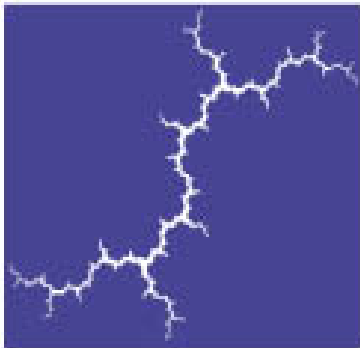
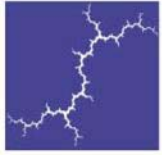

IGCC – A Public Interest Perspective

Anna Sommer
Presentation to EUEC 2006
Tucson, Arizona
January 2006



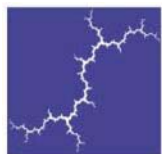
Synapse
Energy Economics, Inc.

22 Pearl Street
Cambridge, MA 02139
617.661.3248
asommer@synapse-energy.com
www.synapse-energy.com



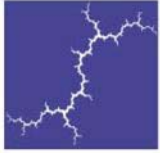
Overview of Synapse

- Economic & policy consulting firm specializing in electric policy issues
- Clients include government agencies, public interest groups, consumer advocates, etc.
- Advise our clients on IGCC and carbon sequestration issues among others
- Involved in several IGCC-related studies



What and where is IGCC?

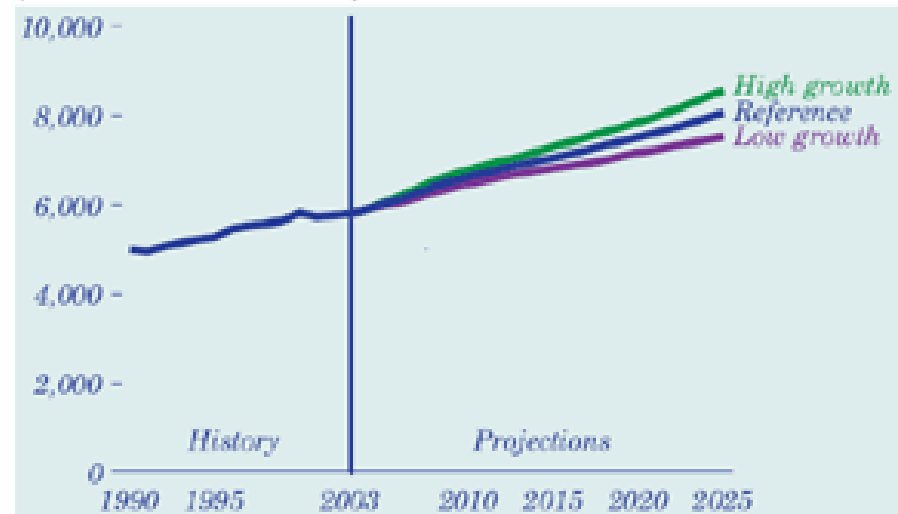
- Gasification of coal to produce synthesis gas which is burned in a combined cycle turbine to generate electricity
- Two operating facilities in Indiana and Florida
- Proposed IGCC facilities in Ohio, Indiana, Florida and Washington



Argument for IGCC

- Energy prices are skyrocketing
- Matter of national security
- GHG regulation is coming

Figure 111. Carbon dioxide emissions in three economic growth cases, 1990-2025 (million metric tons)

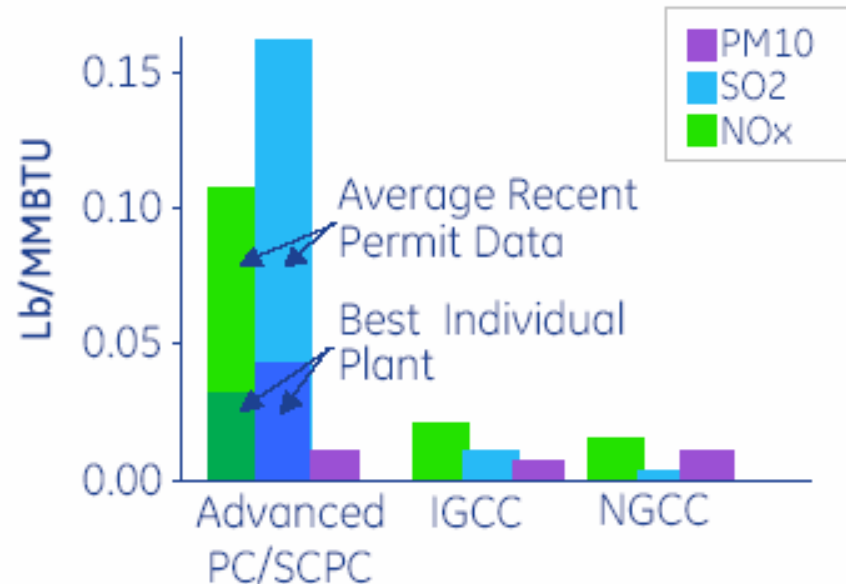


Source: EIA AEO 2005

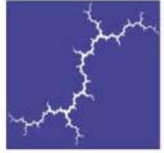


Argument for IGCC

- US carbon emissions on upward trajectory
- Coal is cheapest, most plentiful, domestic fuel
- What solutions do we have available?



Source: GE



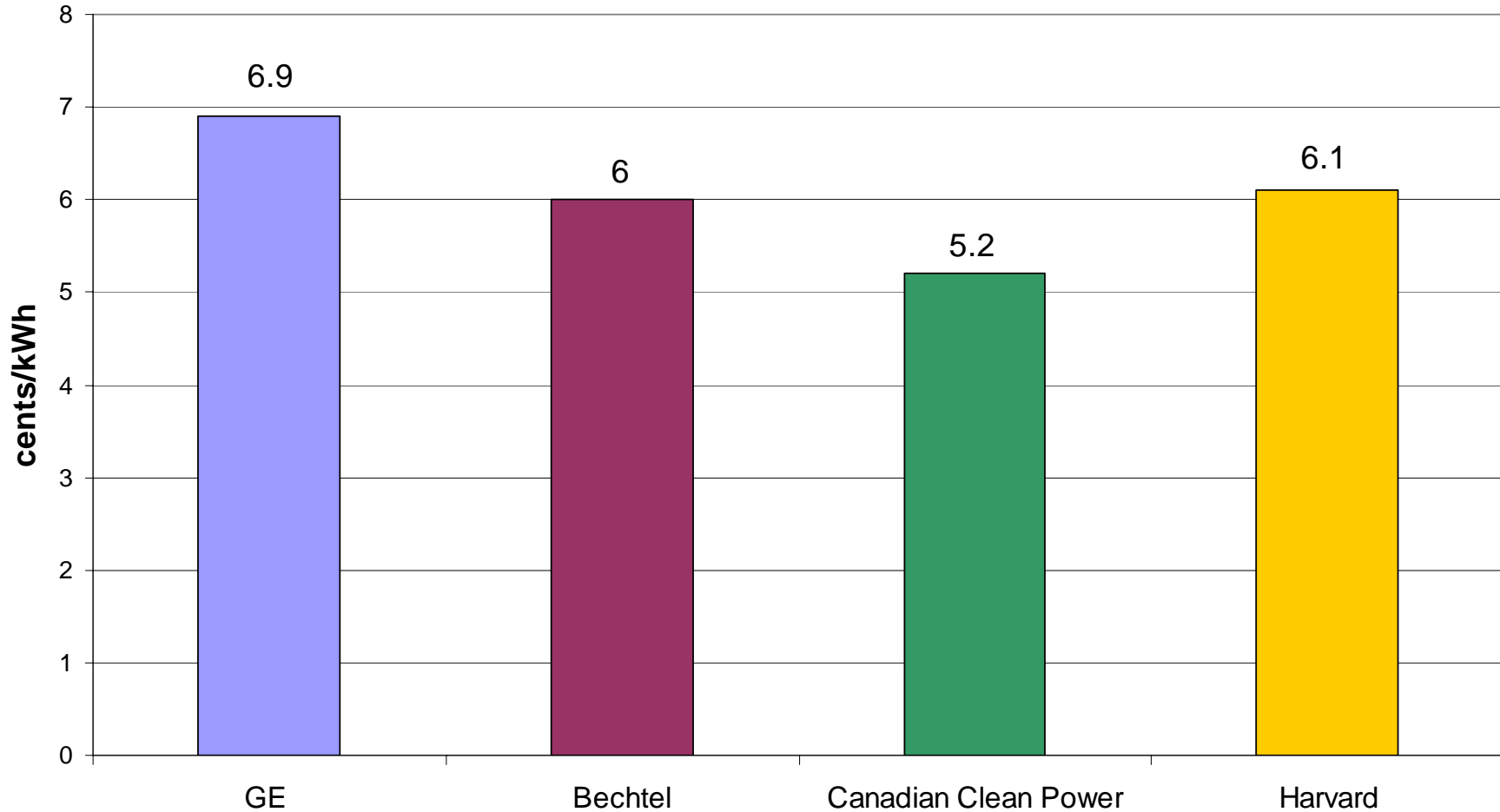
Considering IGCC

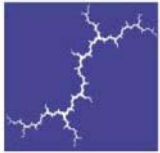
In general, our clients:

- Seek solutions that will have reasonable cost impacts on consumers
- Seek solutions that will make reductions from current GHG emission levels
- Seek solutions that minimize environmental impacts

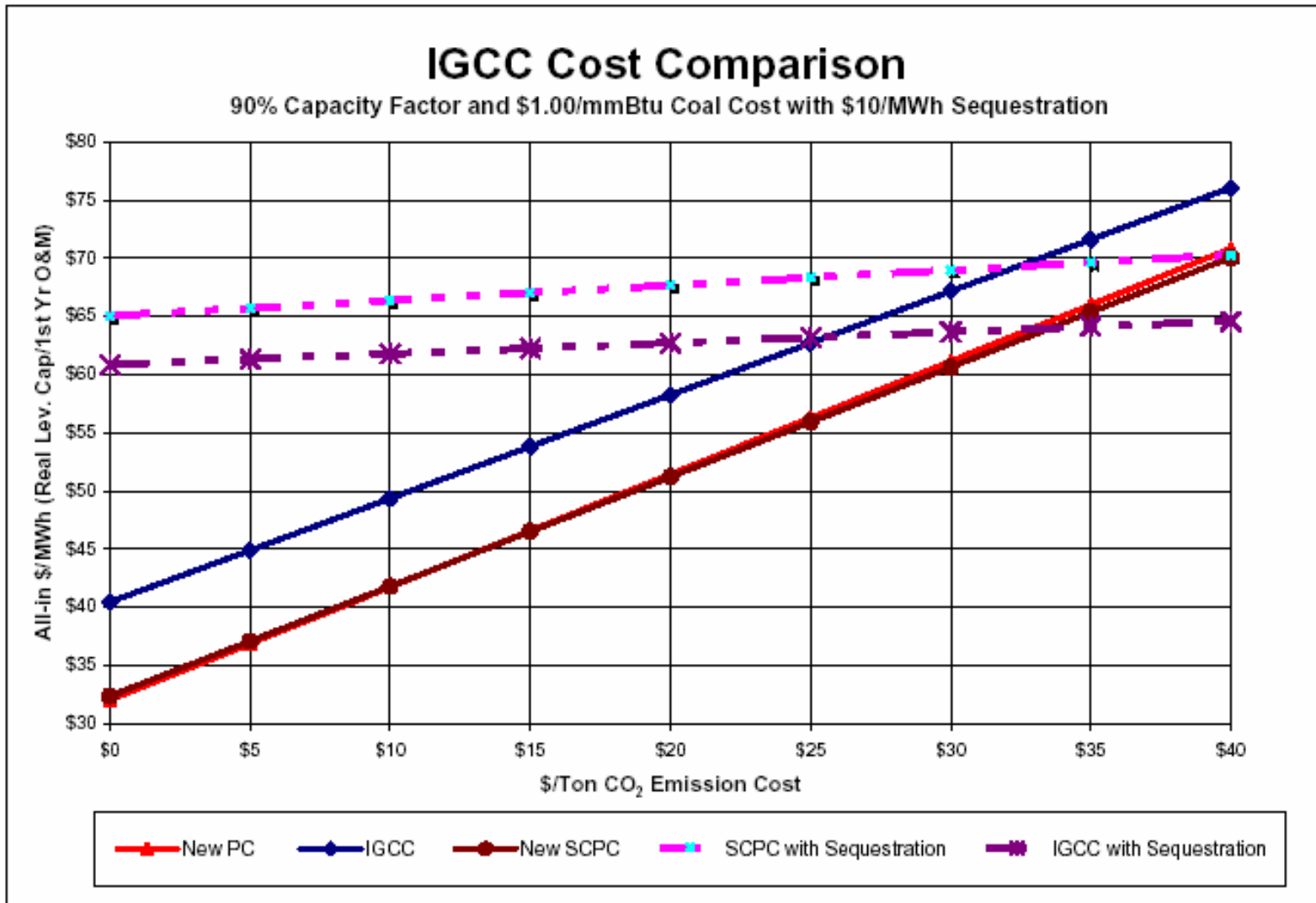


COE Estimates of IGCC+S

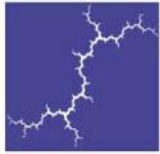




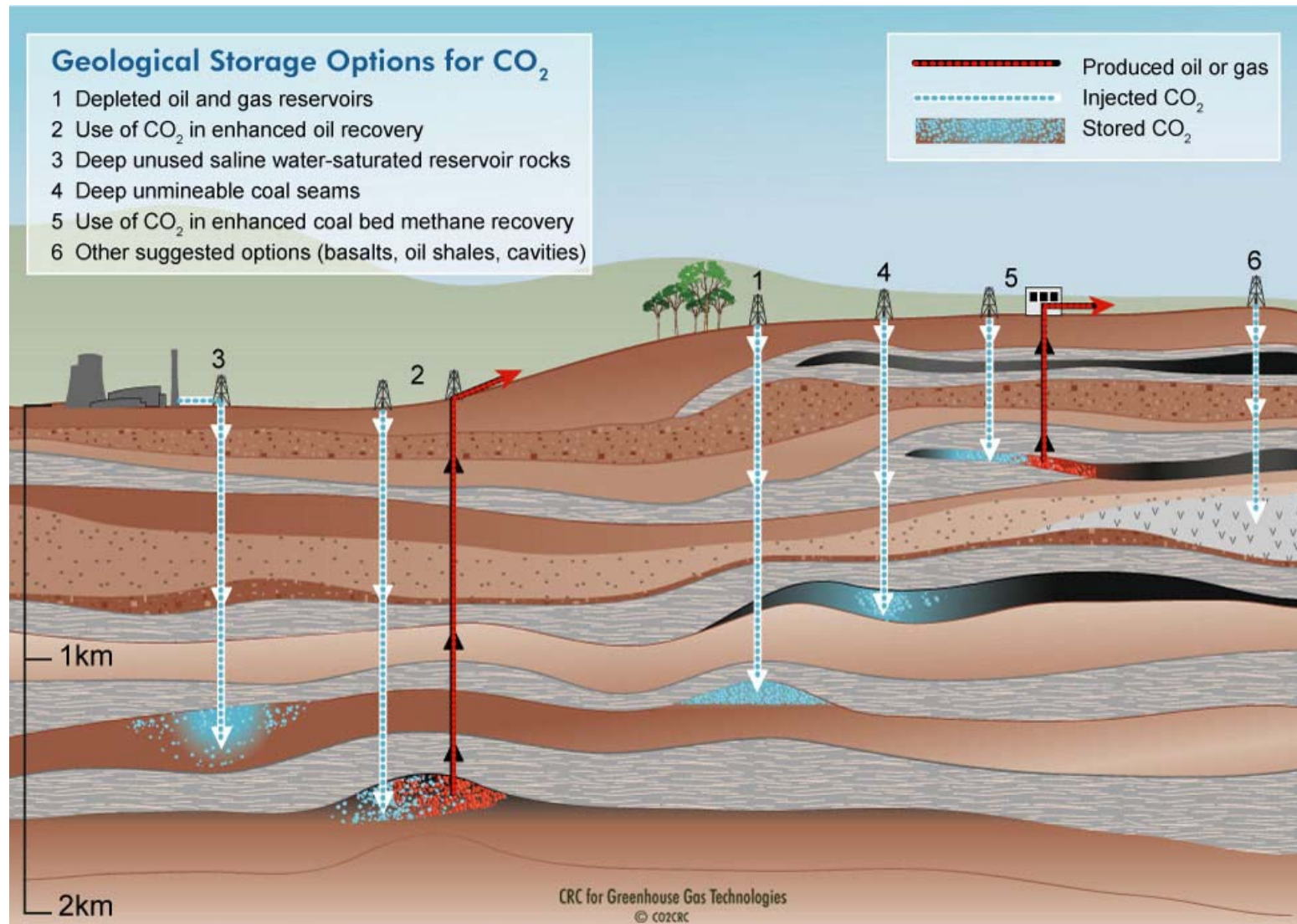
When will IGCC+S Happen?

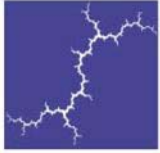


Source: Pacificorp

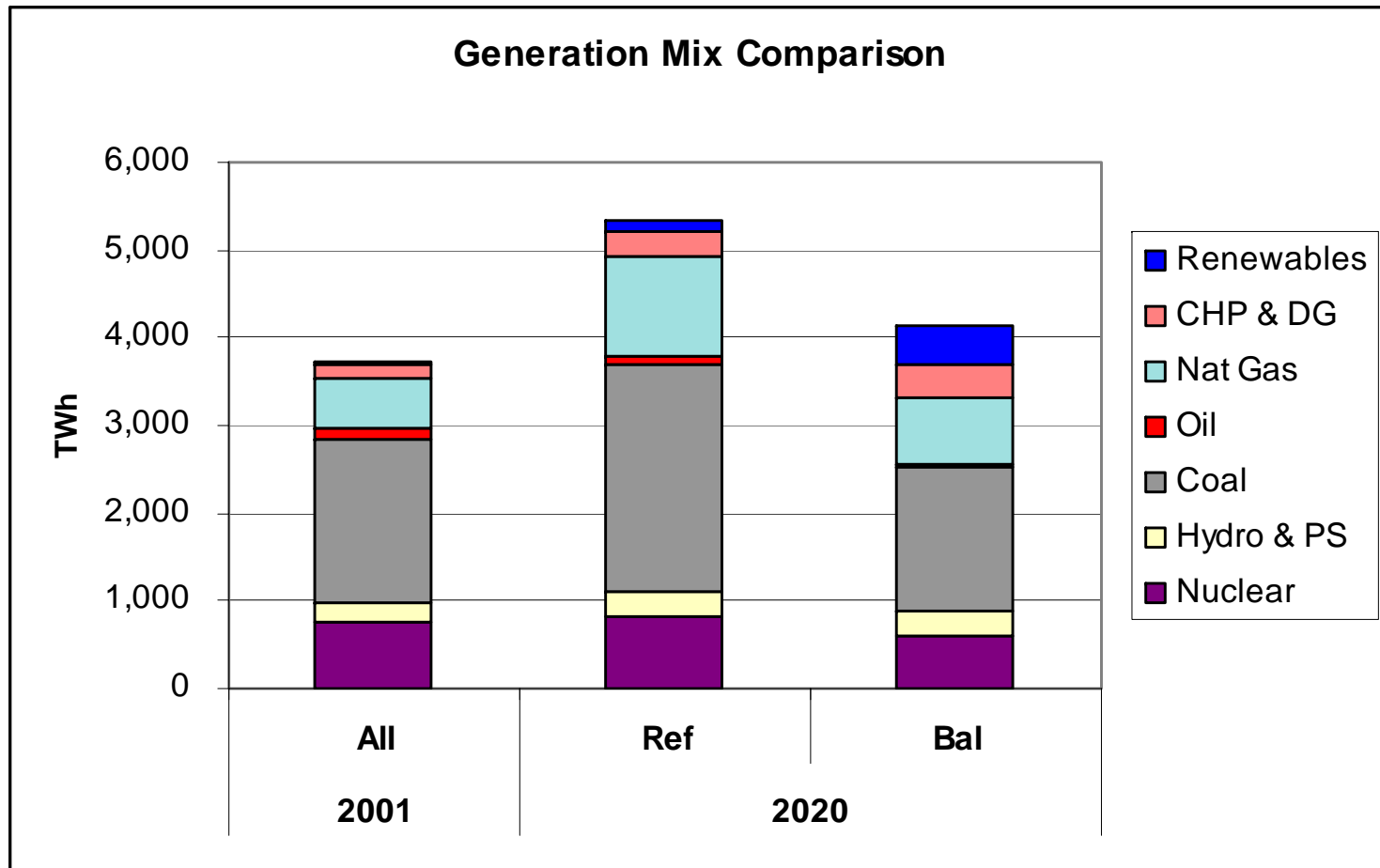


Sequestering the Carbon





Are There Cheaper Alternatives?



- Adding renewables and energy efficiency saves \$36 billion or 10% of Reference Case (Source: Synapse report “A Responsible Energy Future”).



Remaining Questions on IGCC

- What are the tradeoffs between greenfield and repowering projects?
- Can existing, underutilized gas turbines be supplied by off-site gasification facilities?
- Should we be thinking about polygeneration or electric power only?