European Energy Companies –
Paths towards the Future

The Hague, September 26th 2003

• The Challenge
• The Research
• Strategy Dynamics of the European Energy Industry
• Strategy Dynamics of Innovation
The introduction of competition was believed to achieve a better industrial structure for the customers.

- Lower Prices
- New Services
- Higher Quality

In order to face challenges of:
- Pending capacity shortages
- Network convergences
- Rising reliability demands
- Reduced environmental impact
- Alternative raw materials
- Promoting economic growth
Competition does not necessarily create innovation, and on its own does not meet the industry challenges.

In network industries, requires:
- Network cooperation
- Deliberate long term orientation
- Attention to local demand
The research analyzed strategic behaviour of 18 European energy companies.

Selection criteria:
- significant volume
- not subsidiaries
- incumbent status with political influence
- respective national public agencies
- EU-institutions
Energy companies are not inclined towards networked cooperation.
Energy companies react to short term profit opportunities
Energy companies search for economies of scale in size
What are the dimensions of innovation?

Public administration

Competition     Efficiency

Innovation

Effectiveness

Lower Prices
New Services
Higher Quality
Innovation can take many forms, ranging from radical innovations that create wholly new products, processes or services to incremental innovations that improve upon existing offerings in a more modest way. Although attention often focuses on the initial introduction of products, processes or services, incremental innovation and technology diffusion – which improves on initial innovations and spreads them throughout the economy – provide equally important economic benefits over the long term. The source of new ideas that drive innovation are also varied: it may stem from new science and technology or from new forms of organisation, new skills, new forms of marketing and ways in which demand manifests itself in the market place. *Most successful innovation involves a combination of these factors.*

Source: OECD Science, Technology and Industry Outlook 2001
Innovation occurs in many ways
Microeconomic choices for innovation

Technology Push
- Fundamental Research
- Applied Research
- Product Development
- Business Development
- Organizational Development
- Market Development

Scientific Innovation
- Technology Innovation
- Product Innovation
- Business Innovation
- Organizational Innovation
- Market Innovation

Market Pull

Intel Pentium Chip

Dell Computer Retailing
Public policy occurs under various paradigms

- **Planned Economy**: Production factors are meticulously planned in order to increase the marginal rate of capital income.
- **National Champions**: Superior bureaucratic insight favors the allocation of national resources to specific industries or firms.
- **Networked Economy**: Networks of resources favor the promotion of specific industries or firms.
- **Active Facilitation**: Industries or firms can be supported by generally business friendly and facilitative measures.
- **Trade Economy**: Industries need well functioning markets which reduce the transaction cost of trading.
- **Manchester Capitalism**: Production factors are left to compete in an uninhibited market place.
Macroeconomic choices for Innovation

- Planned Economy
- National Champions
- Networked Economy
- Active Facilitation
- Trade Economy
- Manchester Capitalism
Strategy Dynamics of Innovation

**Macro economic Choices for Innovation**
- Fundamental Research
- Applied Research
- Product Development
- Business Development
- Organizational Development
- Market Development

**Micro economic Choices for Innovation**
- Industrial Policy
- Cluster Policy
- Business Support
- Market Support

**Technology Push** vs **Market Pull**
Even if four companies have perfect competition in the energy market, they would still earn very high profits and shut out new entry.
Large prevailing differences in national industrial structures prevent the emergence of a completely level playing field.

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