

JAPAN'S ENERGY - MYTHS VERSUS REALITY

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JAPAN'S ENERGY

- Energy and DNA
- Ludwig Boltzmann's tools and laws to work with energy
- Myth vs Reality, Mantra vs Smart - psychology of judgment and decision making
- Parliamentary commission result: "Regulatory capture" caused the Fukushima Accident
- History: Japan's energy structure frozen since 1952
- Primary energy: 96% imported
- Why Japan pays so much for LNG
- Electricity architecture and liberalization
- Renewable energy
- Future: where do we go from here?

LUDWIG BOLTZMANN

Ludwig Boltzmann created much of the laws and tools to work with energy.

Some renewable electricity generation methods are directly based on Ludwig Boltzmann's work, and all use his laws.

More:

<http://www.eurotechnology.com/events/ludwig-boltzmann-symposia/>

CAUSE OF FUKUSHIMA NUCLEAR ACCIDENT RESULT OF PARLIAMENTARY COMMISSION CHAired BY KIYOSHI KUROKAWA:

- Regulatory capture
- not a Japanese phenomenon
- theory of regulatory capture:
George Stigler (Nobel Prize 1982)
“Economic Theory of Regulation”

Myth	Reality
Mantra	Smart

MANTRA VS SMART

Merriam-Webster:

mantra = a mystical formula of invocation or incantation (as in Hinduism)

In Hinduism and Buddhism, a sacred utterance (syllable, word, or verse) believed to possess mystical or spiritual power. Mantras may be spoken aloud or uttered in thought, and they may be either repeated or sounded only once. Most have no apparent verbal meaning, but they are thought to have profound significance and to serve as distillations of spiritual wisdom. **Repetition of a mantra can induce a trancelike state** and can lead the participant to a higher level of spiritual awareness. Widely used mantras include om in Hinduism and om mani padme hum in Tibetan Buddhism.

MANTRAS - MYTHS

- “nuclear safety” myth/mantra
- “no terrorism in Japan” myth/mantra
- “stable electricity supply” myth/mantra
- “Fukushima nuclear accident was caused by earth quake and tsunami” myth/mantra
- and more

DANIEL KAHNEMAN

2002 Nobel Prize in Economic Science

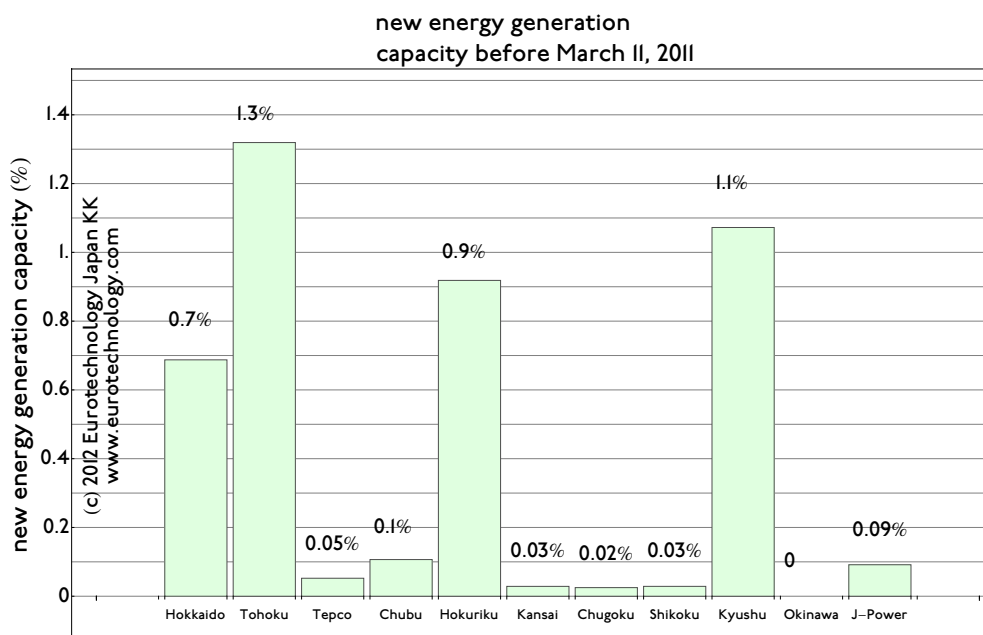
Psychology of judgment and decision making

Eminent US philosopher about Daniel Kahneman:
“I am not interested in the psychology of stupidity”

HISTORY OF JAPAN'S ELECTRICAL POWER INDUSTRY

Year	action
February 15, 1883	Tokyo Dentou KK receives Government license, starts business in July 5, 1886
1893	Tokyo Dentou KK introduces 50Hz equipment from AEG (of Germany) Osaka Dentou KK introduces 60Hz equipment from GE (of USA)
1896	33 electricity utility companies
	700 electricity utility companies
1938-1939	Japan's electricity industry nationalized
March 1942	Nihon Hassouden KK (Nipponatsu) created (generation + transmission) 9 distribution companies
May 1, 1951	US occupation government orders dissolution of Nihon Hassouden KK (Nipponatsu), 9 regional electricity monopolies created, 1972 + Okinawa Power Co
March 1, 1961	construction of first Japanese nuclear power plant (Tokai Nuclear Power Plant, UK Magnox type) starts (power generation starts 1966, decommissioned in 1998)

NEW ENERGY CONTRIBUTION TO THE POWER MIX



Before March 11, 2011, Japan's regional power monopolies had an unwritten rule to keep "new energy" (ie. renewable energies such as wind, solar, geo-thermal, wave power, bio-mass, but excepting water power) below 1% of the power mix. Water power was excepted, and Japan's water power contribution is on the order of 10% overall.

MORE INFORMATION

- In our blog
 - <http://www.eurotechnology.com/news/>
- Japan's energy landscape
 - http://www.eurotechnology.com/store/j_energy/
- Renewable energy in Japan
 - http://www.eurotechnology.com/store/j_renewable/

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