



**Edison Electric Institute**

*Power by Association<sup>SM</sup>*

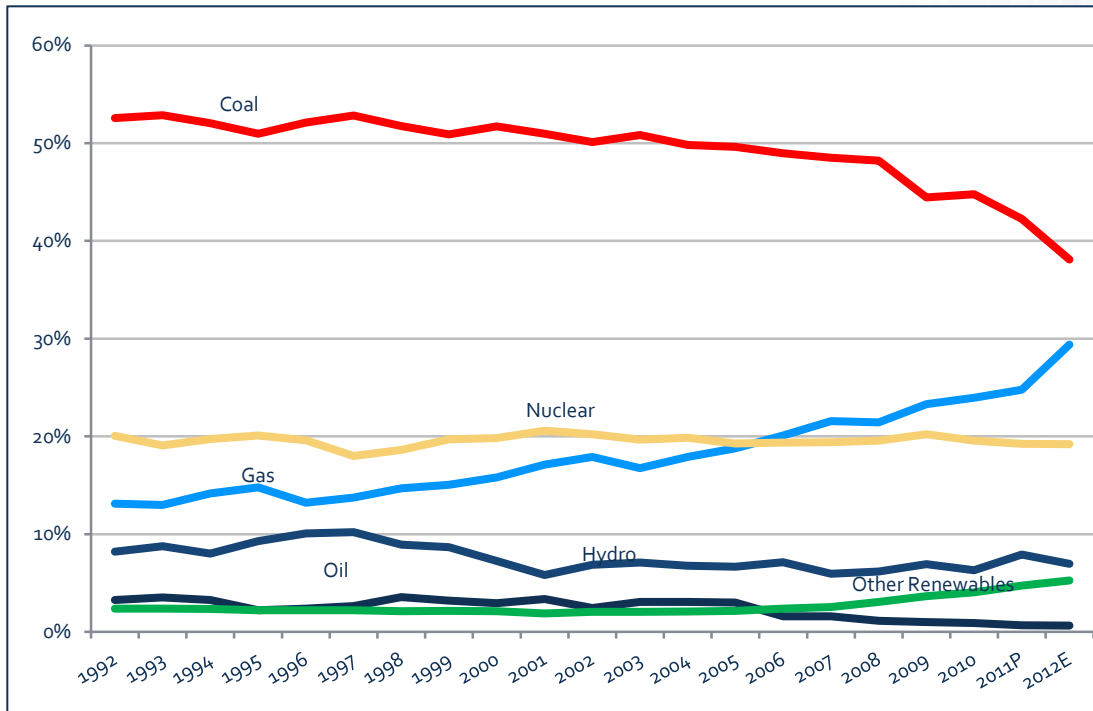
# What is the Future of Coal?

**National Conference of State Legislatures  
Task Force on Energy Supply**

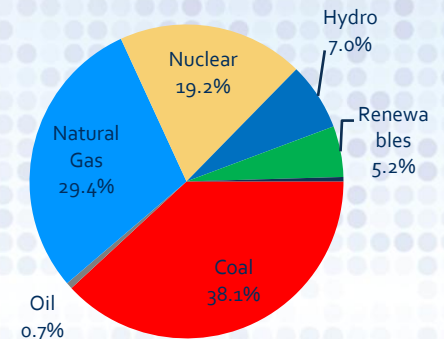
August 5, 2012

Chicago, IL

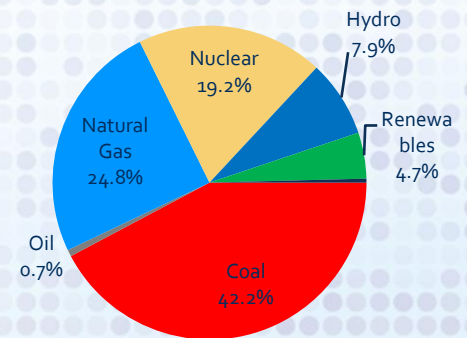
# Generation Fuel Mix



2012 Projection



2011



# A Perfect Storm

***Shale gas production meets EPA regulations!!***

***Low natural gas prices!***

***Future energy demand means \$1.6 trillion-1.8 trillion\* or more in generation, transmission & distribution!***



***Agging fleet!***

***53 GW announced coal retirements!***

\*Source: *Transforming America's Power Industry*, The Brattle Group, November 2008



# Coal Overview

Coal Overview (million short tons)			
	2012P	2011	2010
Production	997.4	1094.3	1085.3
Imports	12.4	13.1	19.4
Consumption (electric sector only)	797.9	928.6	975.6
Exports	112.2	107.3	81.7

AEO Short-Term Energy Outlook 2011 & 2012

# It's Not Easy to Build a Coal-Fired Unit

Year	Announced	Cancelled	Operating	Testing/Under Construction
2002	28	27	1	0
2003	18	11	0	3
2004	17	12	3	1
2005	23	14	3	0
2006	16	12	0	2
2007	11	3	0	0
2008	9	1	1	0
2009	3	0	0	0
2010	2	1	0	0



# New Coal-Fired Units Nearing Completion

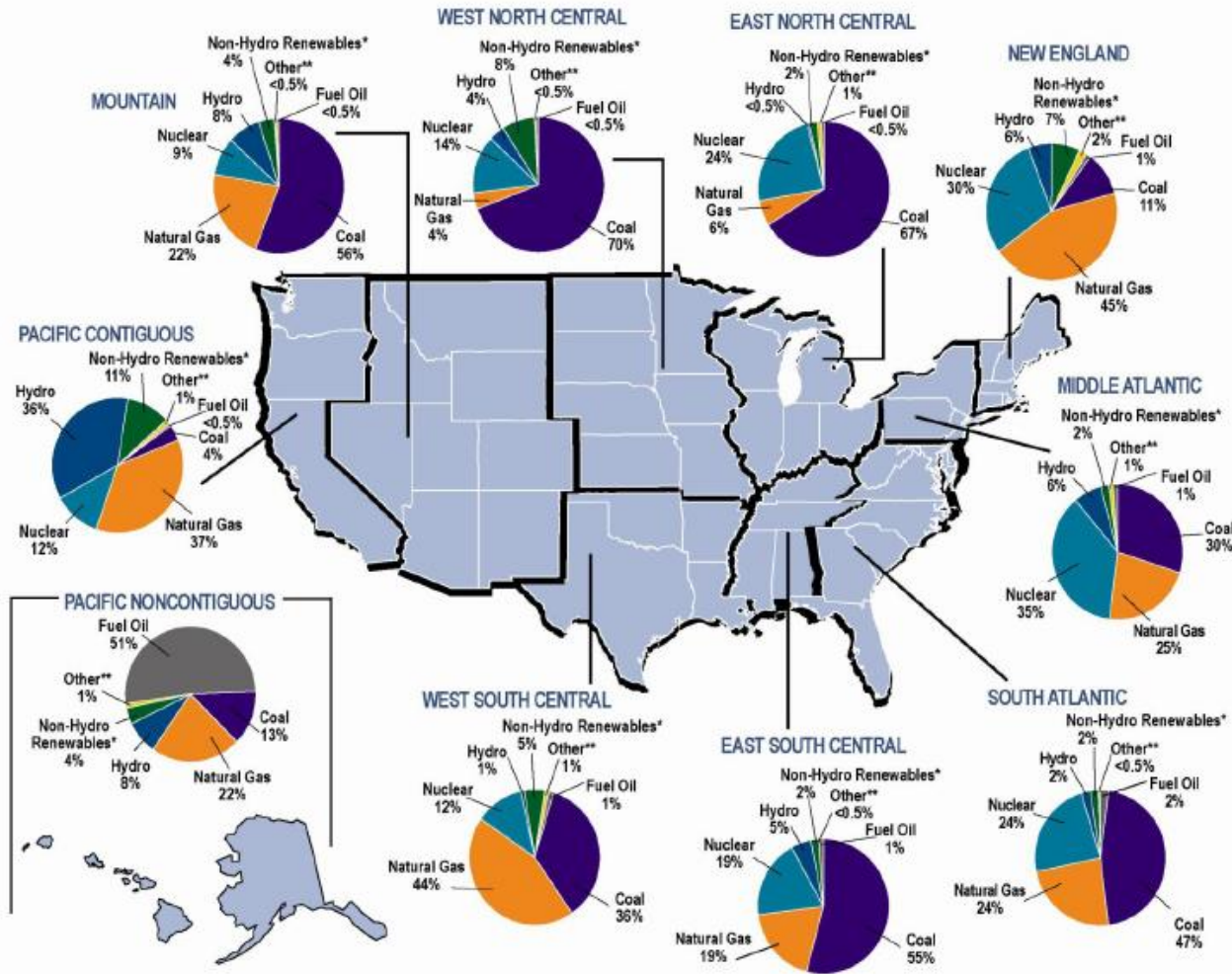
- Testing
  - Duke Edwardsport IGCC Station (600 MW)
- Under construction
  - AEP/SWEPCO John W Turk Jr. Power Plant (609 MW)
  - Spiritwood Energy (99 MW)
  - Sandy Creek Energy Station (898 MW)
  - Southern Co./Miss Power Plant Ratcliffe (600 MW)
  - Greene Energy Resource Recovery (600 MW)

# From Announcement to Operation

(>25MW and announced in 2002 or later)

Plant Name	State	Years to Completion
Sadow 5	TX	7
Dry Fork Station	WY	7
TS Power Plant	NV	4
Virginia City Hybrid Energy Center	VA	8
Wygen III	WY	5
Oak Grove Steam Electric Station	TX	4
Point Comfort Cogeneration (NuCoastal)	TX	6
SunCoke Energy Project	OH	3

# Different Regions of the Country Use Different Fuel Mixes to Generate Electricity



\*Includes generation by agricultural waste, landfill gas recovery, municipal solid waste, wood, geothermal, non-wood waste, wind, and solar.

\*\* Includes generation by tires, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

Sum of components may not add to 100% due to independent rounding.

Source: U.S. Department of Energy, Energy Information Administration, Power Plant Operations Report (EIA-923); 2010 preliminary generation data.

July 2011

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# “Eggs in Many Baskets”

- Fuel diversity and innovative technology development are critical:
  - Meet future energy demand
  - Provide affordable, reliable electricity
  - Maintain energy security and independence
- Novel approach of Arizona Power Services in how it will select new generation supply
  - Will no longer use ‘least cost’ as the dominant factor
  - Goal - no single source will provide more than 26% of generation portfolio by 2027

# Contact Information

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