

# Lifting the Nuclear Moratorium

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# Renewables and energy efficiency **alone** will not satisfy our energy needs

- EIA projections of energy consumption show 30% increase from 2005 – 2030
- Studies conclude the need for alternatives beyond renewables and energy efficiency
  - EPRI “Prism” Study
  - EPRI Energy Efficiency Study
  - National Petroleum Council



# Simple arithmetic



Non-carbon emitting  
resources are necessary  
to achieve deep-cuts in  
CO<sub>2</sub> emissions



# Sources of Non-carbon or low carbon emitting resources

- Hydro
- Renewables
  - Wind
  - Solar
  - Bio-energy
- Natural Gas (carbon emitting)
- IGCC (with carbon capture and storage)
- Coal (with carbon capture and storage)
- Nuclear



# ...but each of these has issues

- Hydro – limited future build
- Renewables – geographic limitations, non-dispatchable, limited potential
- Natural Gas – limited resource, needed for other uses
- IGCC with ccs – not commercially demonstrated
- Coal with ccs – ccs not demonstrated commercially, many legal, technical and environmental issues to consider
- Nuclear – cost, used fuel, safety



# Nuclear is a viable option

- 104 operating reactors in USA providing 20% of energy
- 439 operating reactors in world providing 16% of energy
- Reliable operation – baseload, dispatchable
- Low production costs
- Ample supply of fuel, from diverse resources
- New nuclear plants are planned and being built



# Key issues for nuclear

- Safety: demonstrated safe operation
- Used Nuclear Fuel: can be safely managed
- Cost: if it's too expensive, it won't be selected



# Benefits of Repealing the Moratorium

- Puts Nuclear in the toolbox
- Allows for planning without questions of prudence
- Allows for reasonable evaluation of all alternatives for reducing CO<sub>2</sub> emissions
- Potentially decreases lead time
- This is not a commitment to nuclear – it allows study of nuclear in planning process

