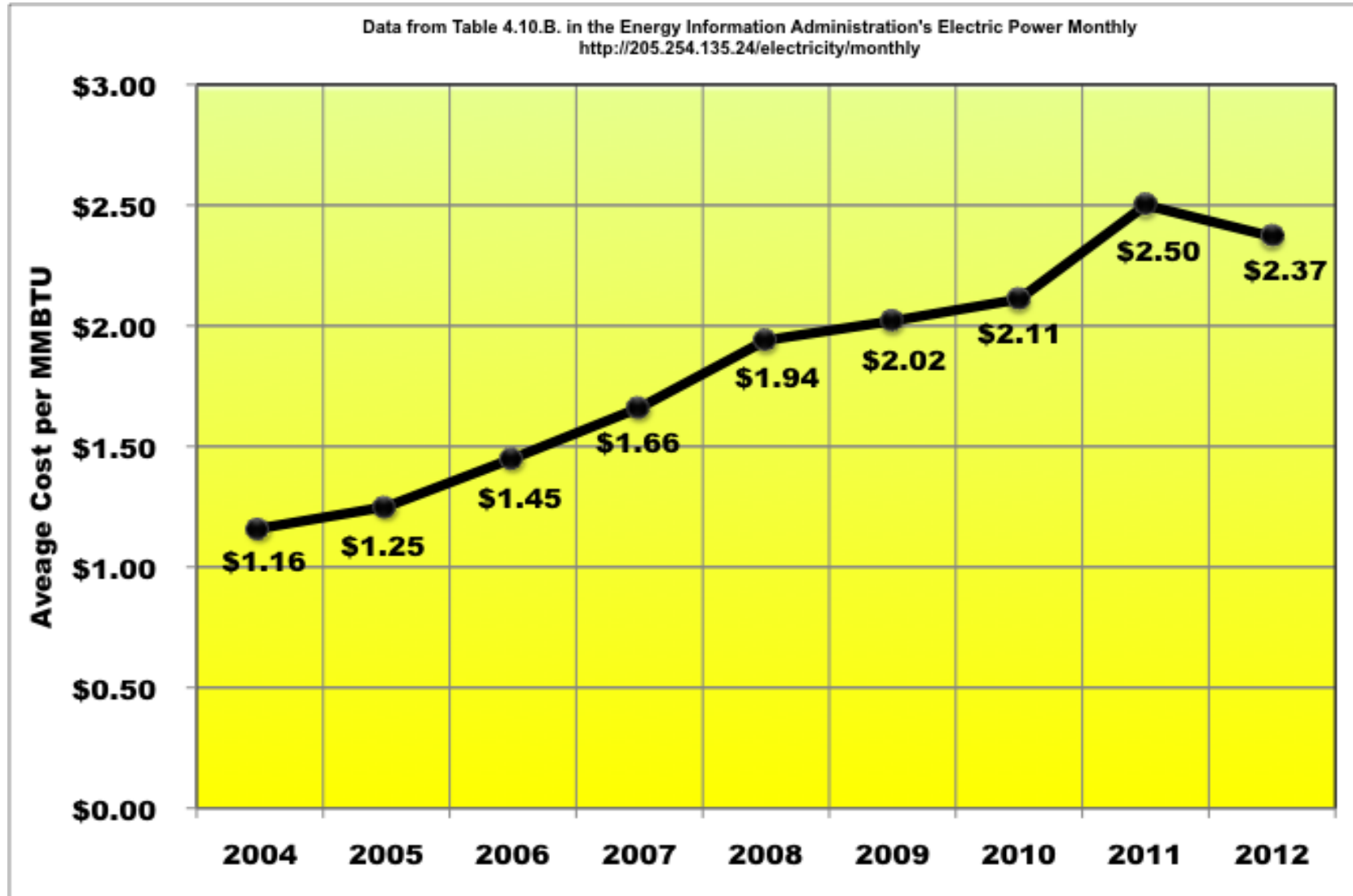
VIRGINIA AVERAGE COAL COSTS 2004-2012



WEST VIRGINIA AVERAGE COAL COSTS 2004-2012



WISCONSIN AVERAGE COAL COSTS 2004-2012



WYOMING AVERAGE COAL COSTS 2004-2012

