

Presented to the Hampton Roads Planning District Commission

ENERGY RESOURCES – ECONOMIC IMPACTS

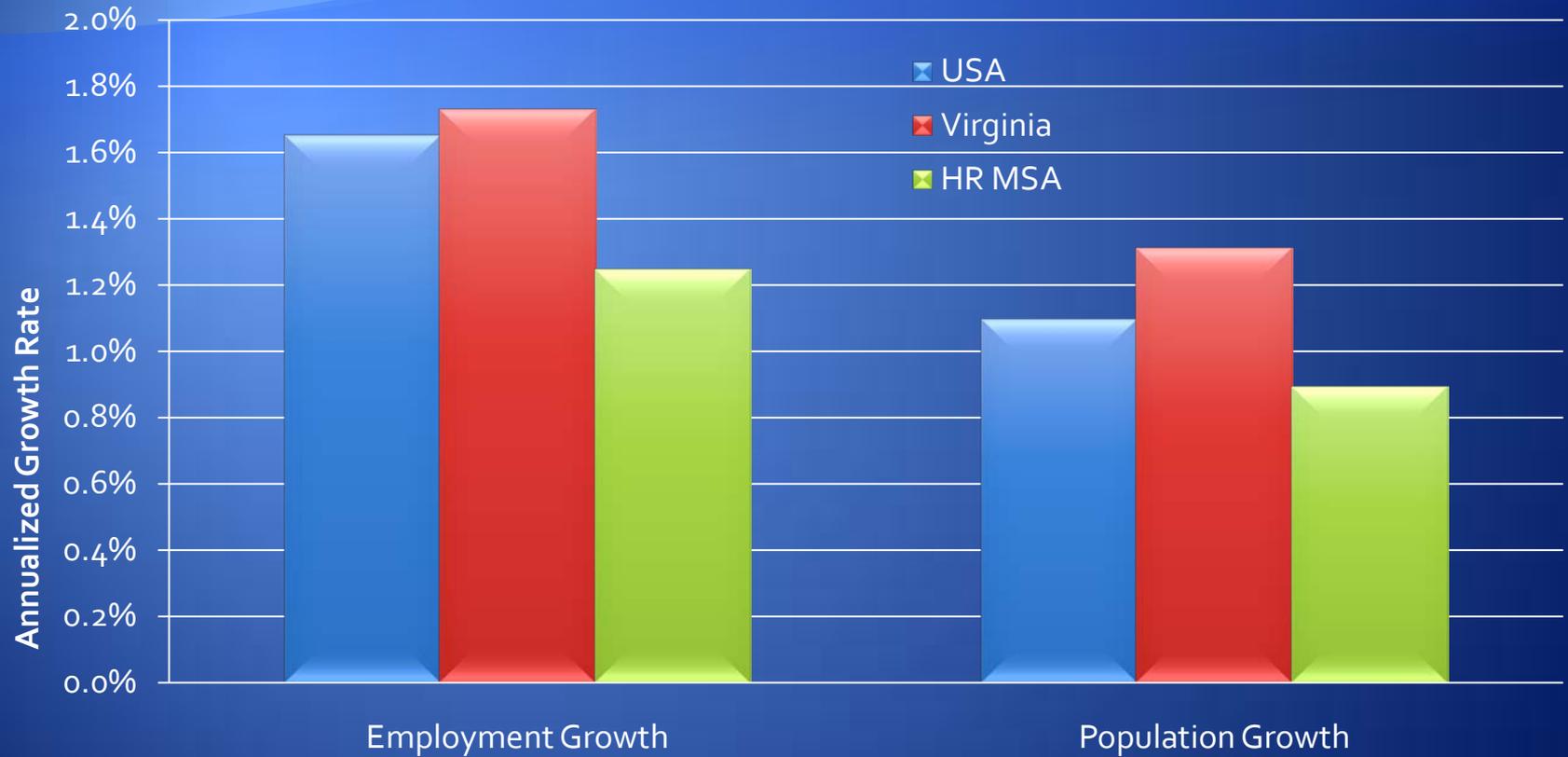
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Chief Economist

February 10, 2010



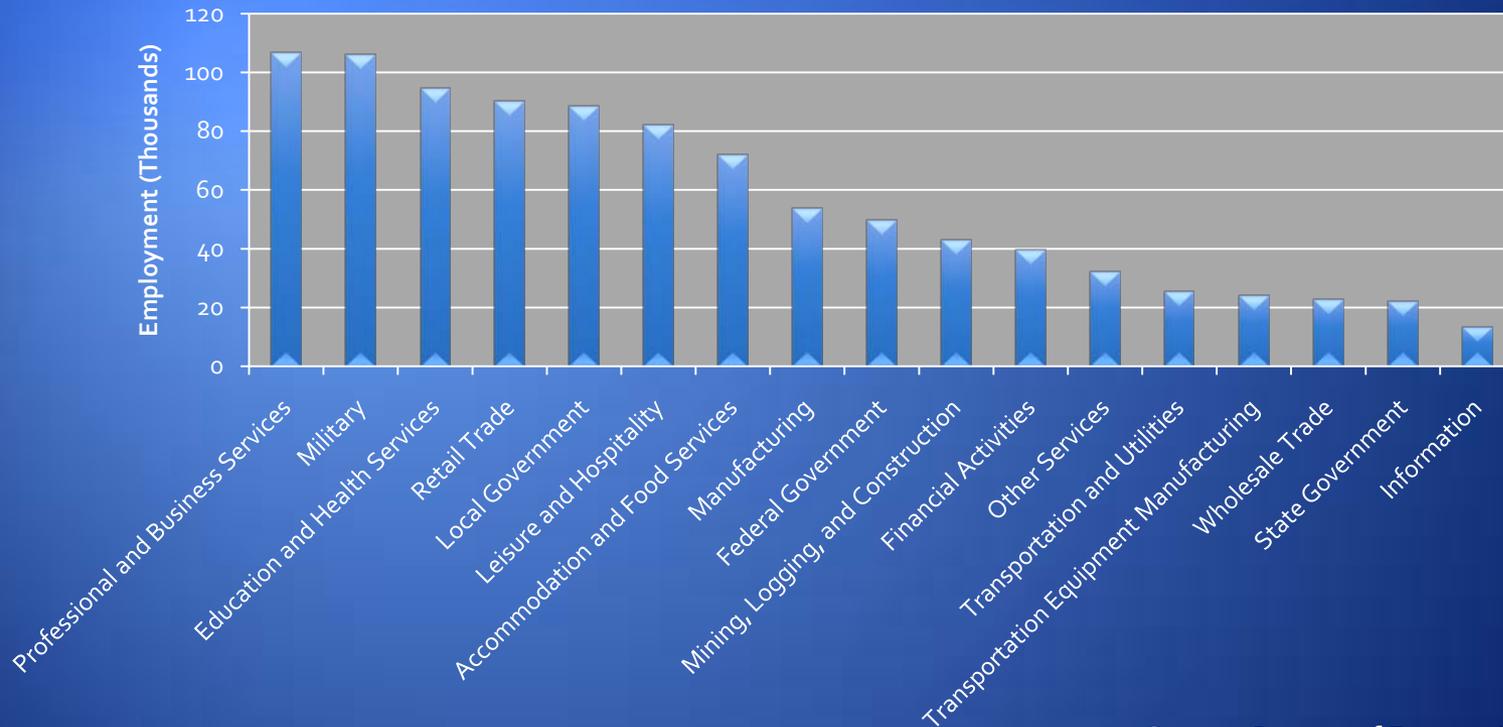
Growth Rates – Past 10 Years



Source: Bureau of Economic Analysis

The Hampton Roads Economy

Industry Employment in Hampton Roads



Source: Bureau of Economic Analysis

Employment by Industry

HR – The Place for Energy?



Chicago Tribune | Nation & World

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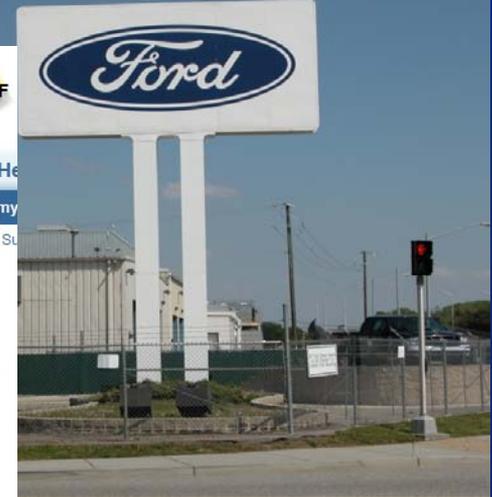
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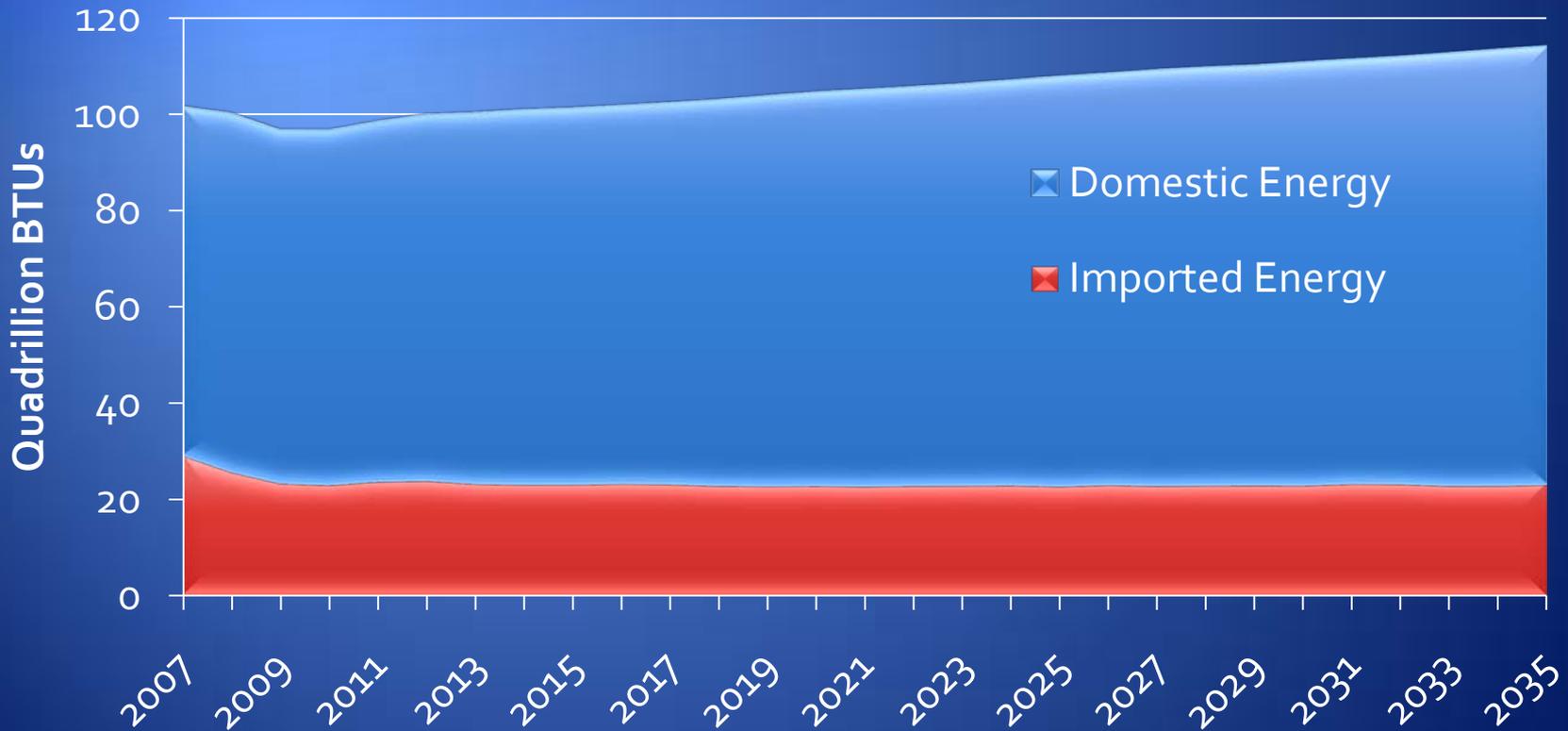
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In Virginia, offshore drilling a bipartisan goal

The Republican governor is 'eager to get started,' and the state's Democratic senators are urging the Obama administration to begin selling leases next year. The plan has raised concern from NASA.



Forecast of Energy Production and Consumption



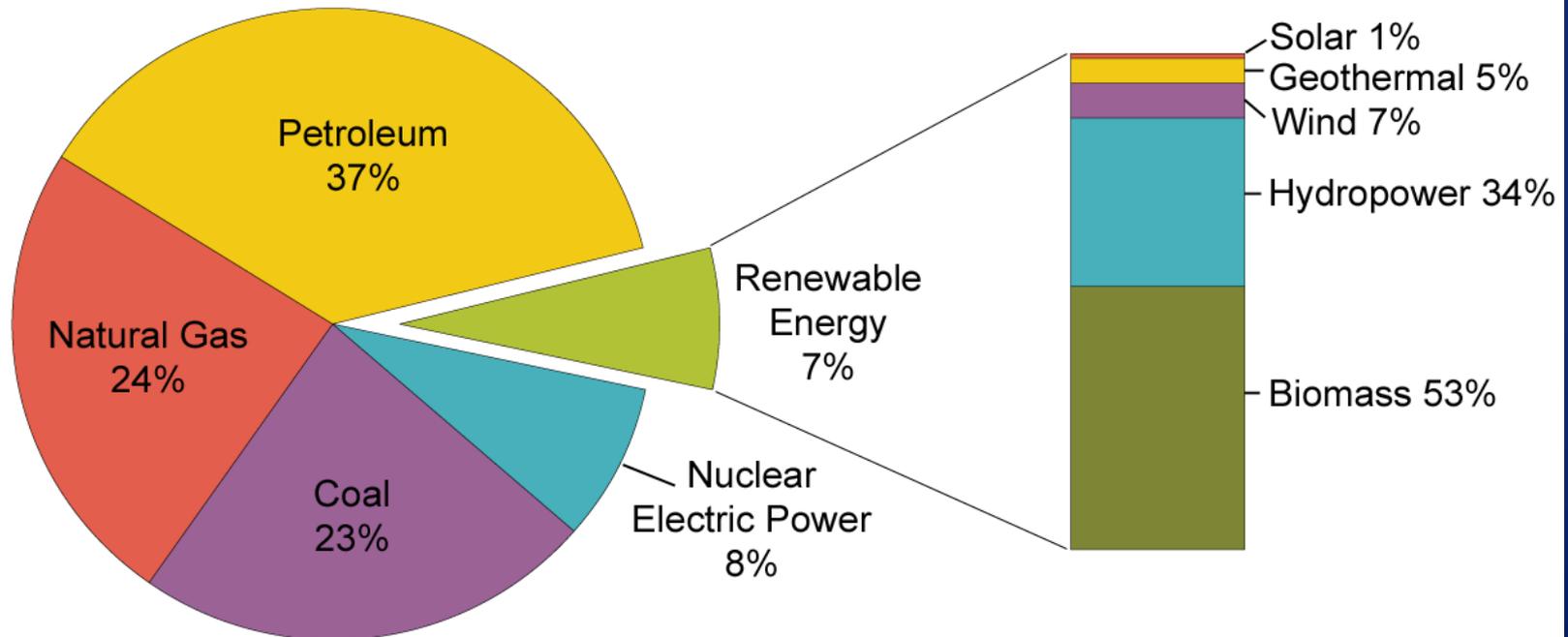
Source: Energy Information Administration

Future Energy Resources

The Role of Renewable Energy in the Nation's Energy Supply, 2008

Total = 99.304 Quadrillion Btu

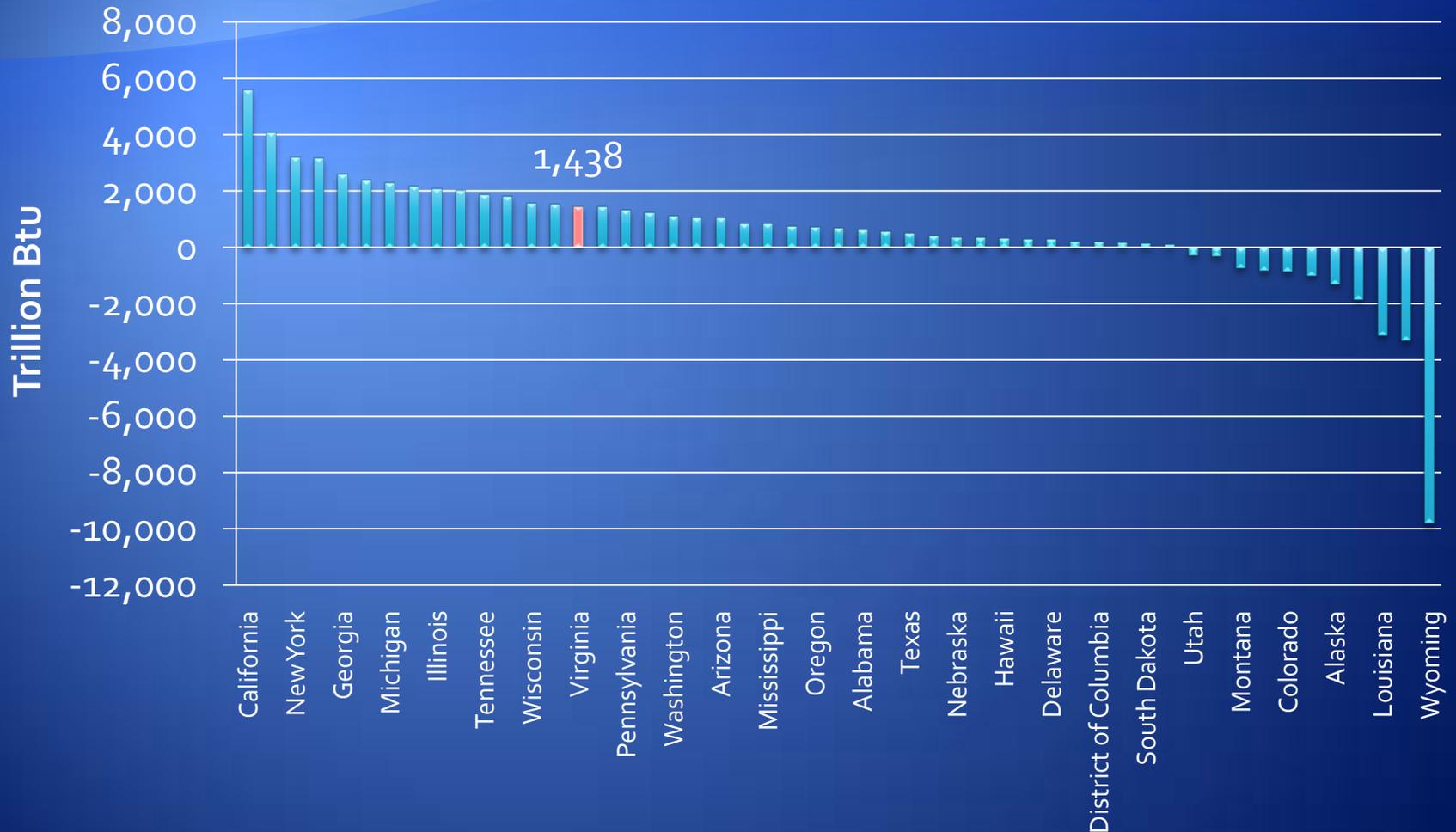
Total = 7.300 Quadrillion Btu



Note: Sum of components may not equal 100% due to independent rounding.

Source: U.S. Energy Information Administration, *Annual Energy Review 2009*, Table 1.3, Primary Energy Consumption by Energy Source, 1949-2008 (June 2009).

Net Energy Imports by State in 2007



Source: Energy Information Administration



Energy in HR



HR – The Future of Energy?

- ◆ Clean Coal
- ◆ Nuclear Energy
- ◆ Low-Energy Nuclear Reactions (LENR)
- ◆ Off-Shore Oil
- ◆ Off-Shore Natural Gas
- ◆ Bio-Fuels
 - ◆ Diesel
 - ◆ Algae (Farmed, Wild, Halophilic Bio-mass)
- ◆ Off-Shore Wind
- ◆ Photovoltaics

Opportunities



- ◆ Production of Energy
- ◆ Manufacture of Energy Related Equipment
- ◆ Logistic Support of Energy Operations
- ◆ Energy Research – Applied Technologies



What is needed?

- ◆ Comprehensive listing of efforts that are currently underway to develop energy within the Hampton Roads region
- ◆ A better understanding of the region's particular competitive advantages with respect to developing various energy alternatives
- ◆ Additional analysis of the regional costs and benefits with respect to various strategies for energy development, with a specific focus on the potential regional economic impact