

Grand Energy Challenges: *Rethinking Our Energy Future*

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Strategic Intent



Moving global energy systems toward a sustainable future through transdisciplinary development of objective and credible data, tools and analysis that inform the energy dialogue and guide energy investment and policy decisions.

Challenges...

Sustainable solutions meet the needs of the present without compromising the ability of future generations to meet their own needs.

1987 Brundtland Commission

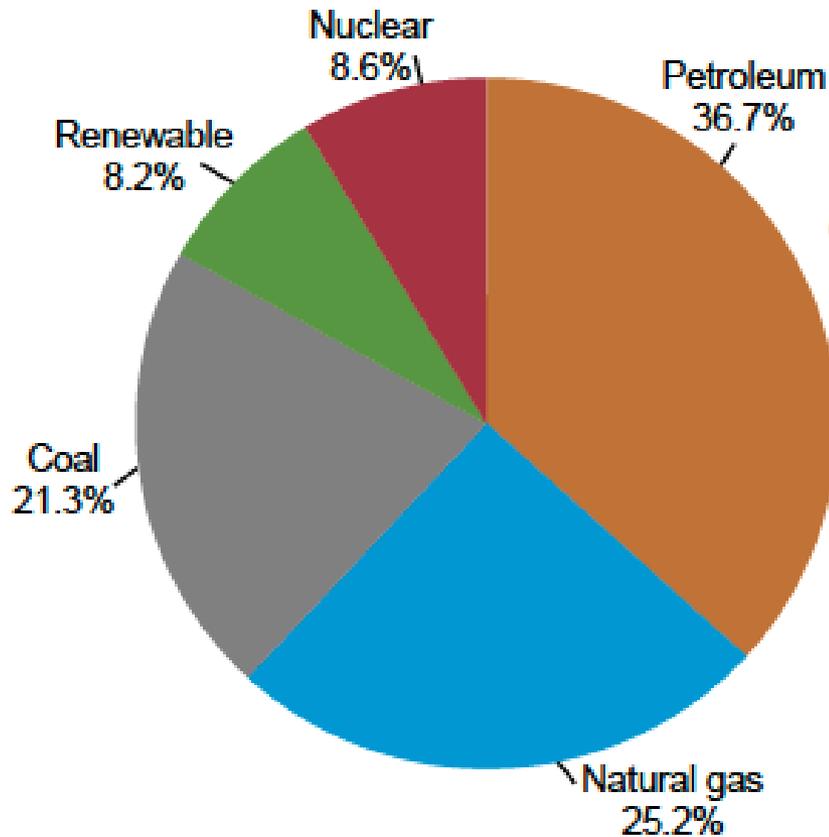
Transdisciplinary Approach

- Science, Technology & Society...
- Human & Earth Systems...
- Comprehensive Approach focused on Impacts:
 - A: Exploration and Leading Research
 - B: Understanding
 - C: Informing Decisions

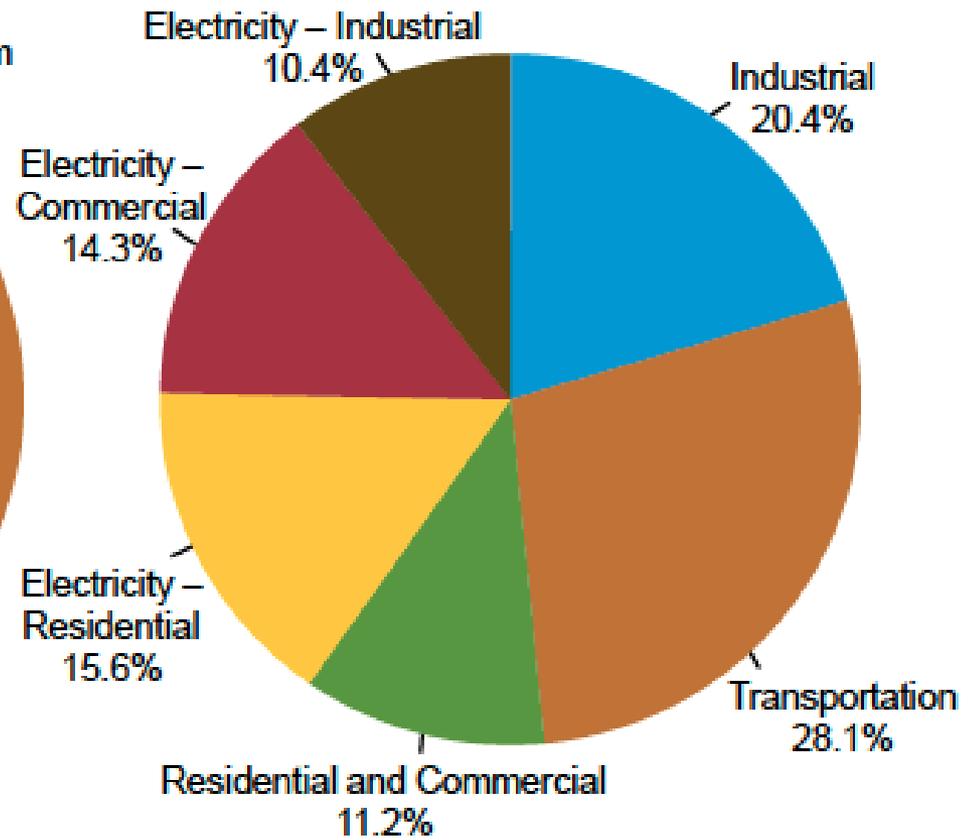
The Traditional View of the U.S. Energy Economy....

2010 total U.S. energy use = 98.0 quadrillion Btu

Primary energy demand by fuel

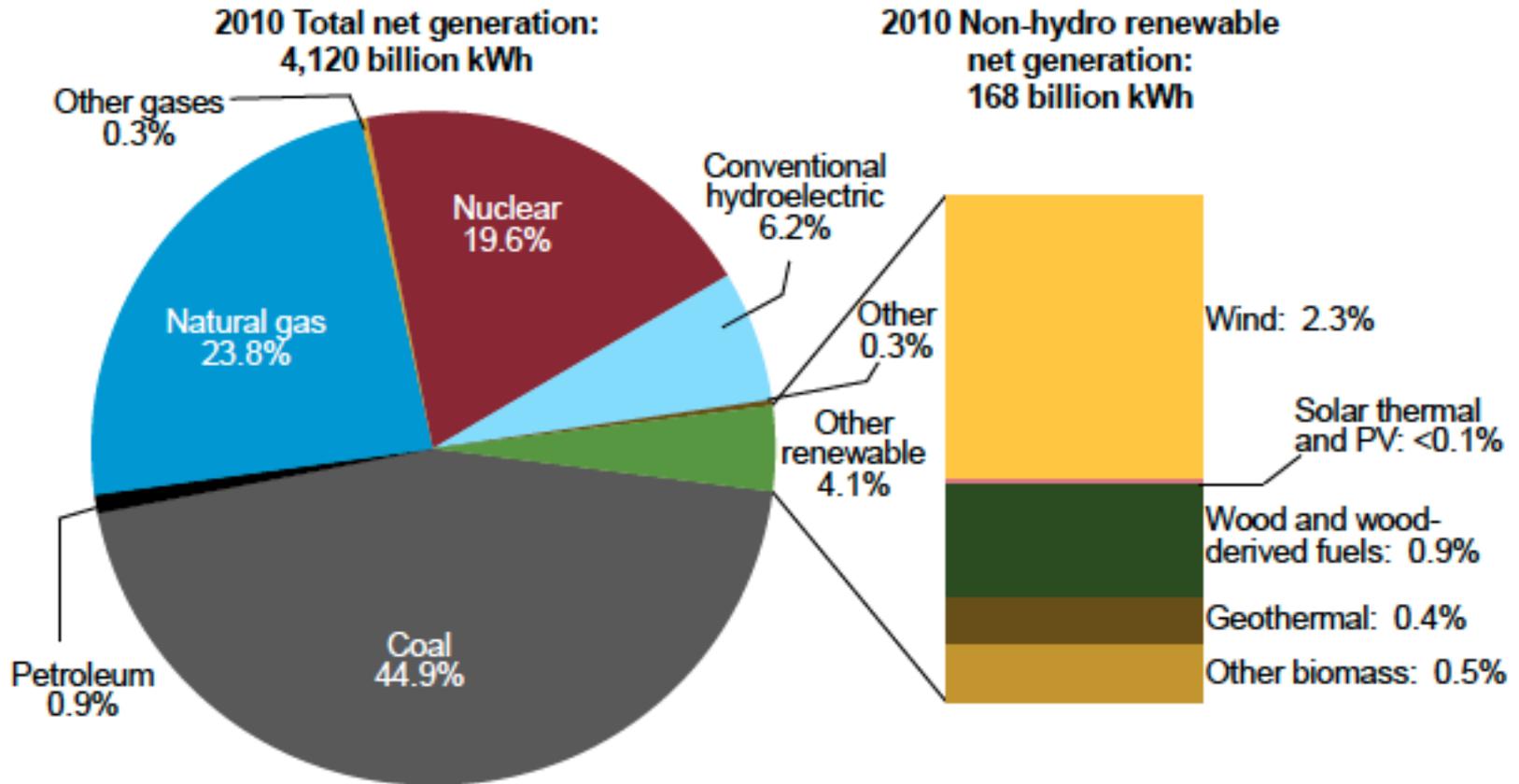


Primary energy demand by sector



Source: EIA, Annual Energy Outlook 2012 Early Release

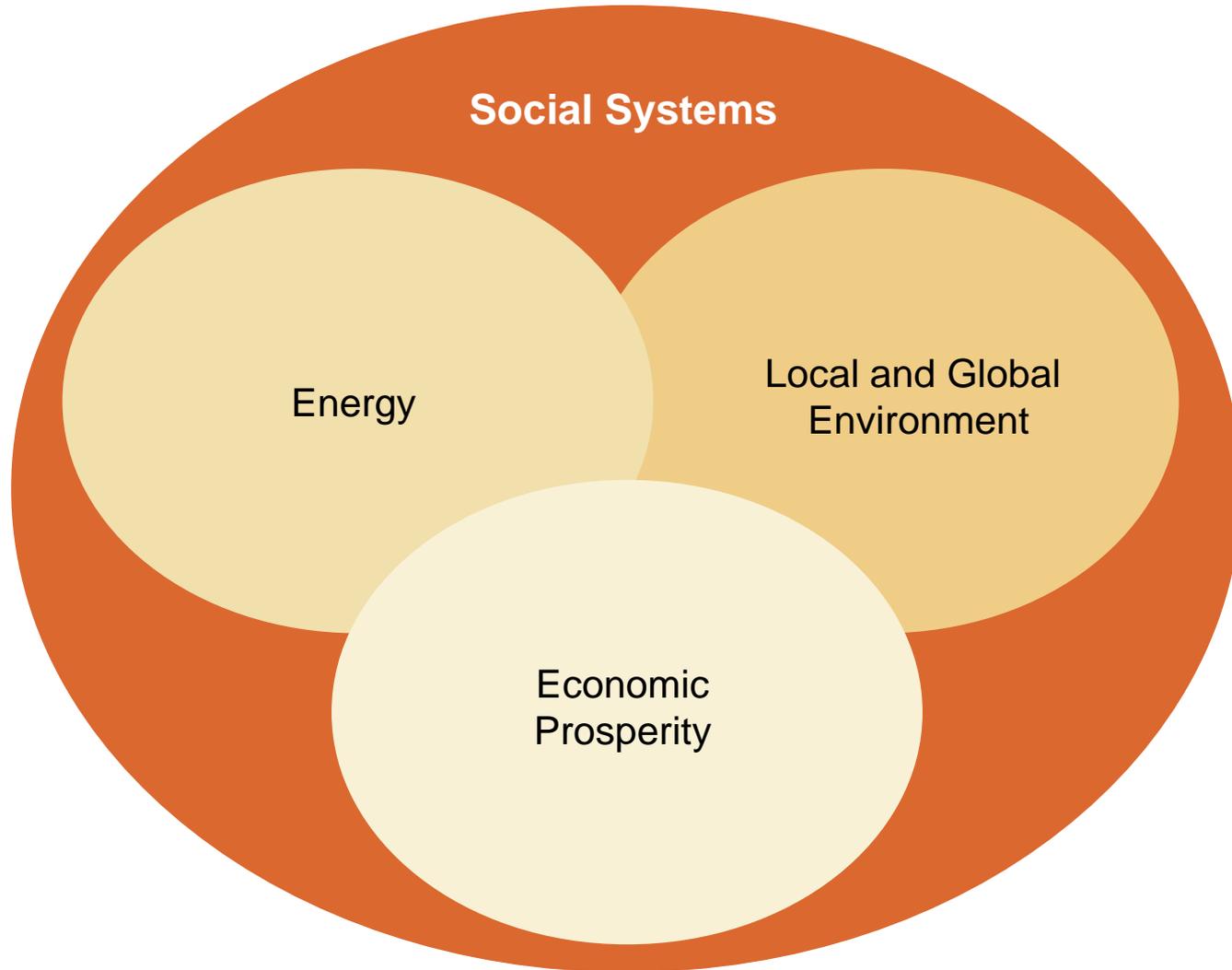
The US Electric Power System, 2010



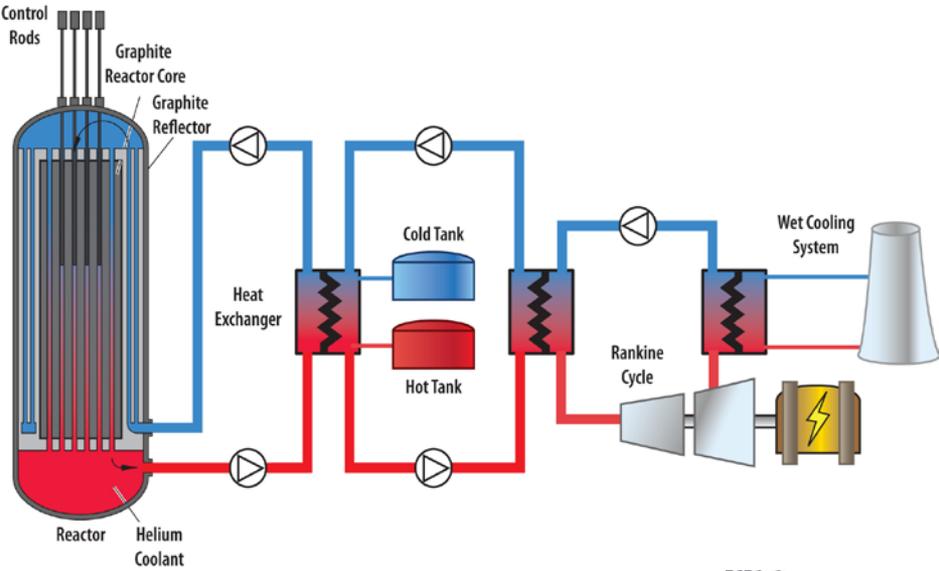
Energy Challenges



Challenges...and incredible Opportunities



ReInvention



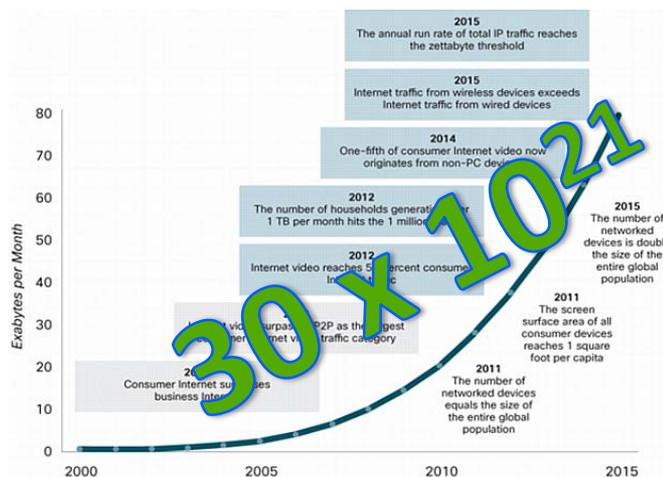
The World Is Changing



Facebook helps you connect and share with the people in your life.



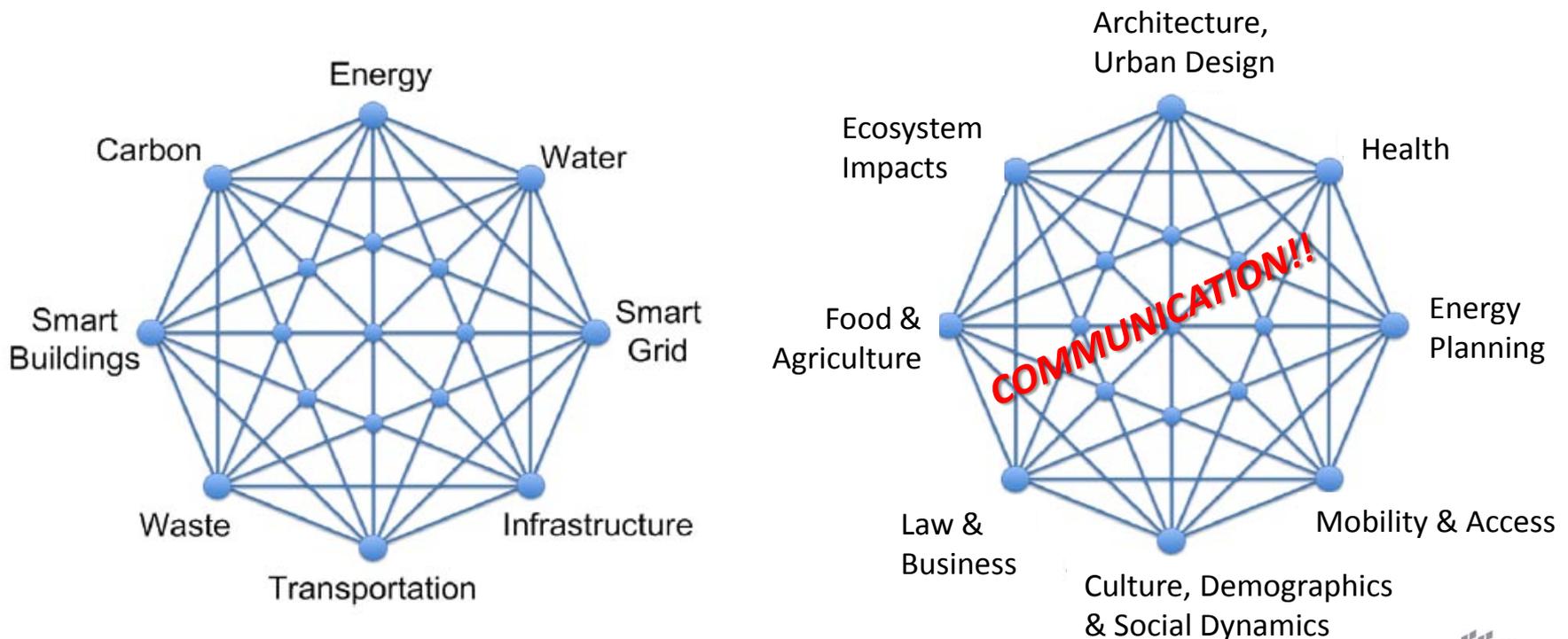
Figure 1. Five Traffic Milestones and Three Traffic Generator Milestones by 2015



Source: Cisco VNI, 2011

A New Approach is Required

- The Emerging Decision Framework is not dominated by one thing—Energy, Environment, Geopolitical Security, Economic Prosperity; Health, IT, Culture, Business, etc--but by ALL simultaneously....



**There are are many voices of counsel,
but few voices of vision.**

–Woodrow Wilson

