## Protocol.

## 5.2. Karl Rabago (Rocky Mountain Institute)

Karl Rabago suggested that recent trends in the business sector point in a different direction than the current energy policy of "drill, dig, dam and glow," articulated by the Bush administration. If the U.S. energy policy continues on its current track, the U.S. will soon lose its global leadership and may drag other countries, including Canada, along.

The major trends and drivers in the business sector include:

- increasing liberalisation/market forces (through privatisation and deregulation)
- increasing unit scale and concentration of
  - energy/emergence of right sized energy resources (the bigger the better principle is on the retreat)
- increasing de-carbonisation of energy fuels/emergence of carbon free energy resources
- growing role of civil society/low cost industrial development

There have been three major surprises:
Negawatts

big savings can cost less than small ones
huge overhang may be bought

Hyper-cars

the biggest industry-changer since chips
a nega-OPEC: ~9 million bbl/d in North America
soon a major distributed power generator
key to a rapid hydrogen transition

Distributed energy resources

microturbines, renewables, now fuel cells
distributed benefits

- (increasing the process for law and the literation of the literati
- (increasing the pressure for low-cost solutions and low environmental costs)
- declining governmental structural protectionism/growth of industrial adaptability or flexibility
  - downstream shift in economic focus from supply to end use/emergence of a business model based on service value (i.e. customer value choice may be wind-power or other "friendly" energy).

Rabago outlined four main principles for a new business model labelled "Natural Capitalism," they are:<sup>4</sup>

- **Radically increased resource productivity.** Through fundamental changes in production design and technology, leading organizations are making natural resources stretch 5, 10, even 100 times further than before. The resulting savings in operational costs, capital, and time quickly pay for themselves, and in many cases initial capital investments actually decrease.
- Ecological redesign (biomimicry: closed loops, no waste, no toxicity). Natural

<sup>4</sup>For more information on Natural Capitalism, see the Rocky Mountain Institute website: <u>http://www.rmi.org/sitepages/pid268.php</u>