

U.S. Commercial Power and Fuel Supply Outlook

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June 23, 2009

2009 NRC Fuel Cycle Information Exchange

Fuel Issues Overview: A U.S. Perspective

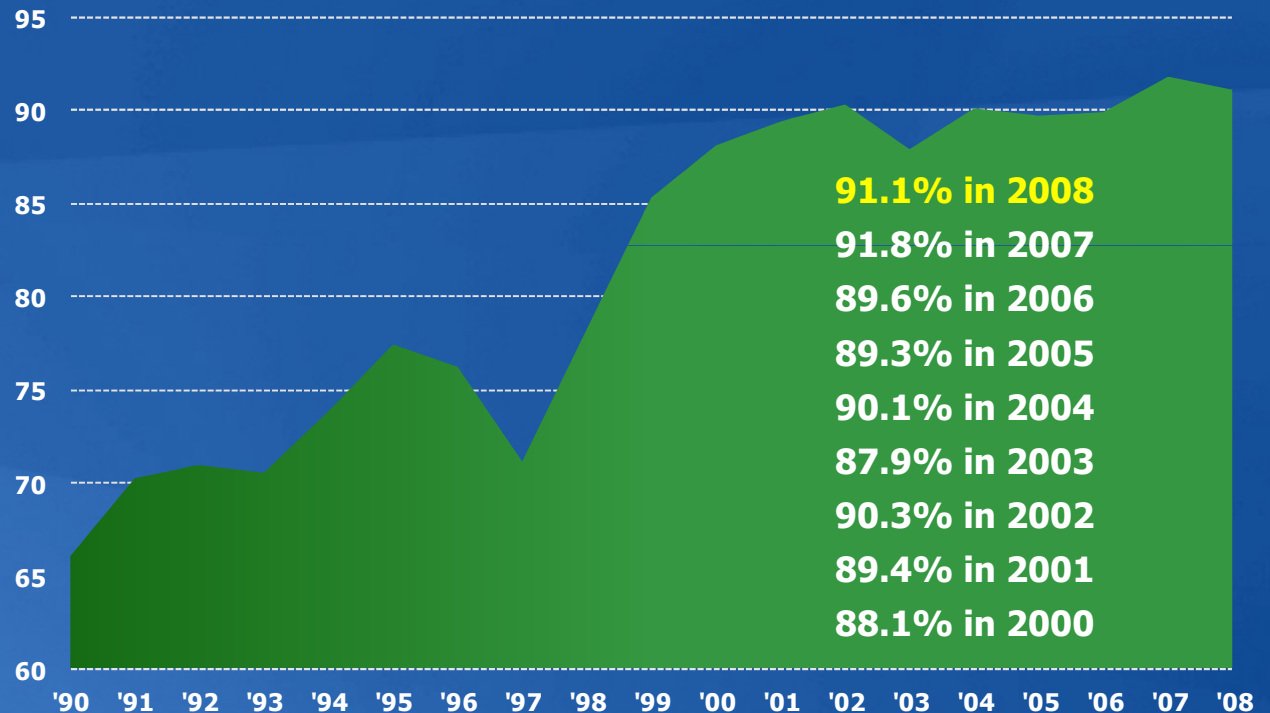
- Generation Outlook
 - Current reactors
 - New additions
- Fuel Requirements and Production
 - Existing capabilities
 - Anticipated facilities
- Assuring Future Fuel Supply
 - For current reactors
 - For entering countries

Sustained Reliability

U.S. Nuclear Plant Average Capacity Factor

Highlights

- Refueling outages: 66 in 2008, 56 in 2007
- Average refueling outage duration: 37.6 days in 2008, 40.4 days in 2007



Sources: Ventyx Velocity Suite, U.S. Energy Information Administration,
U.S. Nuclear Regulatory Commission, NEI estimate for 2008

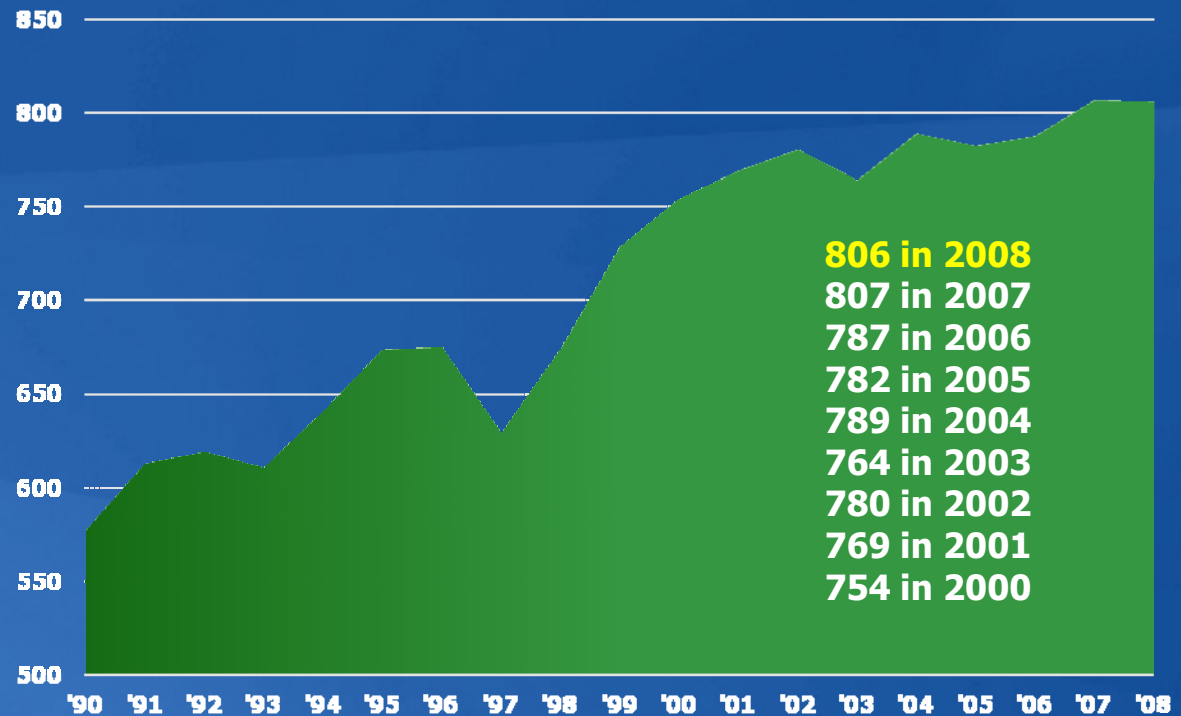


Steady Output From the Operating Plants

U.S. Nuclear Generation (billion kilowatt-hours)

Highlights

- 5,640 MW of power uprates approved since 1977
- 595 MW of uprates under review
- 2,882 MW of uprates expected by 2013

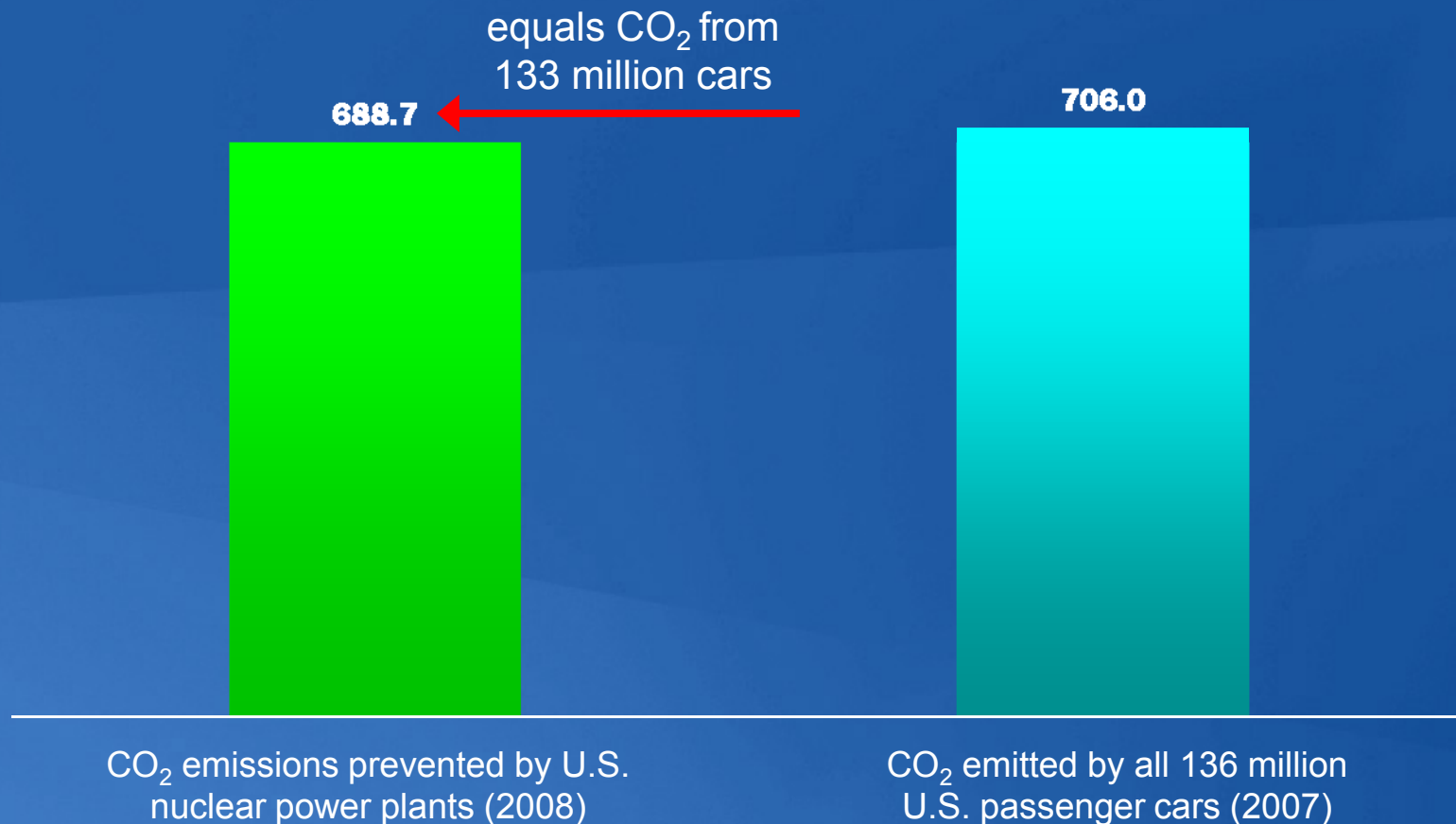


Sources: Ventyx Velocity Suite, U.S. Energy Information Administration,
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Perspective on CO₂ Emissions Prevented By U.S. Nuclear Plants

Million Metric Tons, 2008



CO₂ emissions prevented by U.S. nuclear power plants (2008)

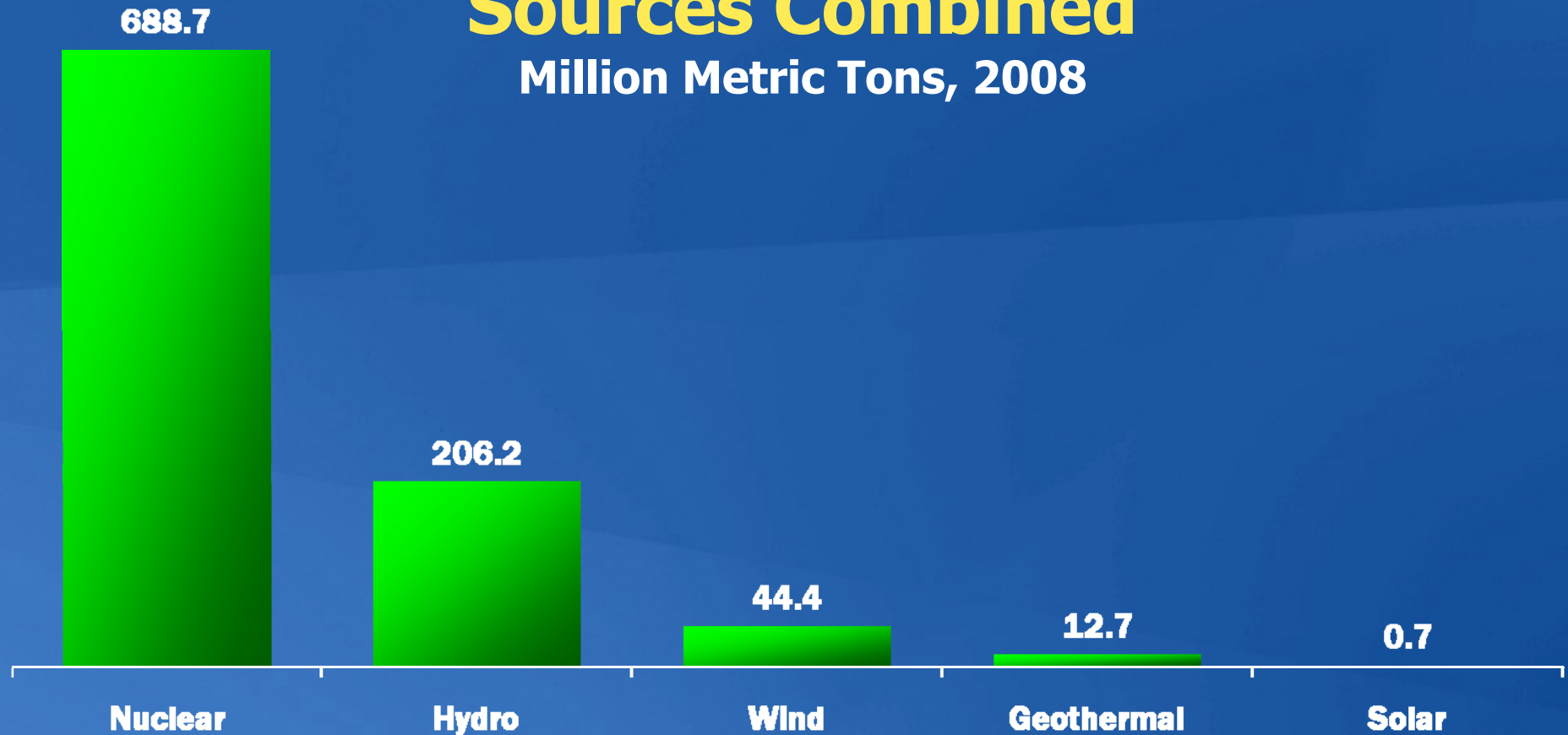
CO₂ emitted by all 136 million U.S. passenger cars (2007)



Source: Emissions avoided by nuclear power are calculated using regional fossil fuel emission rates from the Environmental Protection Agency and plant generation data from the Energy Information Administration. Car emissions from EPA, Office of Transportation and Air Quality Emissions Facts (April 2000).
Updated: 5/09

U.S. Nuclear Plants Prevent More CO₂ Emissions Than Other Emission-Free Sources Combined

Million Metric Tons, 2008

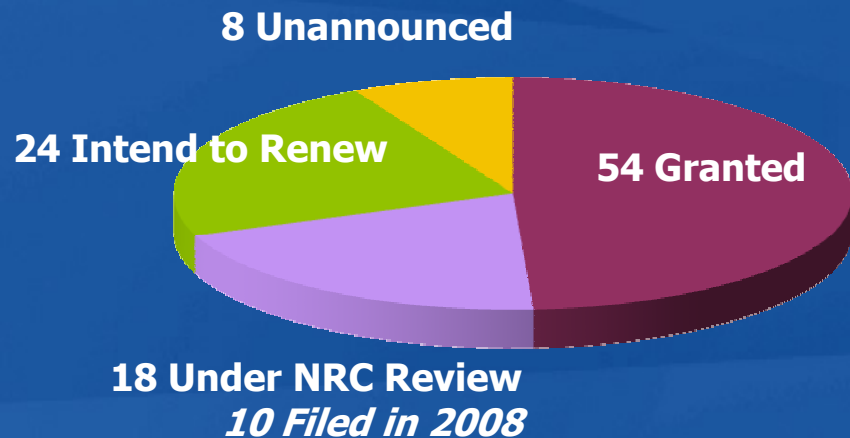


Source: Emissions avoided are calculated using regional and national fossil fuel emissions rates from the Environmental Protection Agency and plant generation data from the Energy Information Administration.

Updated: 5/09

Other Key Highlights From 2008

License Renewals Continue ...



Source: U.S. Nuclear Regulatory Commission

... And America's 105th Plant Is Well Under Way

- TVA sanctioned Watts Bar 2 completion in August 2007
- 5-year, \$2.5 billion project
- On schedule and on budget for April 2012 construction completion
- Currently employs 1,500 people on-site

Preparing for New Nuclear Plant Construction

- Major investments in:
 - Design and engineering
 - Long-lead procurement
 - Expansion of U.S. manufacturing capability
- Licensing
 - 3 early site permits approved, one undergoing NRC review
 - 2 certified designs*, 3 undergoing NRC review
 - 17 license applications submitted for as many as 26 reactors



*Amendments are pending for the AP1000 certified design

Fuel Requirements and Production: URANIUM

- 2008 U.S. requirements:
 - 50 million pounds U_3O_8
- 2008 World requirements:
 - 159.1 million pounds U_3O_8
- 2008 U.S. production:
 - 3.9 million pounds U_3O_8
- U.S. production is projected to remain relatively flat at today's market prices. If prices rise additional production may come on line

Fuel Requirements and Production: CONVERSION

- 2008 U.S. requirements:
 - 19,100 MTU as UF₆
- 2008 World requirements:
 - 61,800 MTU as UF₆
- 2008 domestic production supplied approximately 43% of domestic requirements
- ConverDyn expected to increase capacity by 3,000 MTU to reach 18,000 MTU over next decade

Fuel Requirements and Production: ENRICHMENT

- 2008 U.S. requirements:
 - 14.1 million SWU
- 2008 World requirements:
 - 45.6 million SWU
- Slightly more than half of 2008 domestic requirements met through combination of USEC production, Russian HEU and inventories

Anticipated New Enrichment Facilities

- USEC American Centrifuge Plant (Portsmouth, OH)
 - Initial operation 2010, 3.8 million SWU by 2012
- LES National Enrichment Facility (Lea County, NM)
 - Initial operation 2009, 3.0 million SWU by 2012
- GE SILEX (Wilmington, NC)
 - Environmental Report to NRC in February 2009
 - Potential pilot in 2009, commercial facility by about 2012
- AREVA Eagle Rock Facility (Idaho Falls, ID)
 - License Application to NRC in January 2009
 - Initial Operation 2015, final capacity 3.0 million SWU

Fuel Requirements and Production: FABRICATION

- 2008 U.S. requirements:
 - 2,164 MTU or about one-third of world total
- U.S. total capacity:
 - approximately 3,900 MTU
- Four fabrication facilities: AREVA (Lynchburg, VA and Richland, WA); Global Nuclear Fuels (Wilmington, NC); Westinghouse (Columbia, SC)

Assuring Future Fuel Supply: What Will It Take?

- Regulatory predictability
 - Licensing procedures for new production must be predictable, transparent, and efficient
- Ability to finance new production
 - Companies must be able to provide reasonable projections for business development
- Appropriate government participation
 - Creation of strategic reserve
 - Rational uranium inventory disposition plan

Assurance for Countries Seeking New Nuclear Generation

- U.S. government committed to helping ensure that secure fuel supply is available to countries willing to forego enrichment and reprocessing
- Approximately 17.5 MTU of excess U.S. HEU now set aside for stockpile
- U.S. continuing to work with IAEA to create international framework for supply assurance
- Lack of confidence in fuel supply should not be a deterrent for new nuclear development

Conclusions

- Continued operation of existing nuclear generation as well as substantial growth are essential to combat global climate change
- NEI supports OECD and IAEA conclusions that uranium resources are adequate to meet needs of existing and projected reactors
- Current lean supplies do not mean inadequate future supplies
- Expect industry to meet challenges of increased future demand