



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

Trends in
U.S. Coal Production:
1990-2012

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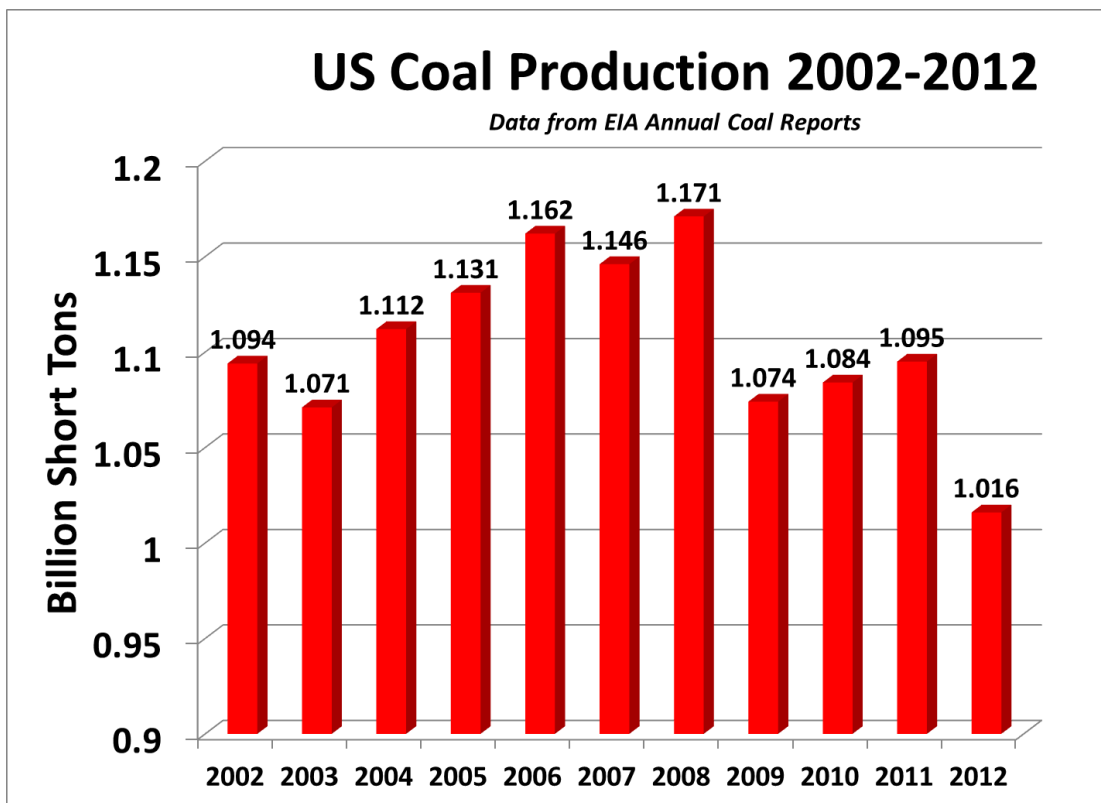
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Introduction

As shown below and in the graphs in this report, it appears that the US is likely past “peak coal” production.¹ Nationally, coal production appears to have peaked in 2008 at 1.171 billion tons. US coal production in 2012 had fallen by about 155 million tons to 1.016 billion tons. While there are likely to be yearly ups and downs and no one can predict the future with certainty, it does not appear that the US is likely to exceed the 2008 peak in coal production.



¹ Given the increasing reliance of the US on lower heat content subbituminous coals, it has been noted that the United States very likely passed peak coal production on a heat content basis in the 1990s. See for example, page 30 in the 2007 Energy Watch Group report “Coal: Future Resources and Production,” available at www.energywatchgroup.org/.../EWG_Report_Coal_10-07-2007ms.pdf

As shown in the table below and in the graphs for each state, it appears that the top 16 states, which combined produce over 95% of US coal, are all past their peak production of coal, with only Indiana likely to exceed its earlier peak.²

Top 16 Coal-Producing States—All Past Peak?

(Data from EIA Annual and Quarterly Coal Reports available at <http://www.eia.gov/coal/data.cfm> and for peaks before 1990, from EIA State Coal Reports available at <ftp://ftp.eia.doe.gov/coal/0576.pdf>)

2012 Rank	US Coal Producing State	Apparent Peak Year	Production in Peak Year (Million Tons ³)	Production in 2012 ⁴ (Million Tons)	Approximate Percent Reduction in 2012 Production from Peak
#1	Wyoming	2008	467.6	401.4	-14.2%
#2	West Virginia	1947 ⁵	176.2	120.1	-31.8%
#3	Kentucky	1990 ⁶	173.3	90.6	-47.7%
#4	Pennsylvania	1918 ⁷	277.4	55.0	-80.2%
#5	Illinois	1918 ⁸	89.3	47.9	-46.4%
#6	Texas	1990 ⁹	55.8	44.2	-20.8%
#7	Montana	2008	44.8	36.7	-18.1%
#8	Indiana	1984 ¹⁰	37.6	36.7	-2.4%
#9	Colorado	2004	39.9	28.6	-28.3%
#10	Ohio	1970 ¹¹	55.4	27.6	-50.2%
#11	North Dakota	1994	32.3	27.5	-14.9%
#12	New Mexico	2001	29.6	22.4	-24.3%
#13	Alabama	1990	29.0	19.6	-32.4%
#14	Virginia	1990	46.9	18.1	-61.4%
#15	Utah	2001	27.0	16.4	-39.3%
#16	Arizona	2001	13.4	7.5	-44.0%

² With less than 5% of US coal production, a new peak for Indiana is not likely to change the conclusion that the US is very likely past peak coal production.

³ Production numbers provided as million short tons.

⁴ 2012 Production numbers are preliminary numbers from the EIA 2012 Q4 Quarterly Coal Report available from <http://www.eia.gov/coal/production/quarterly/> .

⁵ See EIA State Profile Coal Reports for West Virginia available at <ftp://ftp.eia.doe.gov/coal/0576.pdf>, page 105

⁶ See EIA State Profile Coal Reports for Indiana available at <ftp://ftp.eia.doe.gov/coal/0576.pdf>, page 45

⁷ See EIA State Profile Coal Reports for Pennsylvania available at <ftp://ftp.eia.doe.gov/coal/0576.pdf>, page 81

⁸ See EIA State Profile Coal Reports for Illinois available at <ftp://ftp.eia.doe.gov/coal/0576.pdf>, page 28

⁹ See EIA State Profile Coal Reports for Texas available at <ftp://ftp.eia.doe.gov/coal/0576.pdf>, page 88

¹⁰ See EIA State Profile Coal Reports for Indiana available at <ftp://ftp.eia.doe.gov/coal/0576.pdf>, page 32

¹¹ See EIA State Profile Coal Reports for Ohio available <ftp://ftp.eia.doe.gov/coal/0576.pdf> , page 70

Further information on US coal cost and supply issues is available in the following Clean Energy Action reports

1) “Coal: Cheap and Abundant....Or Is It. Why Americans Should Stop Assuming that the U.S. Has a 200-Year Supply of Coal” a 2009 report available from http://cleanenergyaction.files.wordpress.com/2011/10/coal_supply_constraints_cea_0212091.pdfm

2) “Warning: Faulty Reporting of US Coal Reserves,” an October 2013 report available from www.cleanenergyaction.org

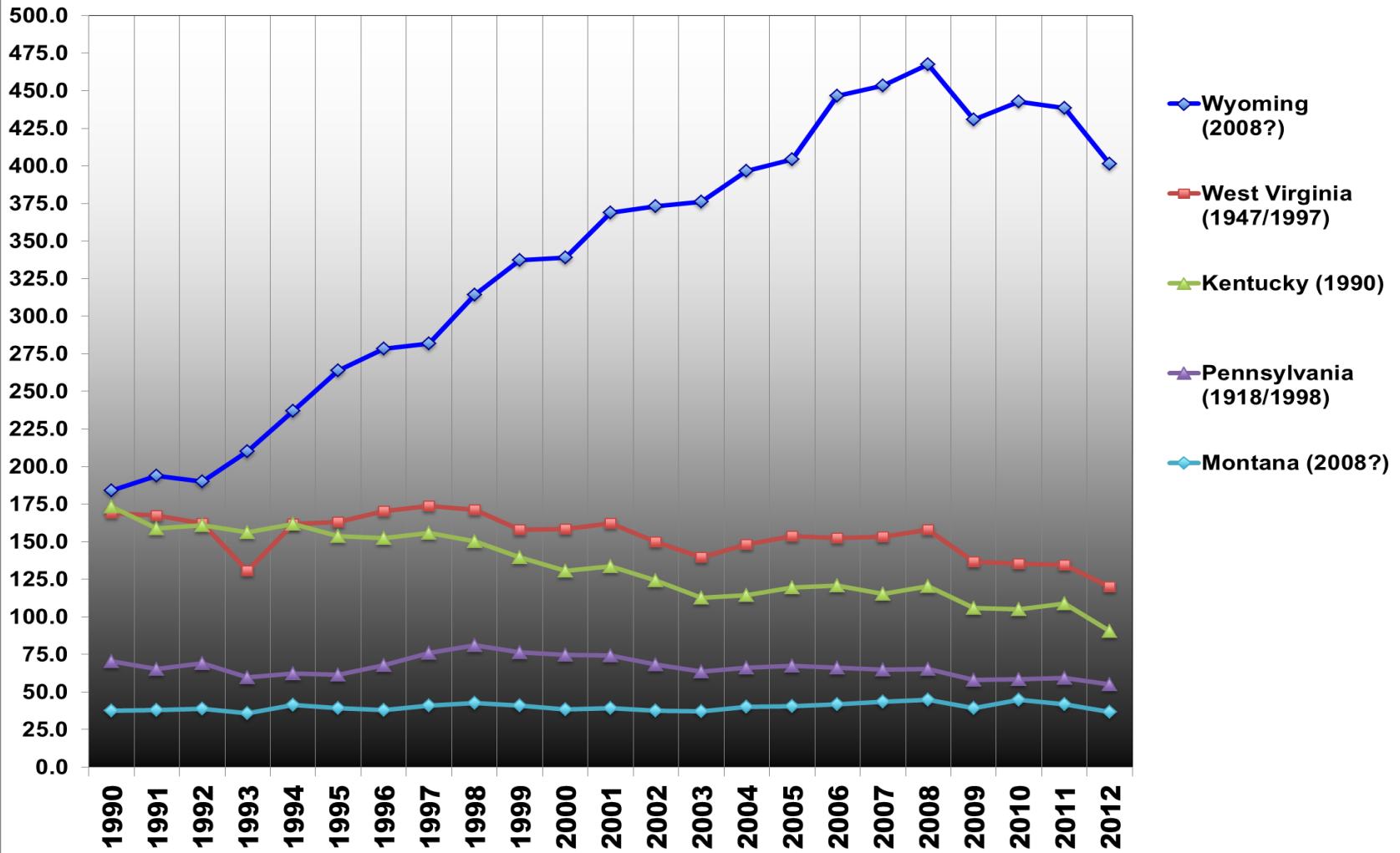
3) “Trends in US Coal Costs 2004-2012,” an October 2013 report available from www.cleanenergyaction.org

A review of the data and references in the reports listed above indicates that the US is very likely rapidly approaching the end of economically recoverable coal. If coal can't be mined at a profit, it is not likely that much of it will be mined.

As seen in the graphs on the following pages, the period from 1990-2008 was characterized by rapidly increasing coal production from Wyoming but declining production from eastern states. Since 2008, coal production in Wyoming has begun to fall off significantly and it does not appear likely that this production will be regained due to the increasing difficulties of reaching the coal as discussed in the first two reports listed above.

Given that the US is very likely past “peak coal” production, it does not appear that large investments in new coal plants or coal plant technologies is likely to be wise at this point in time given significant uncertainty about future US coal production and coal costs.

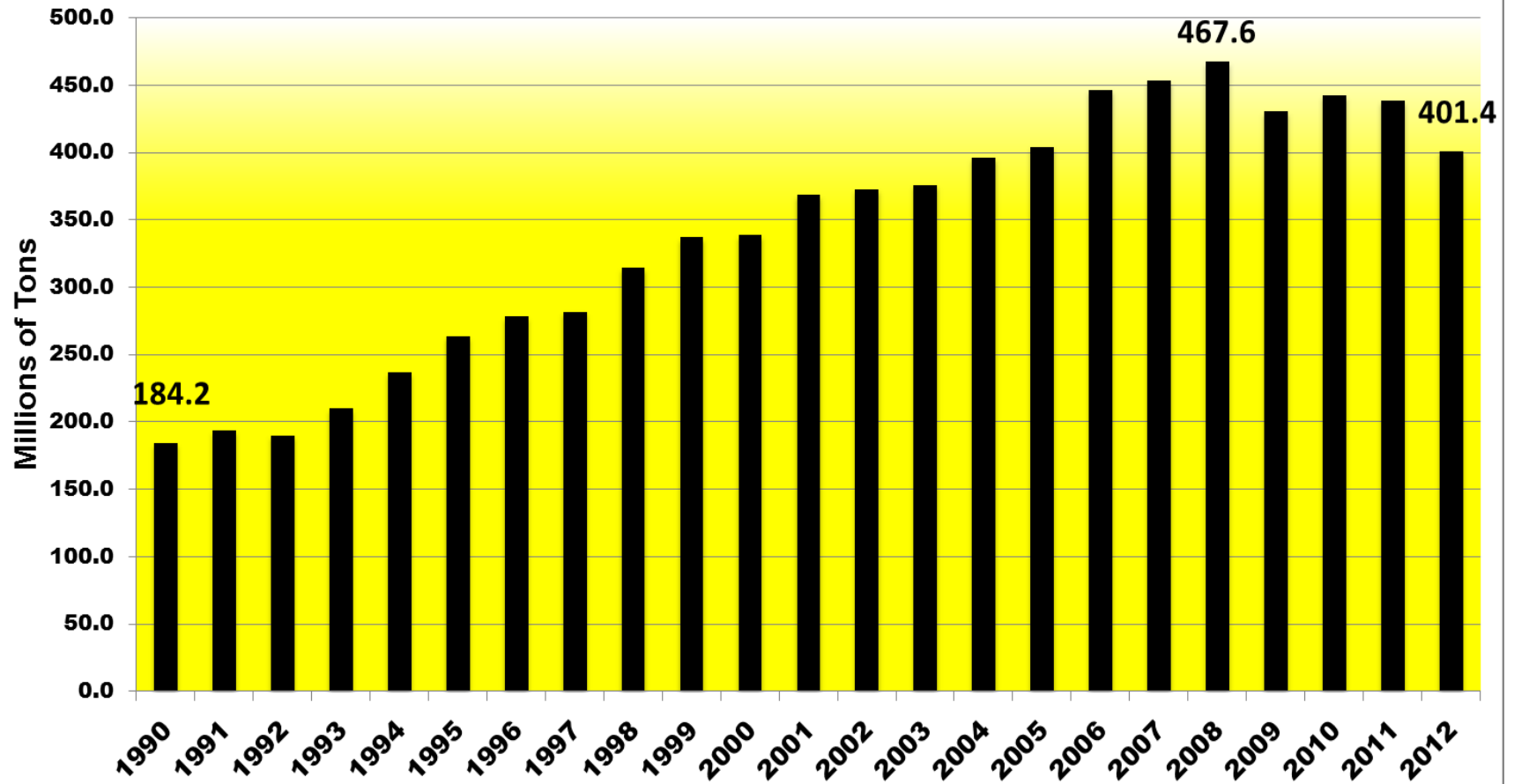
Coal Production Top 5 States 1990-2012



Wyoming 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>

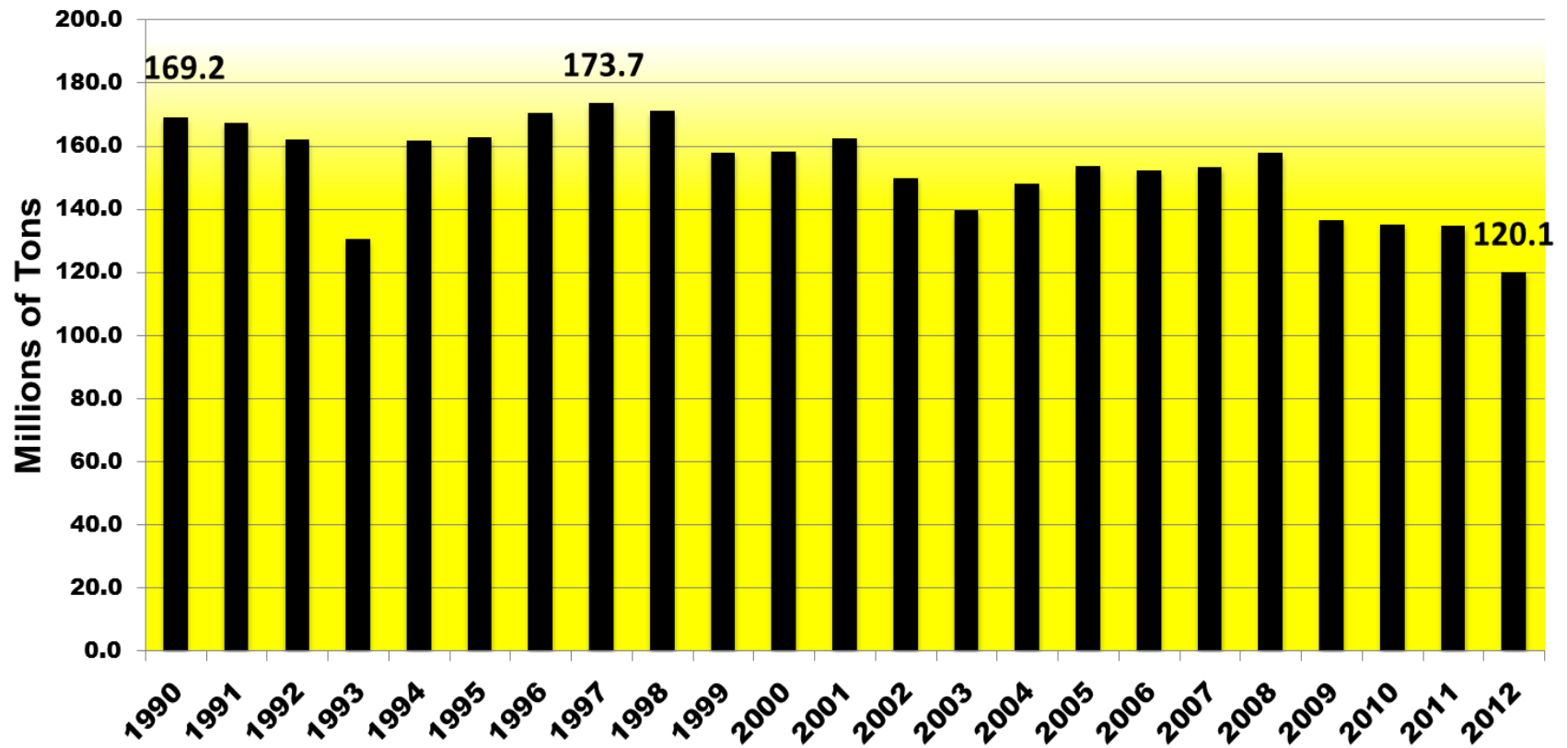
Apparent Peak Year--2008 467.6 Million Tons



West Virginia 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>
Peak Year: www.nma.org/pdf/c_production_state_rank.pdf

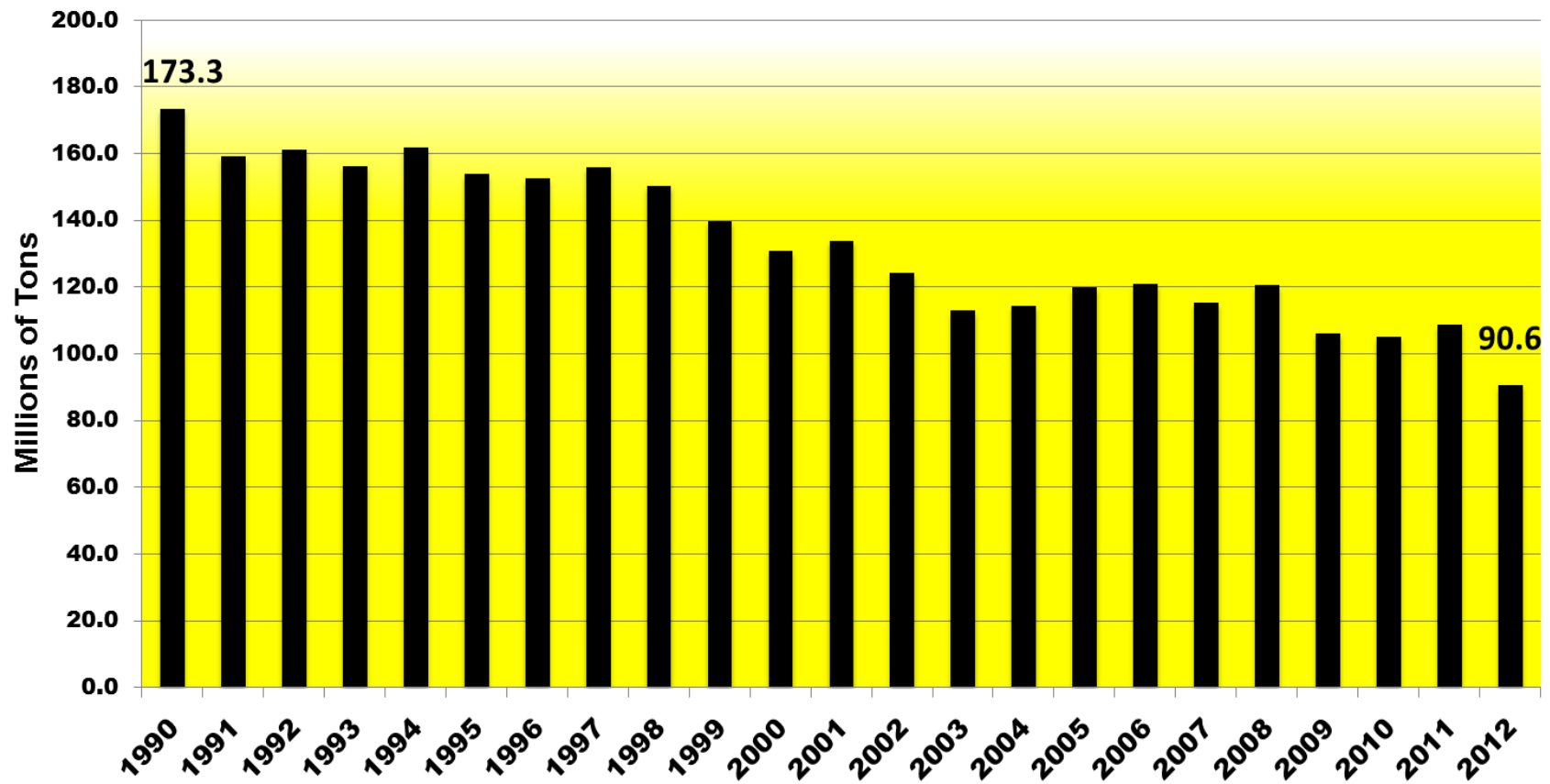
Apparent Peak Year--1947 176.2 Million Tons



Kentucky 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>

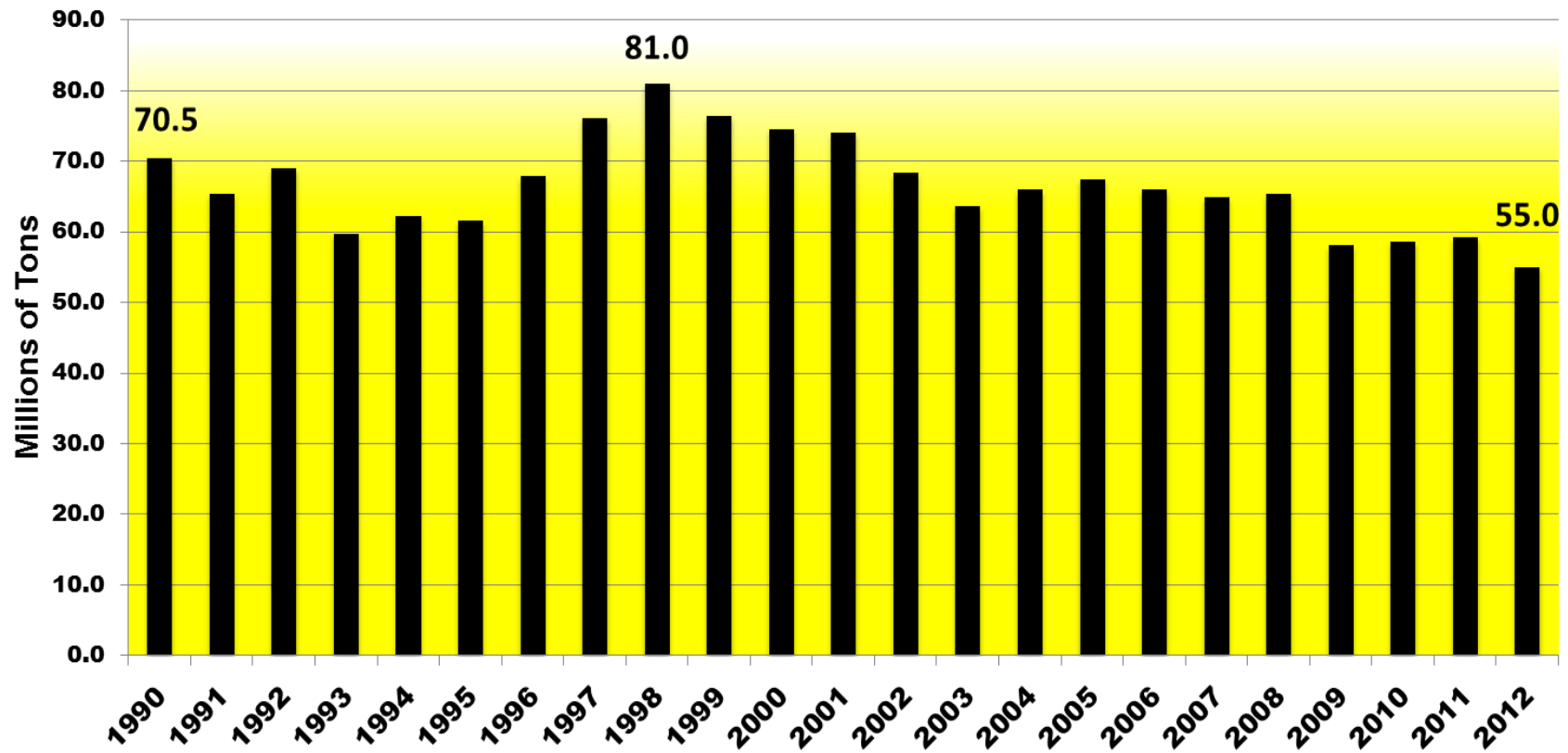
Apparent Peak Year--1990 173.3 Million Tons



Pennsylvania 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>
Peak Year: www.nma.org/pdf/c_production_state_rank.pdf

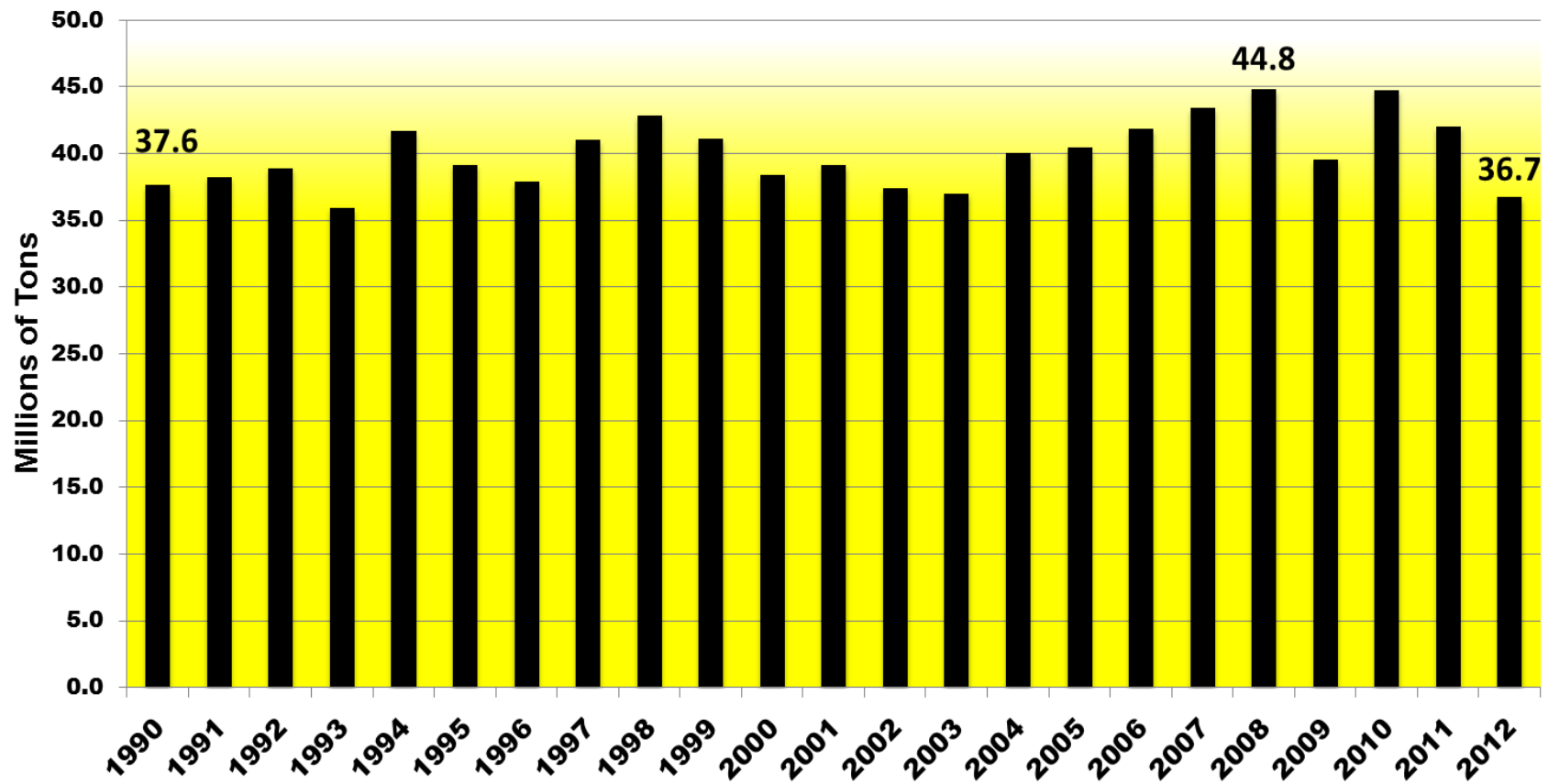
Apparent Peak Year--1918 277.4 Million Tons



Montana 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>

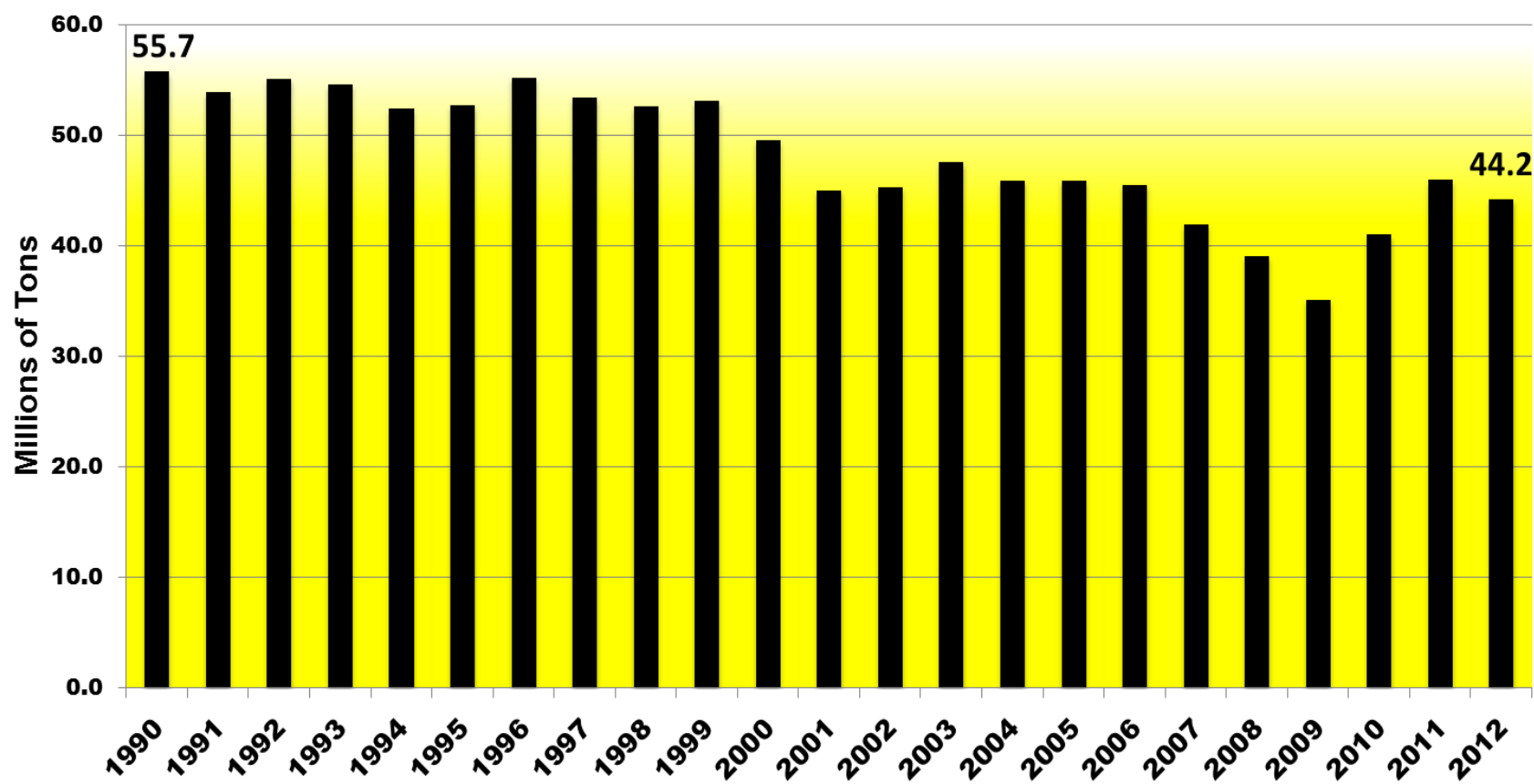
Apparent Peak Year--2008? 44.8 Million Tons



Texas 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>

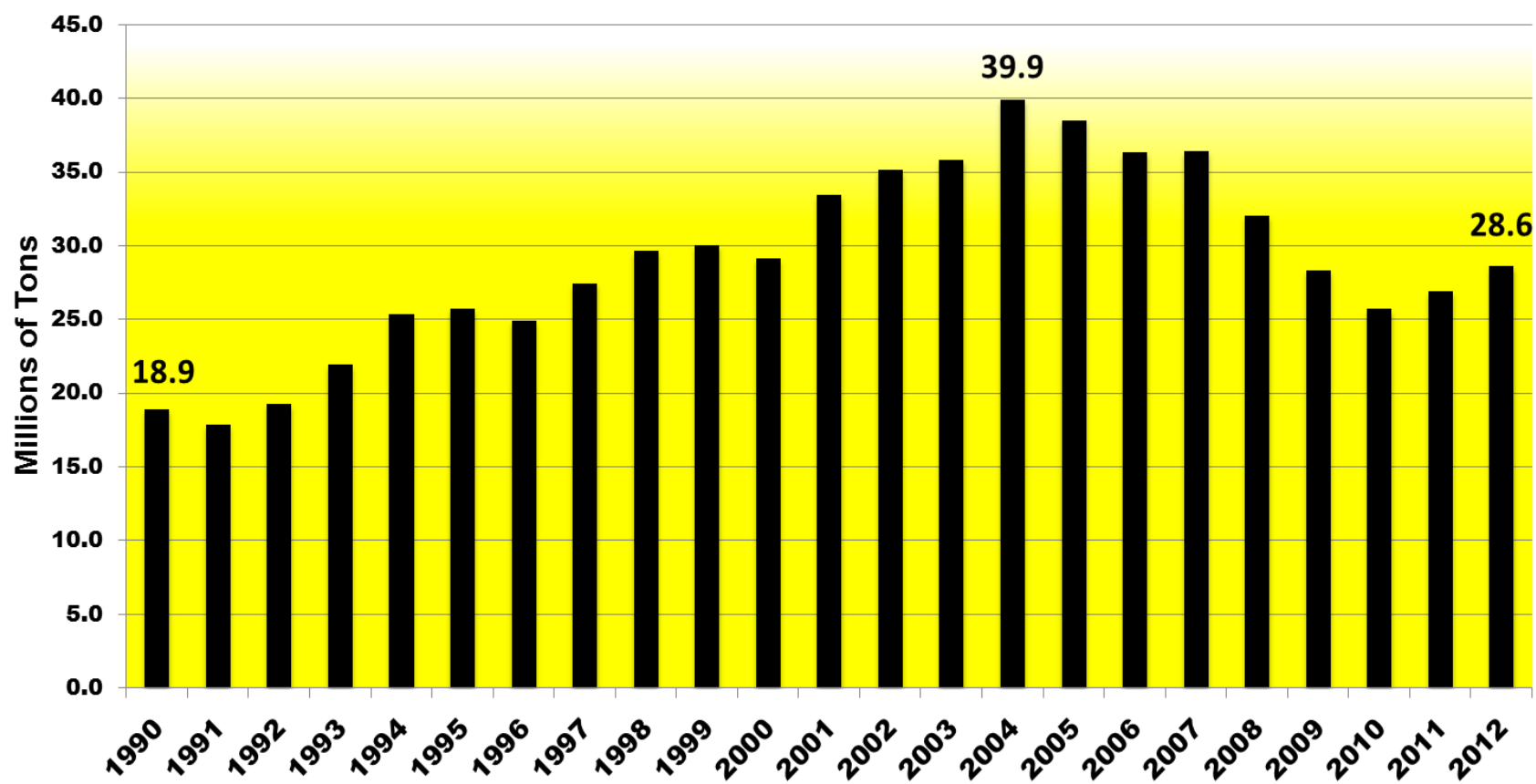
Apparent Peak Year--1990 55.7 Million Tons



Colorado 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>

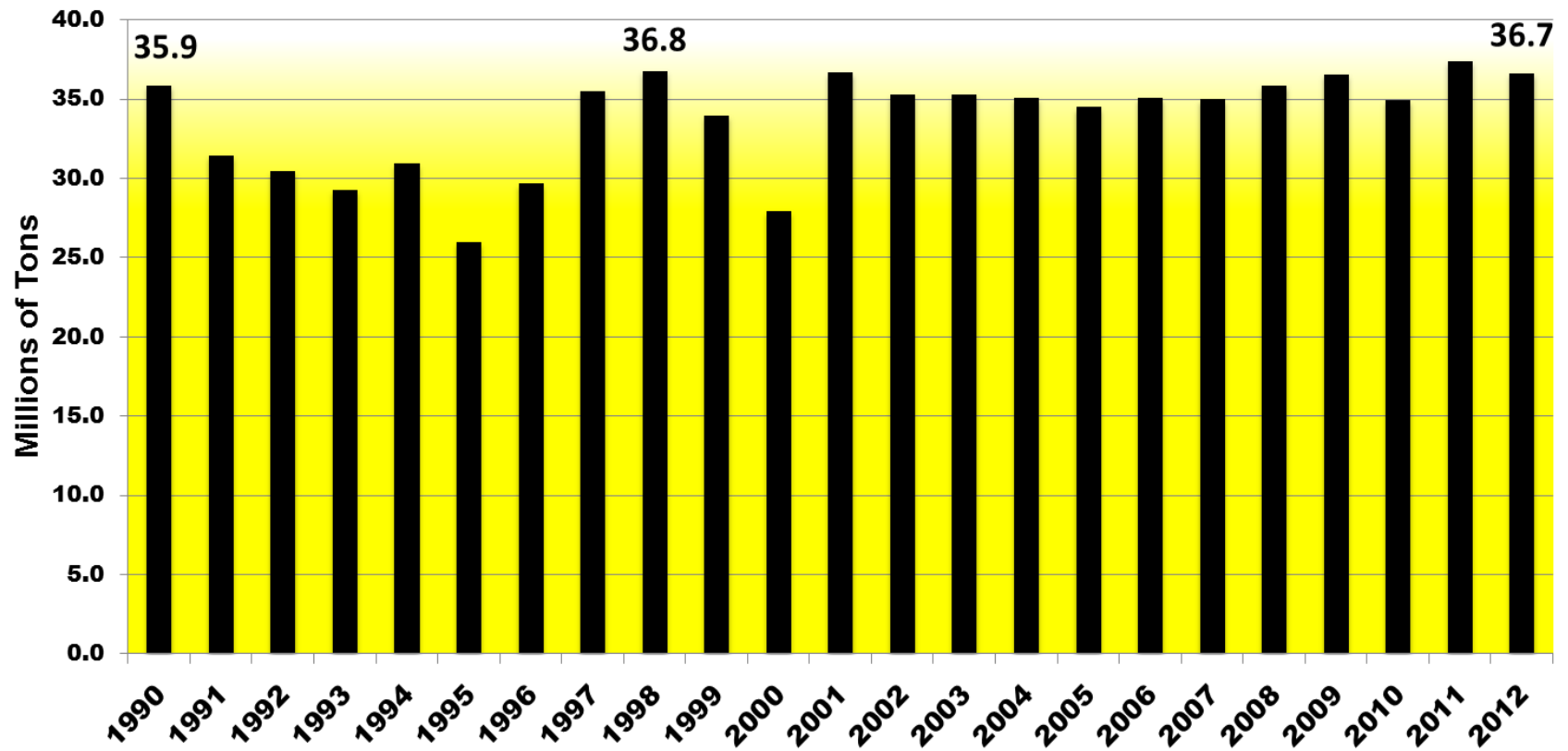
Apparent Peak Year--2004 39.9 Million Tons



Indiana 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>
Peak Year: www.nma.org/pdf/c_production_state_rank.pdf

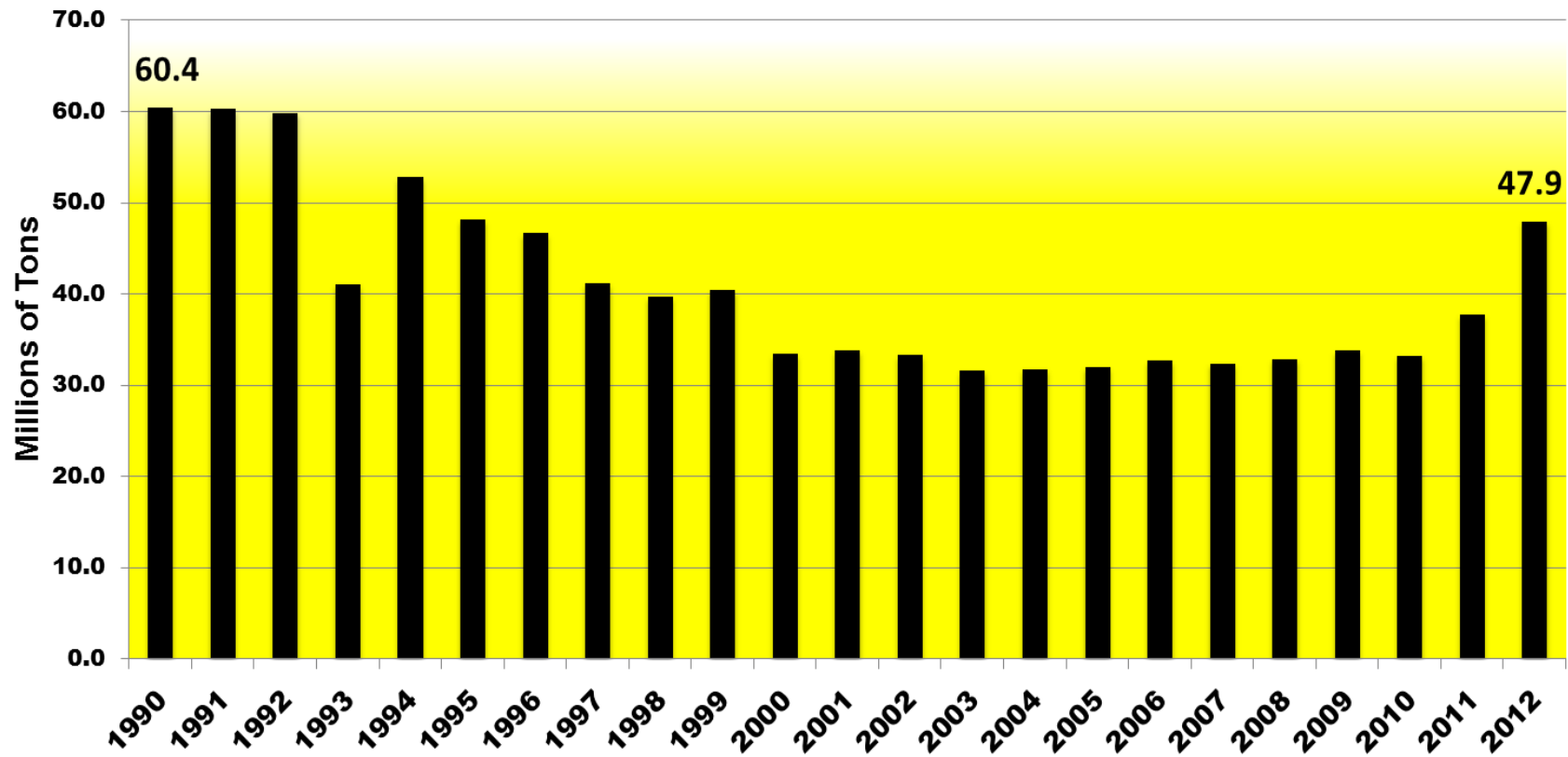
Apparent Peak Year--1984 37.6 Million Tons



Illinois 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>
Peak Year: www.nma.org/pdf/c_production_state_rank.pdf

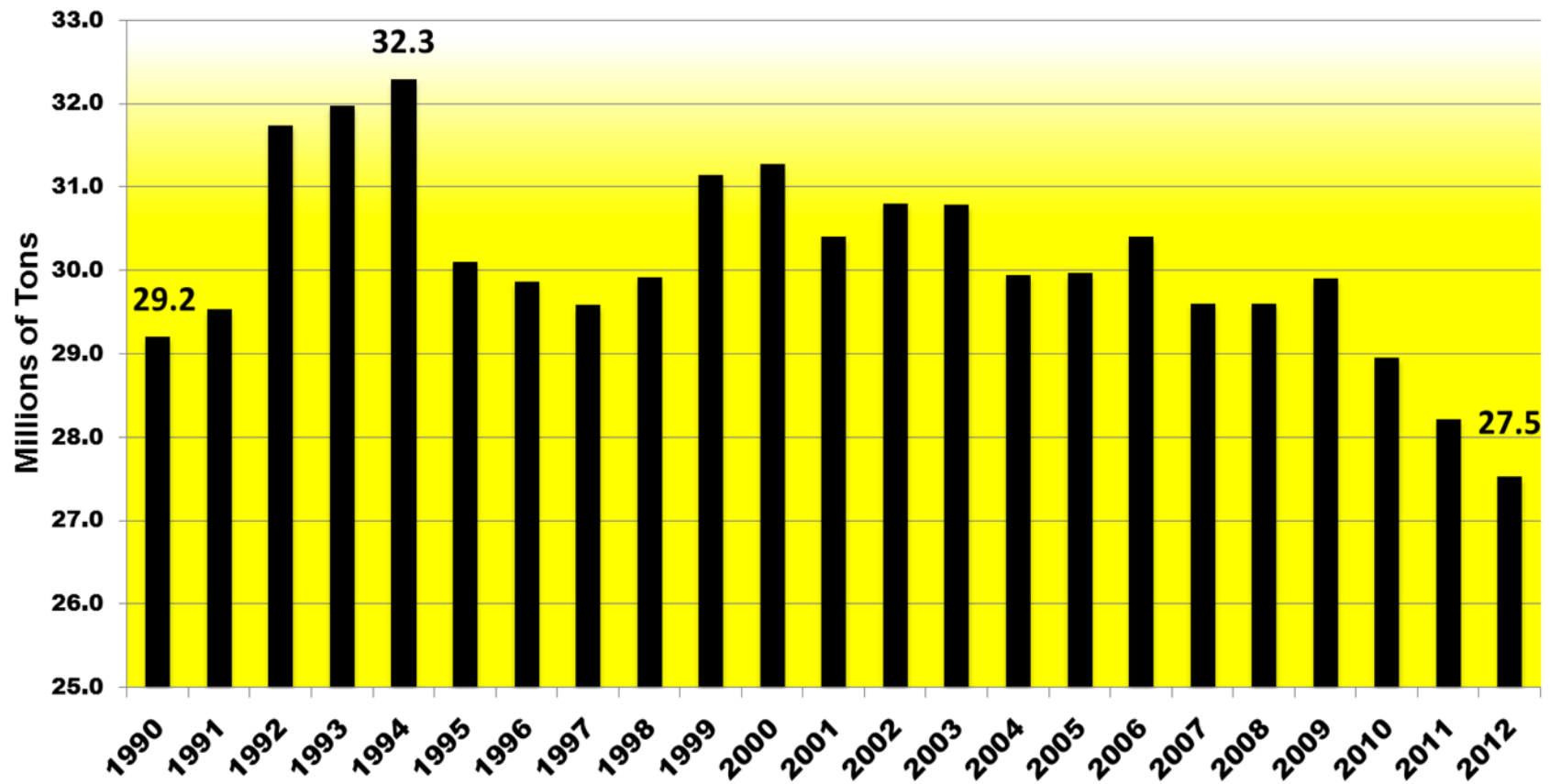
Apparent Peak Year--1918 89.3 Million Tons



North Dakota 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>

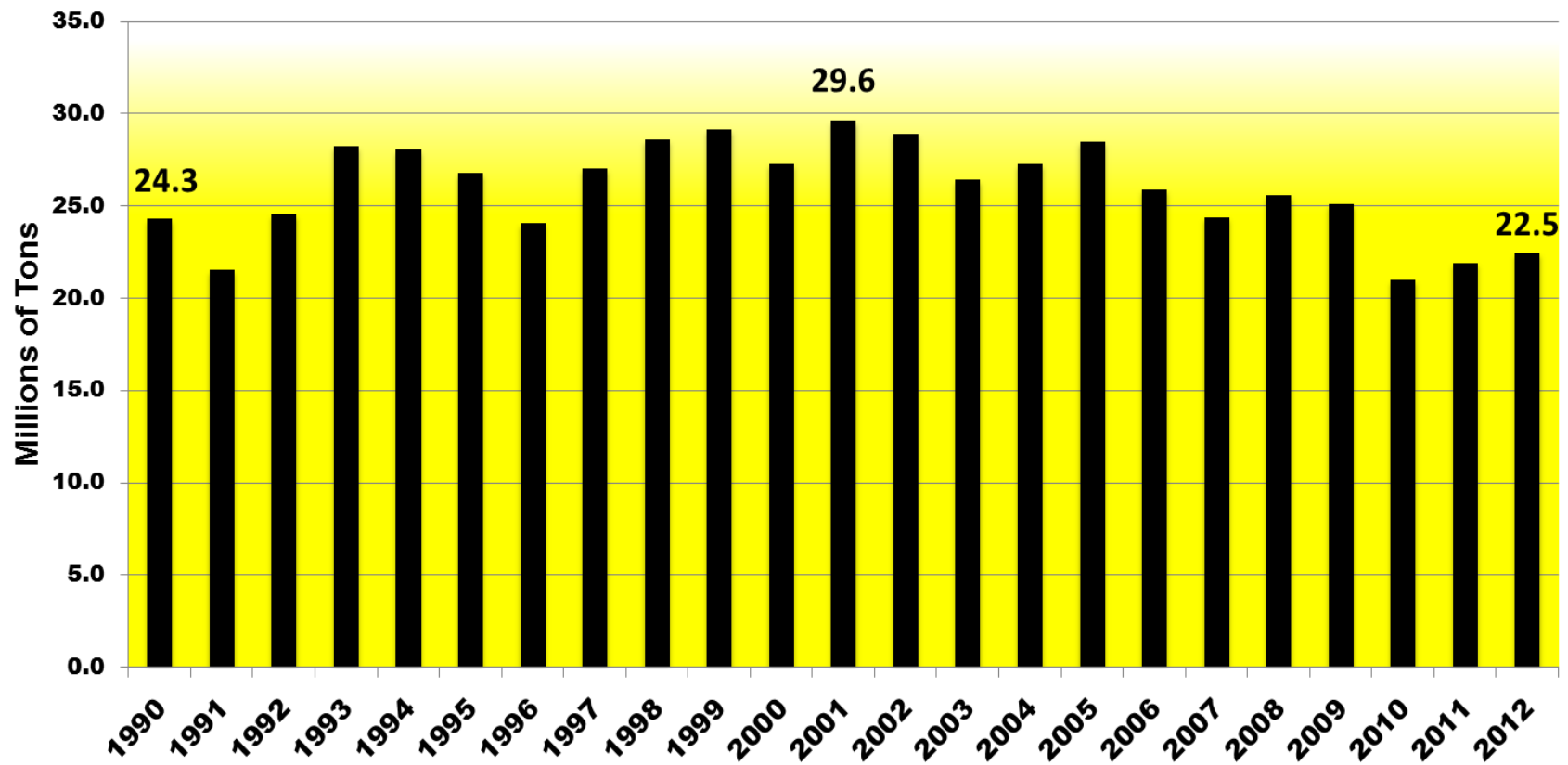
Apparent Peak Year--1994 32.3 Million Tons



New Mexico 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>

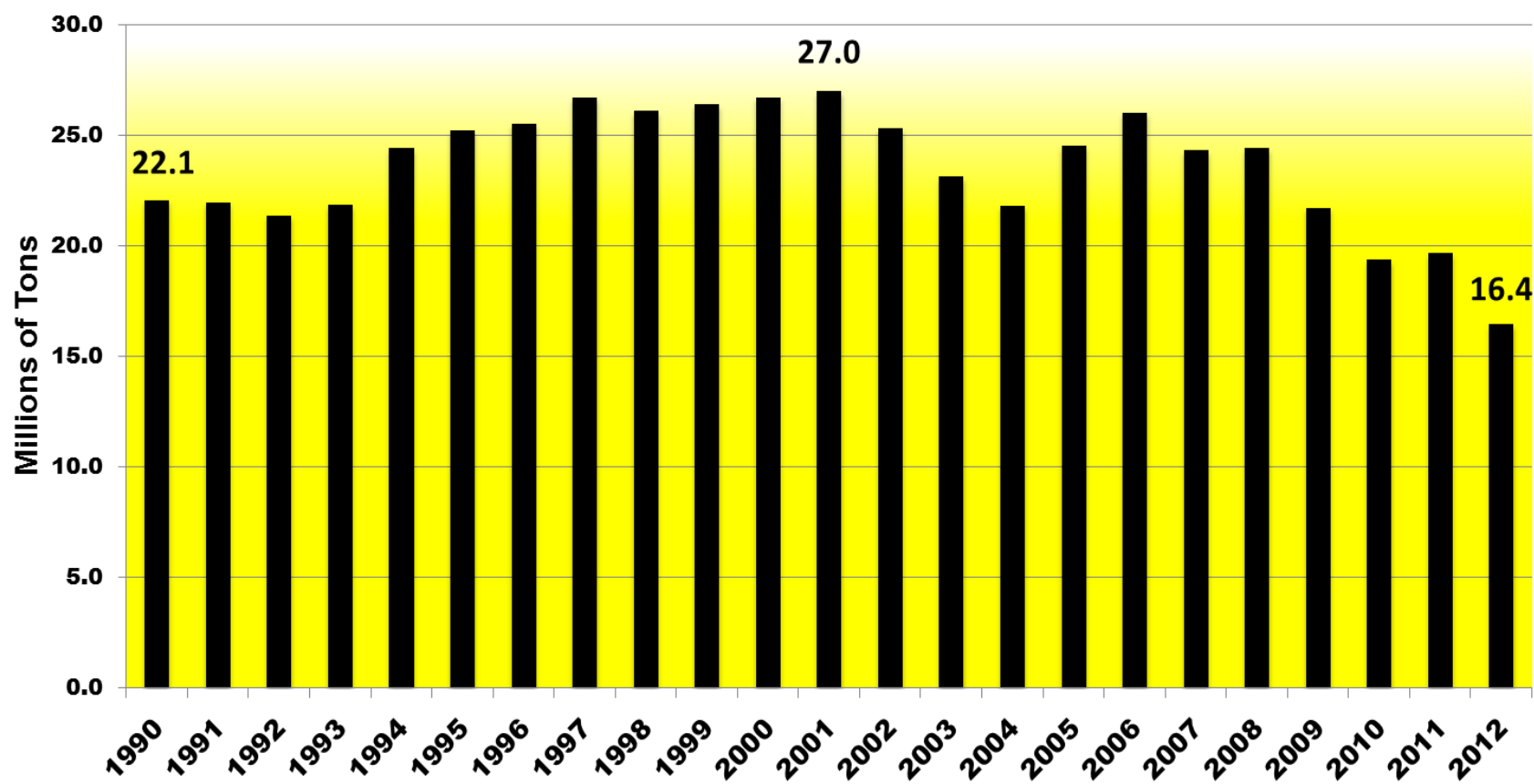
Apparent Peak Year--2001 29.6 Million Tons



Utah 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>

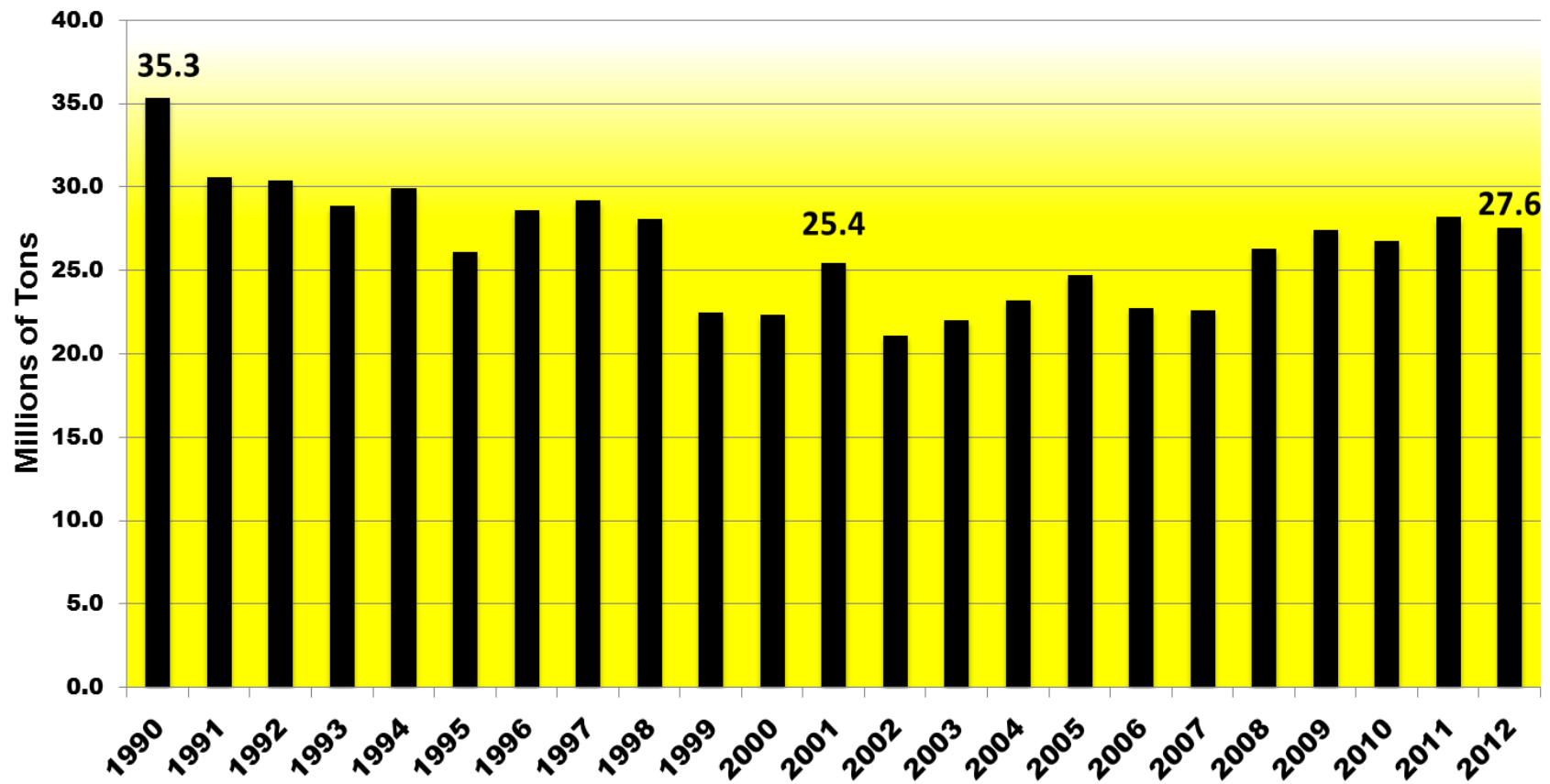
Apparent Peak Year--2001 27.0 Million Tons



Ohio 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>

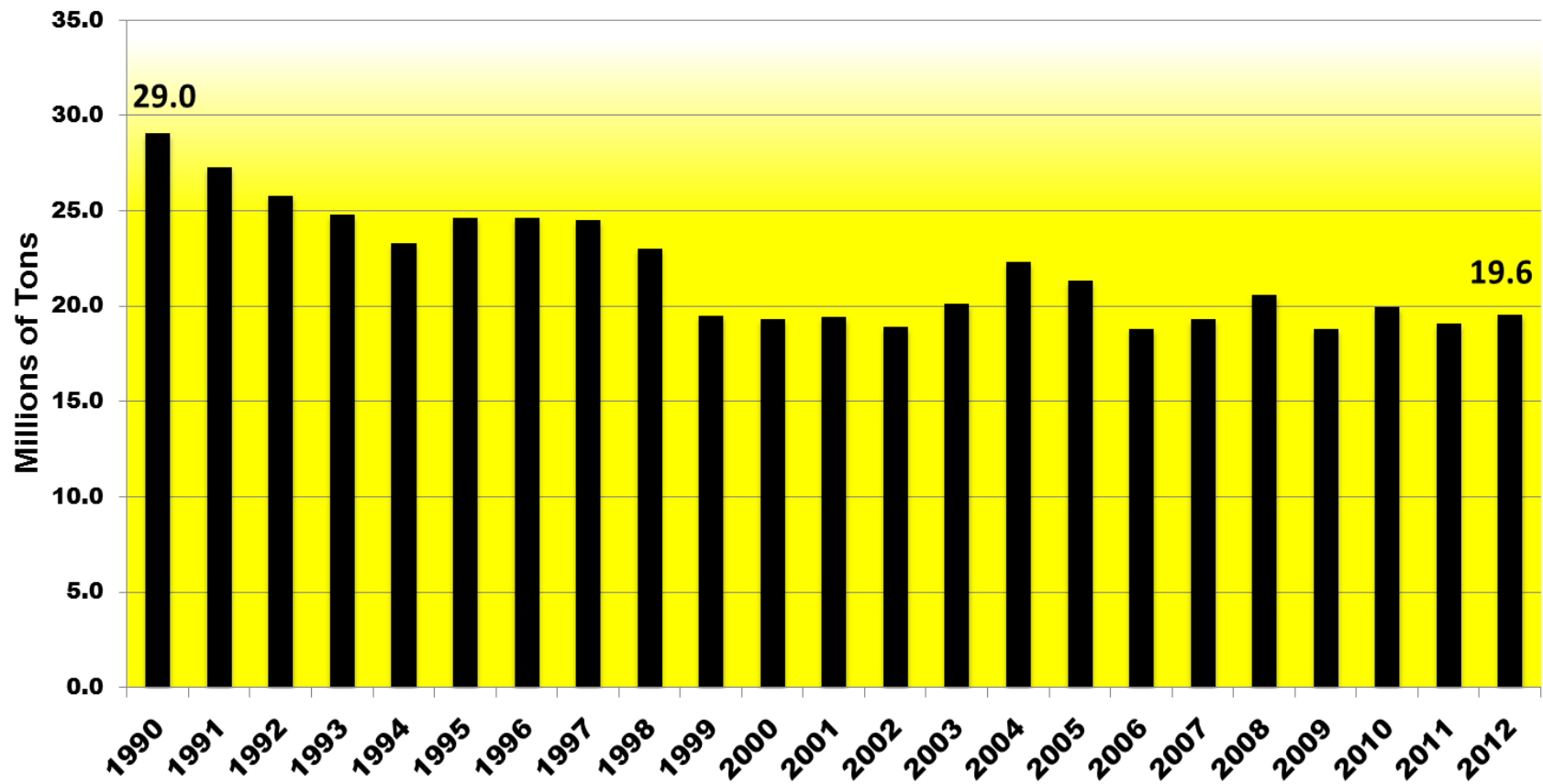
Apparent Peak Year--1990 35.3 Million Tons



Alabama 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>

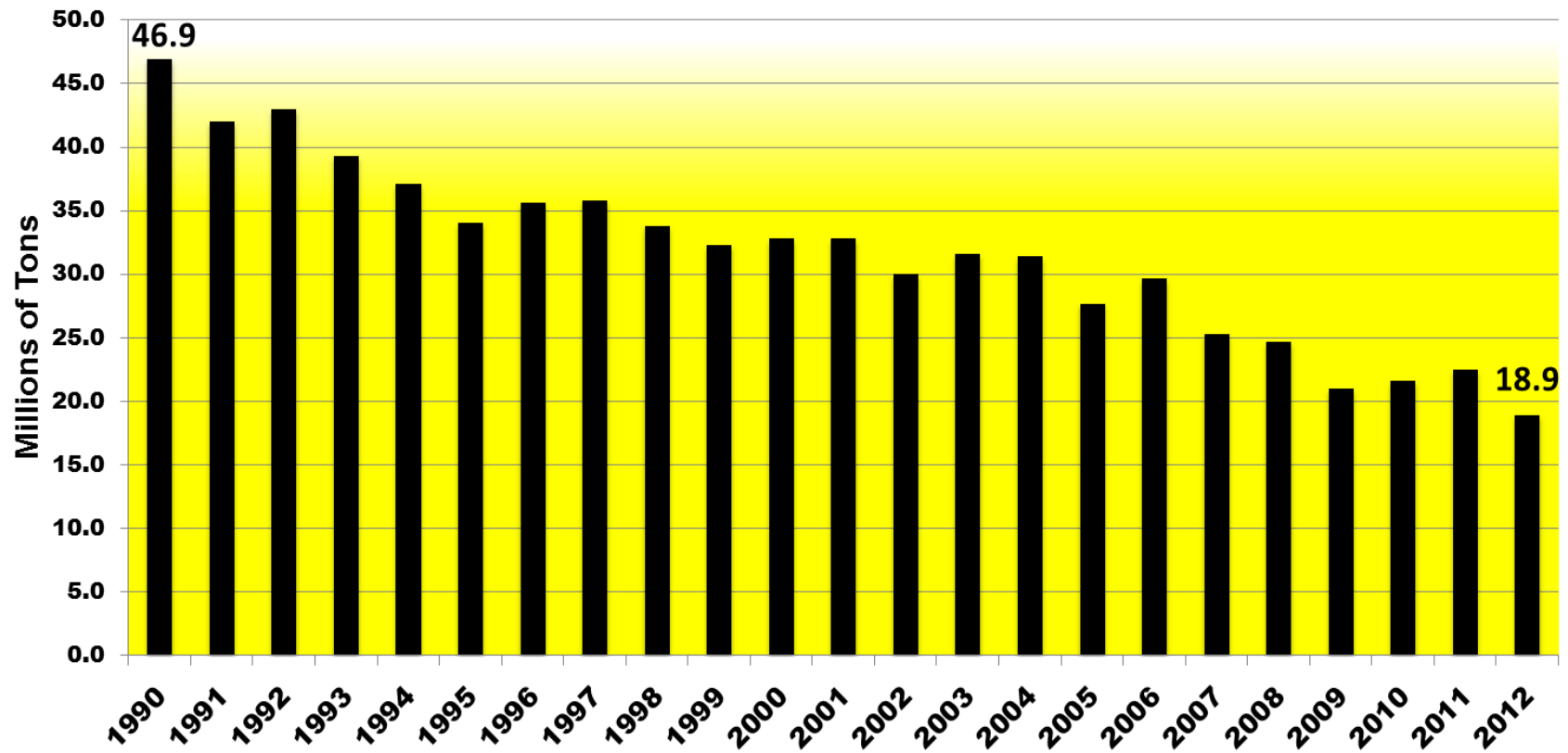
Apparent Peak Year--1990 29.0 Million Tons



Virginia 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>
Peak Year: www.nma.org/pdf/c_production_state_rank.pdf

Apparent Peak Year--1990 46.9 Million Tons



Arizona 1990-2012 Coal Production

Data from EIA Annual Coal Report Table 1 - <http://www.eia.gov/coal/annual/>

Apparent Peak Year--2001 13.4 Million Tons

