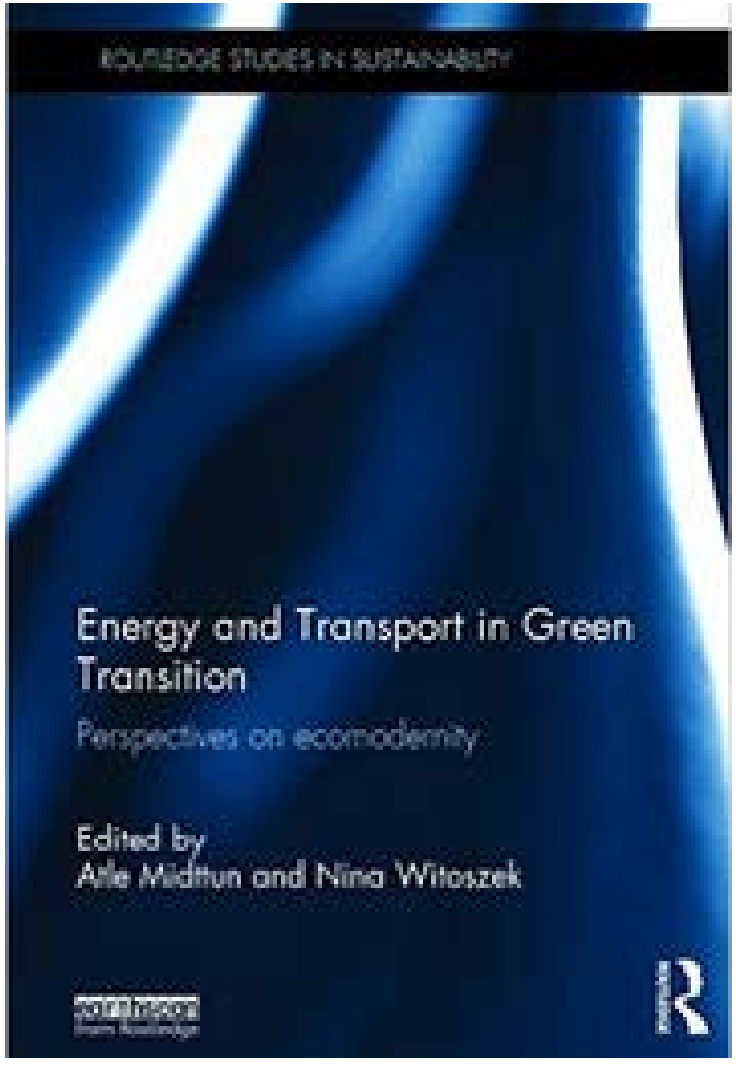


Business Models for Sustainability:

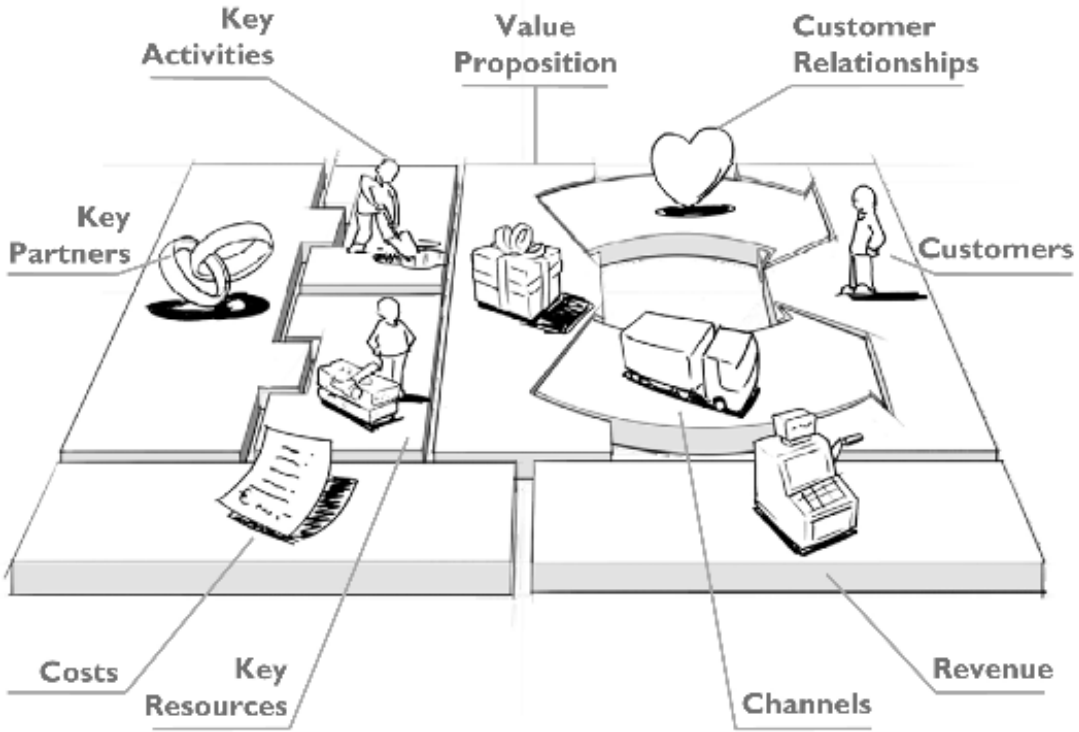
Energy Industry Under Commercial and Ecological Transformation

Atle Midttun

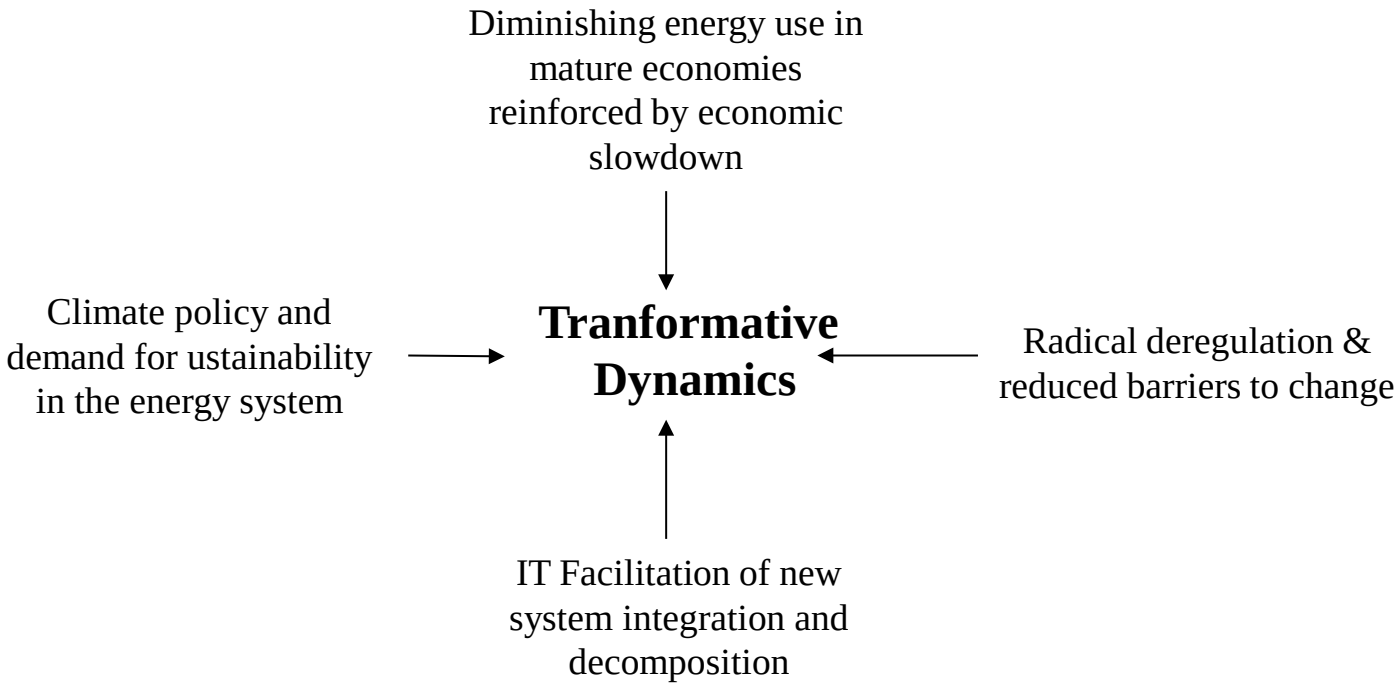
Presentation at the Salzburg Energy Seminar 3 September 2015

Based on Midttun & Piccini: European Energy Industry: Towards Sustainability and Transformative Change. Working paper Centre for Energy Studies, BI Norwegian Business School (forthcoming)

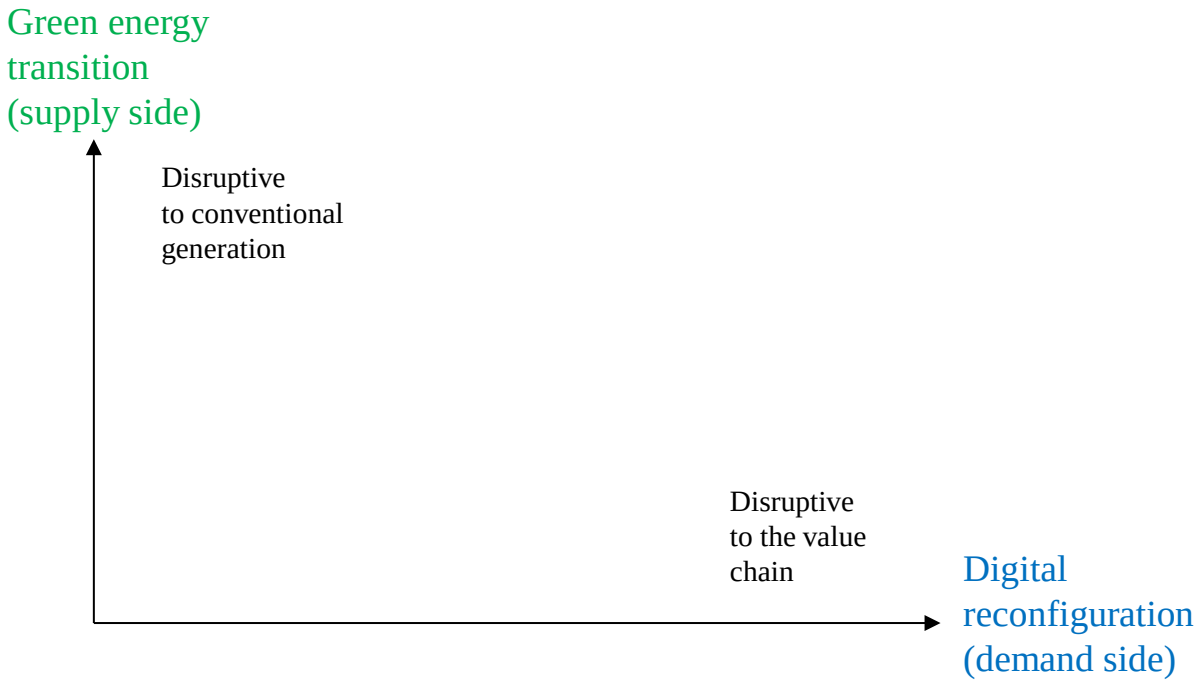
Business Model Canvas – (Ostervalder)



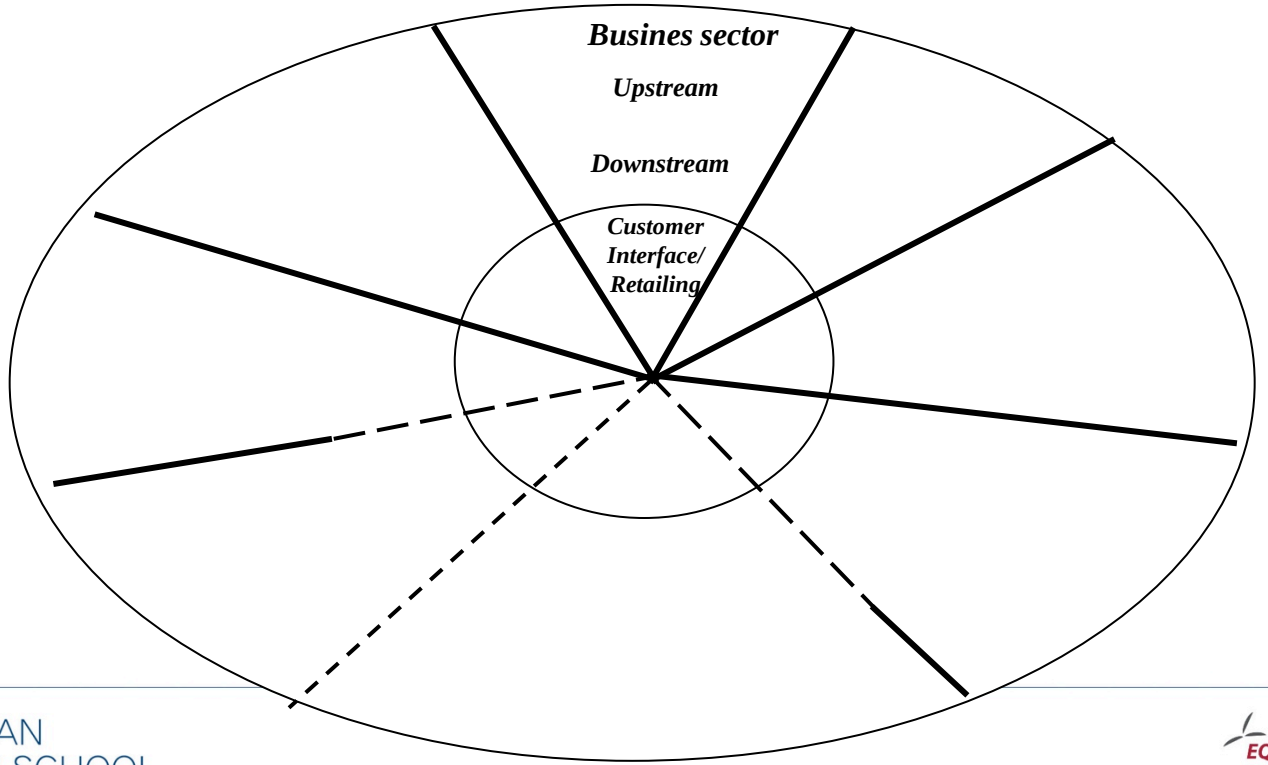
Pressures for Change



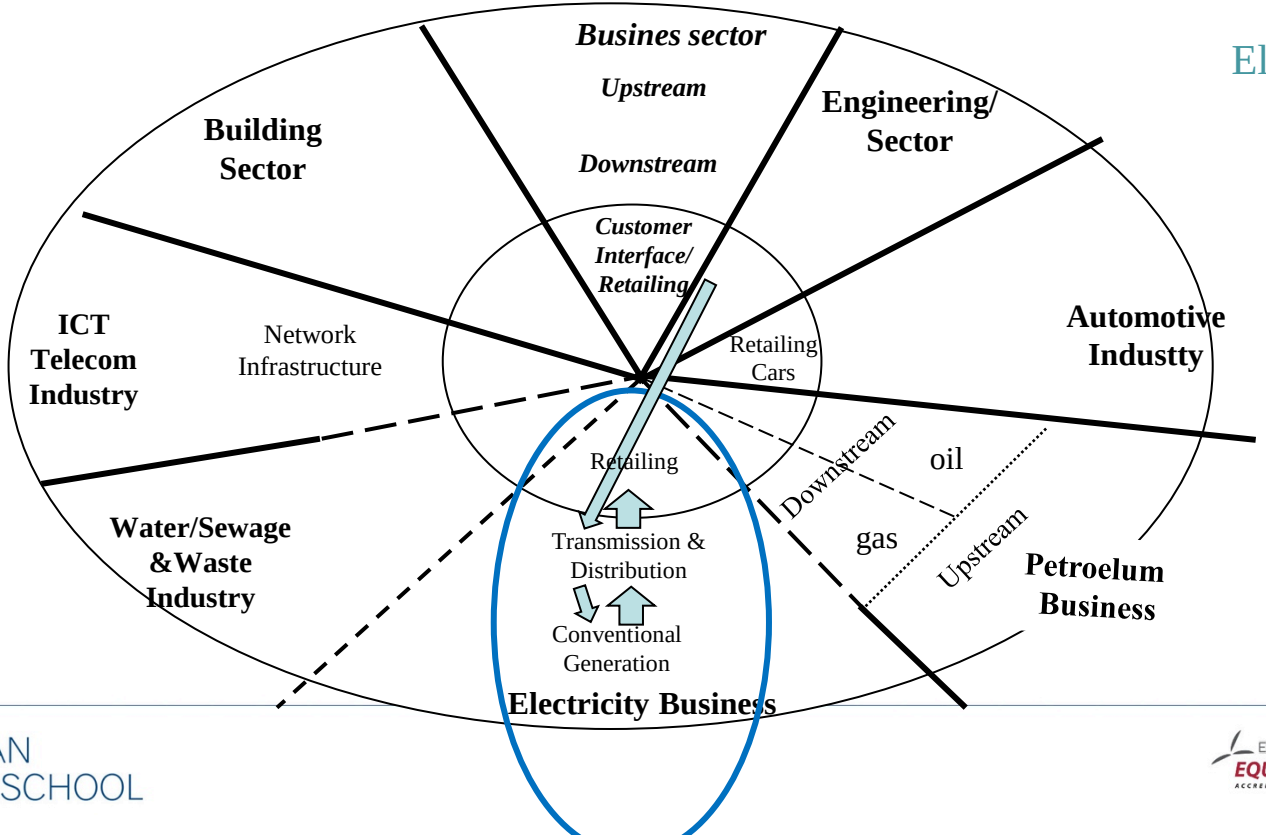
Two Dimensions of Transition



Business Models – A Schematic Overview

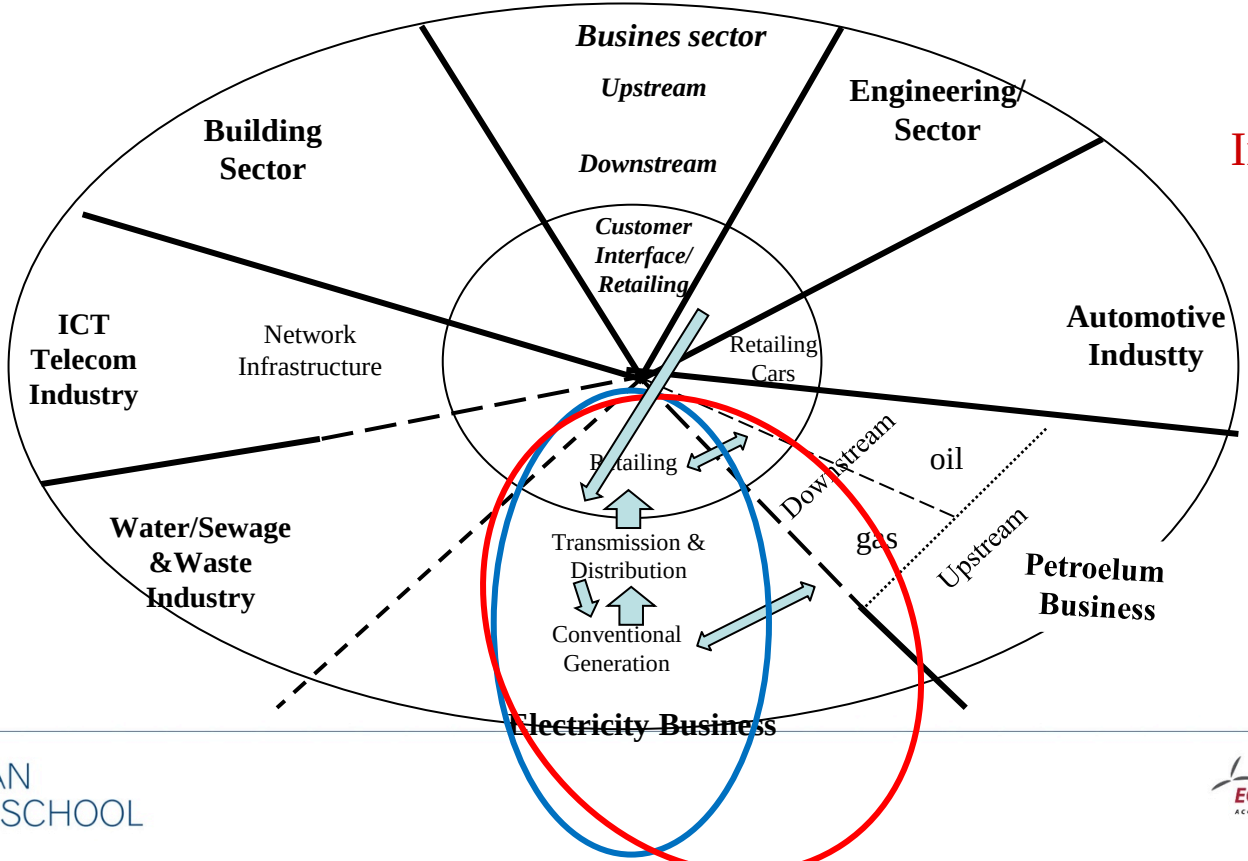


Traditional Business Models: The Electricity Company



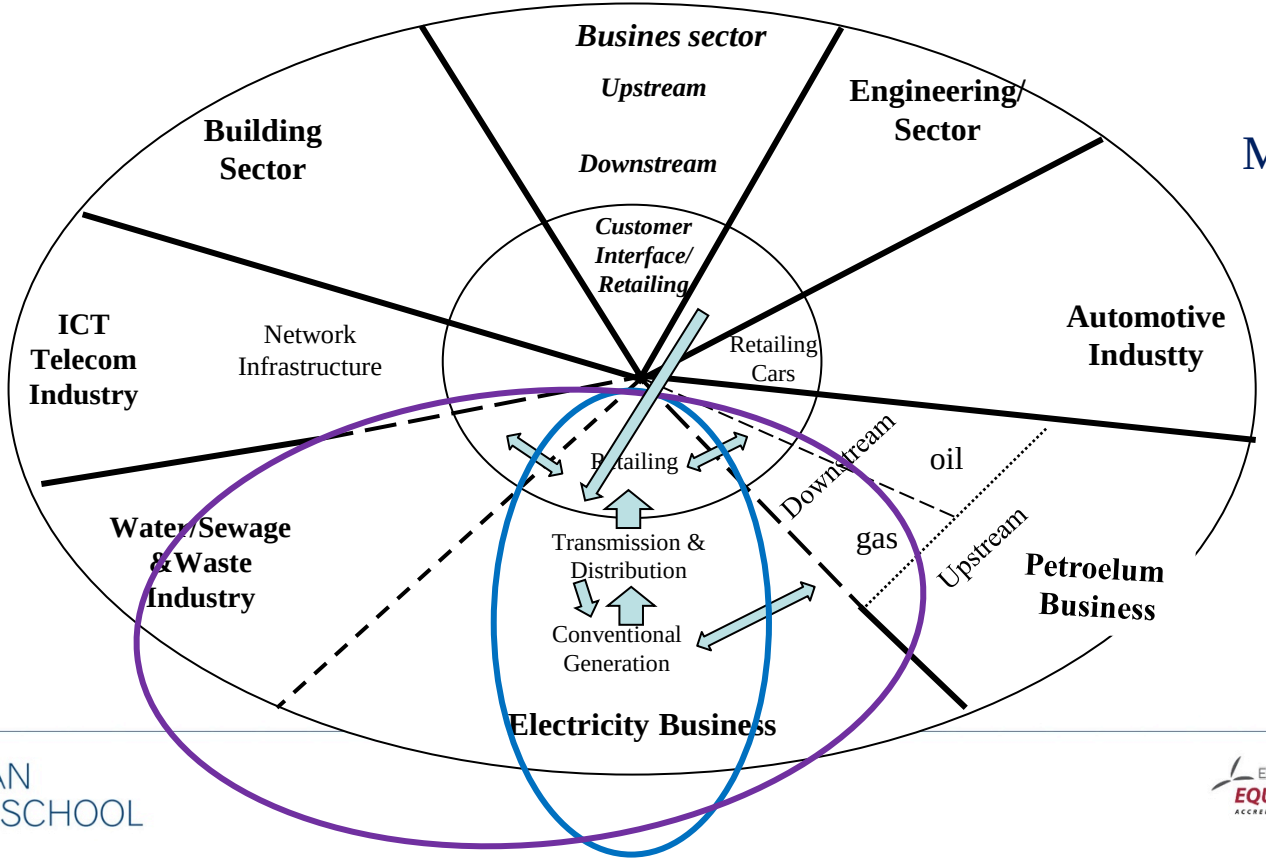
Electricity

Traditional Business Models: The Integrated Energy Company



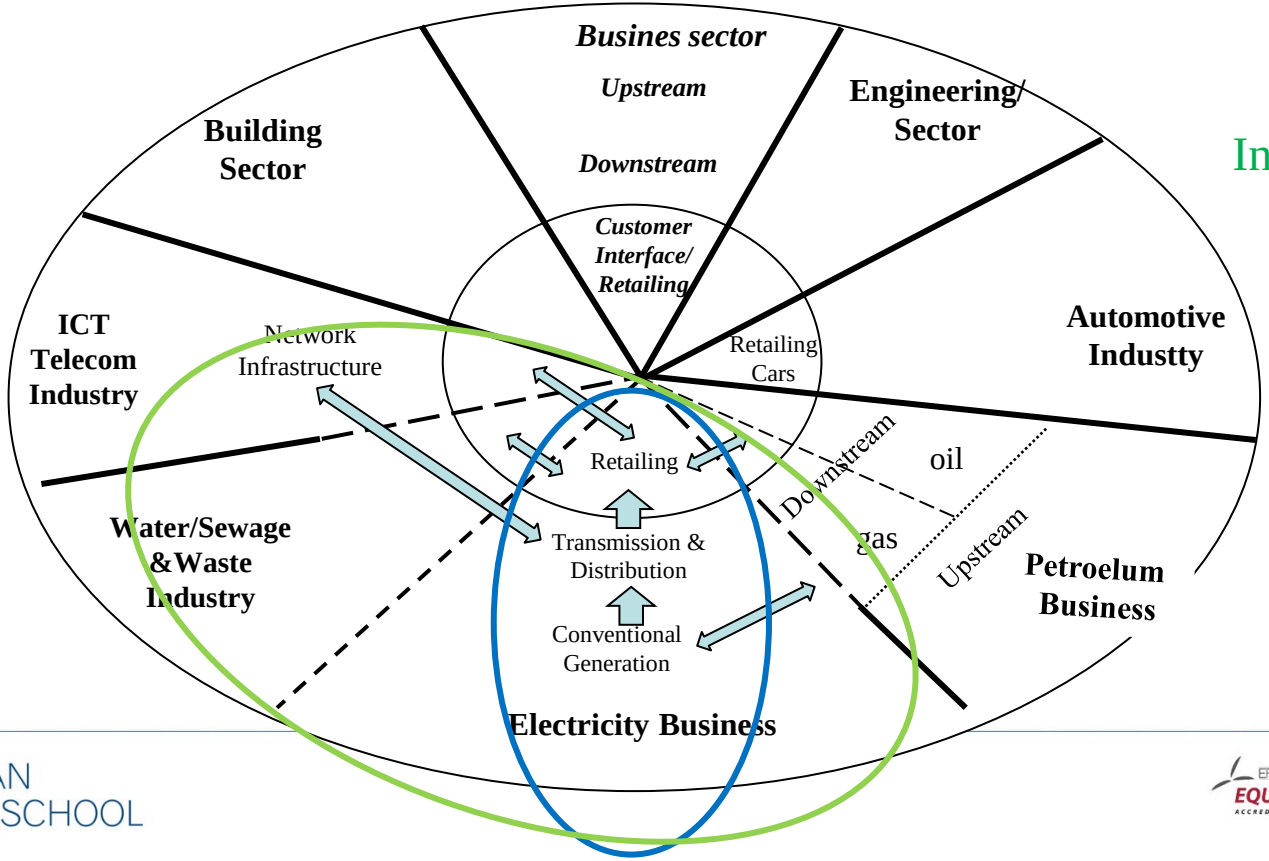
Integrated energy

Traditional Business Models: The Multiutility Company



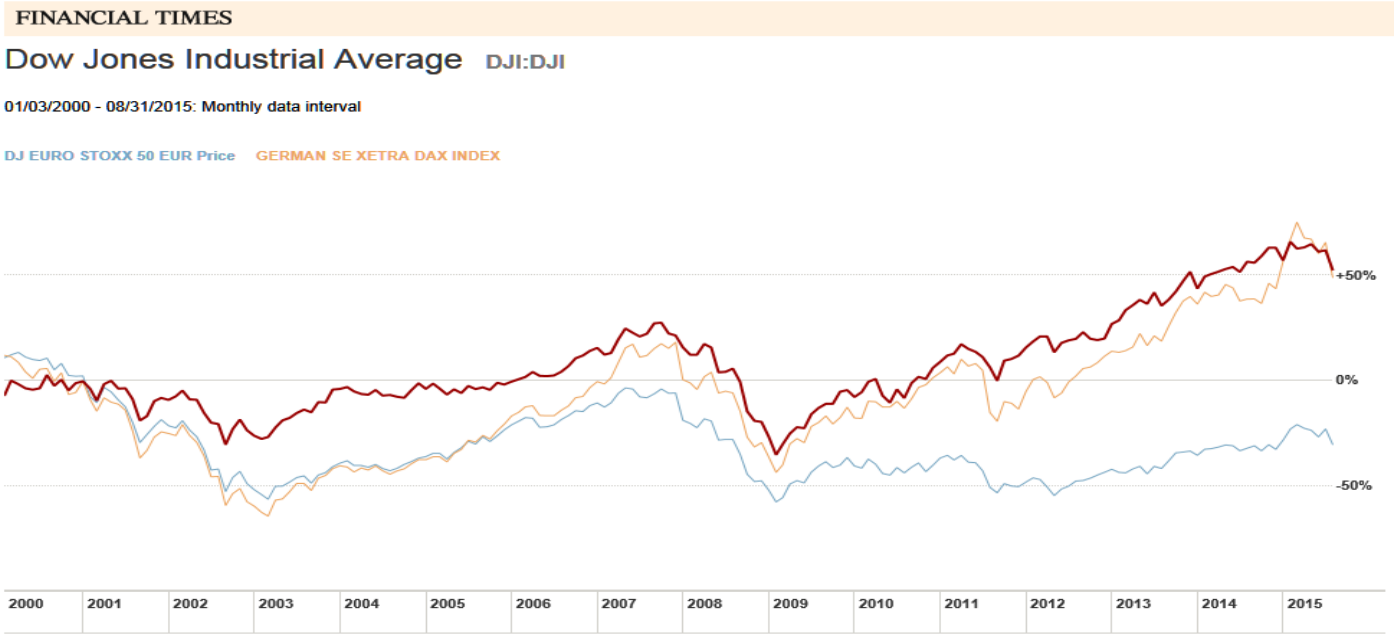
Multiutility

Traditional Business Models: The Infrastructure Company

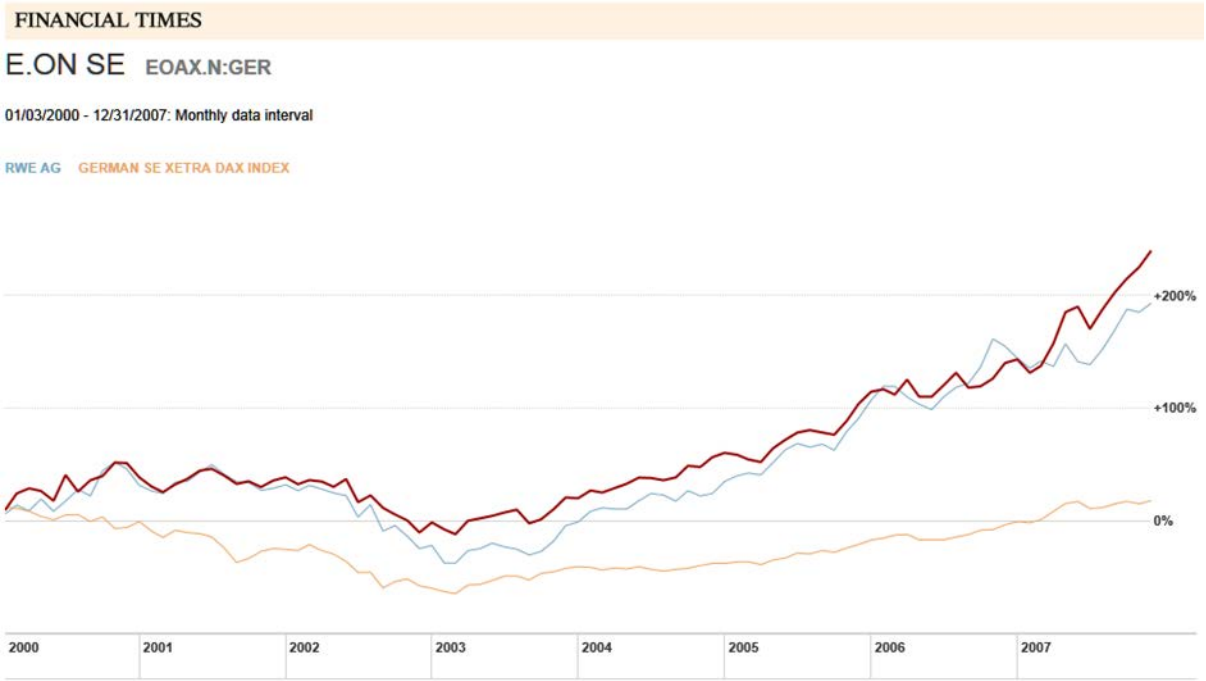


Infrastructure

General Stock Index as a Benchmark

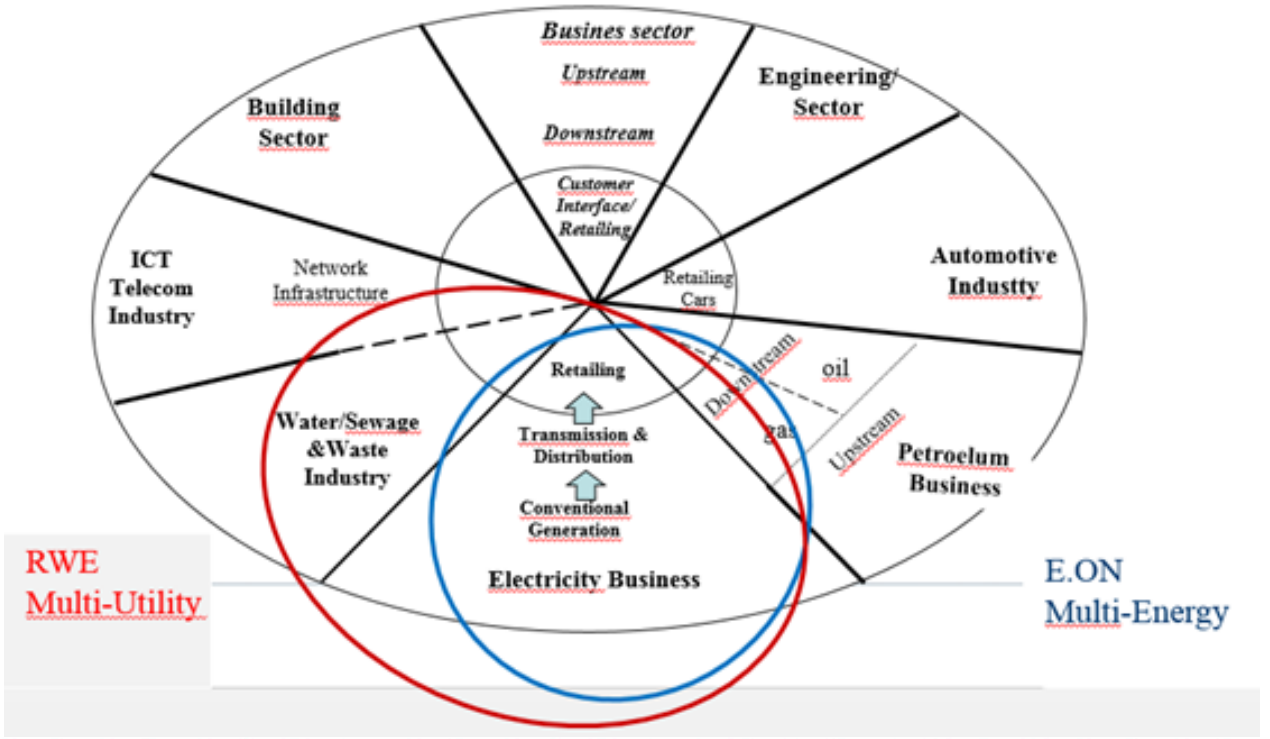


The Golden Age of European Electricity (2003-2007)

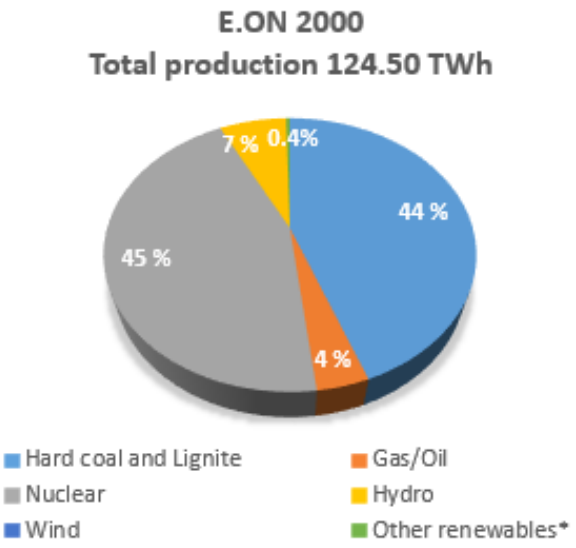


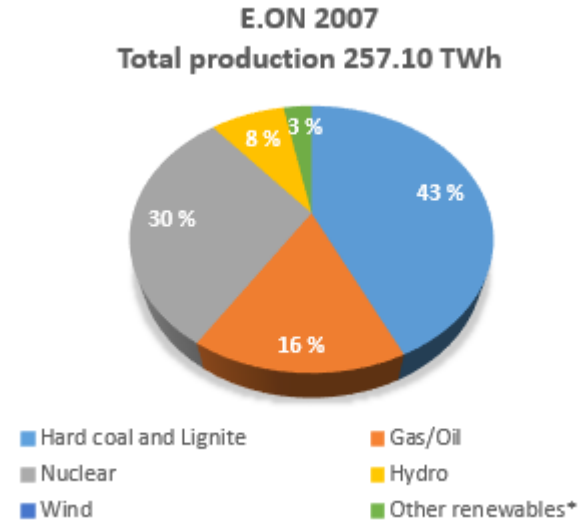
RWE has two types of share traded in the stock market, which are common share and preferred share. Of the total outstanding stock 614,745 thousand shares, the common share accounts for approximately 94%, while the preferred share represents 6%. We have used the price development of RWE's common share is used in this analysis

Multi-Energy and Multi-Utility Business Models

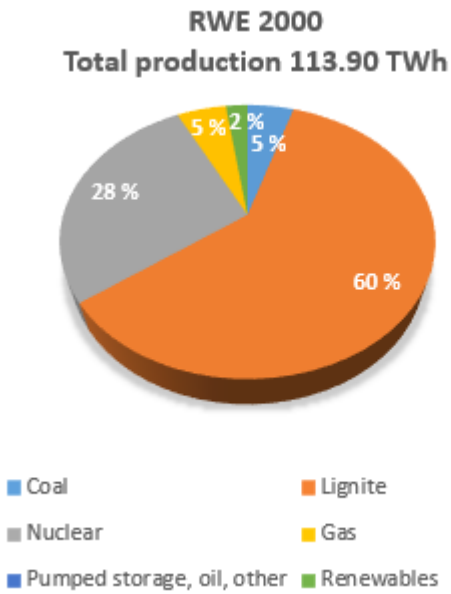


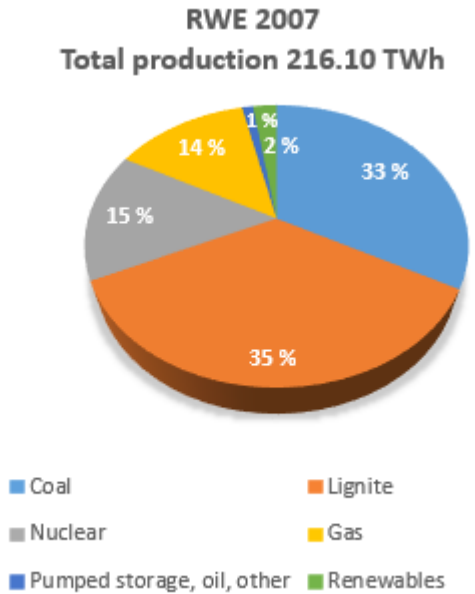
Source-Mix in the Golden Age – E.ON



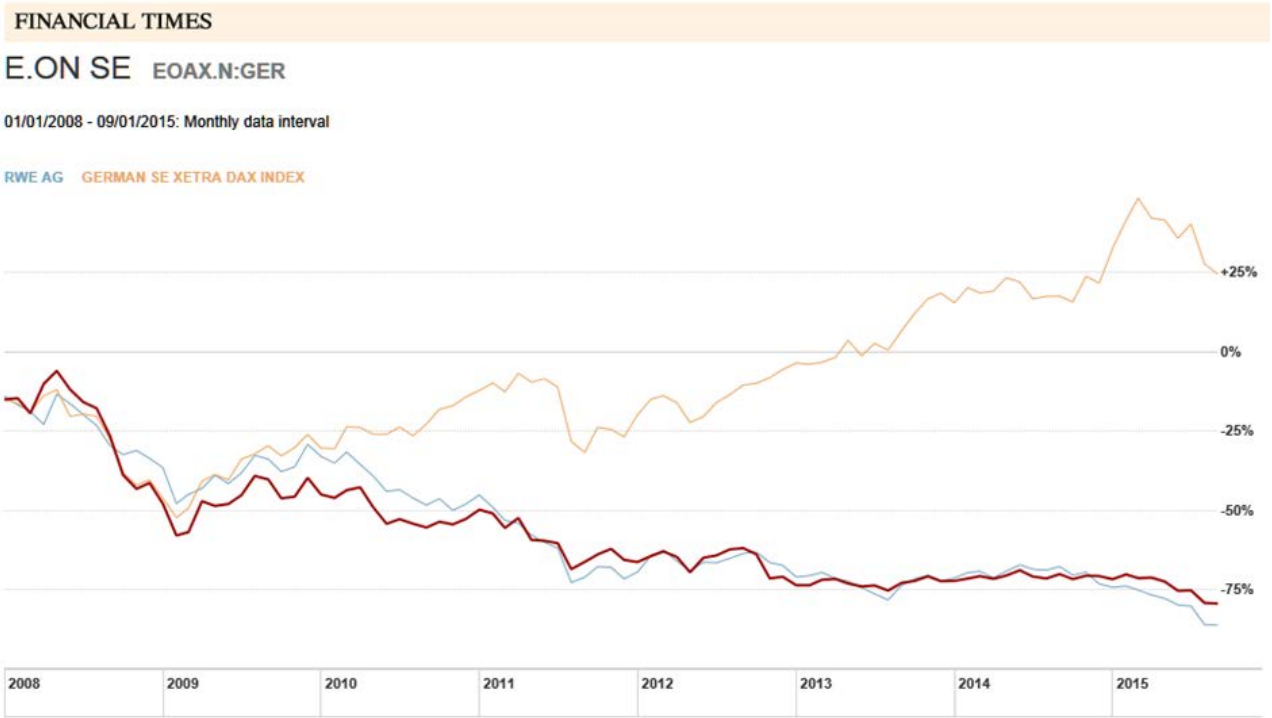


Source Mix in the Golden Age RWE

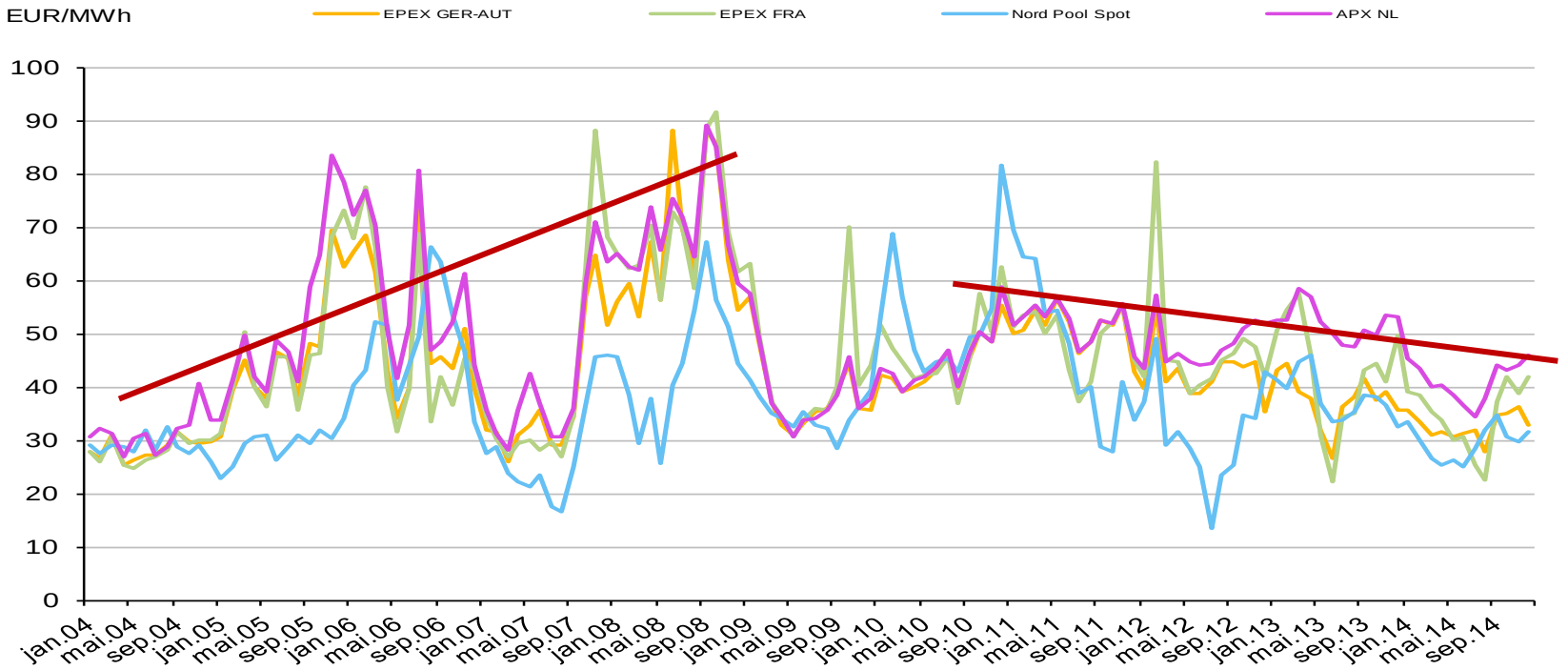




Crisis and Transformation (2008 – 2015)

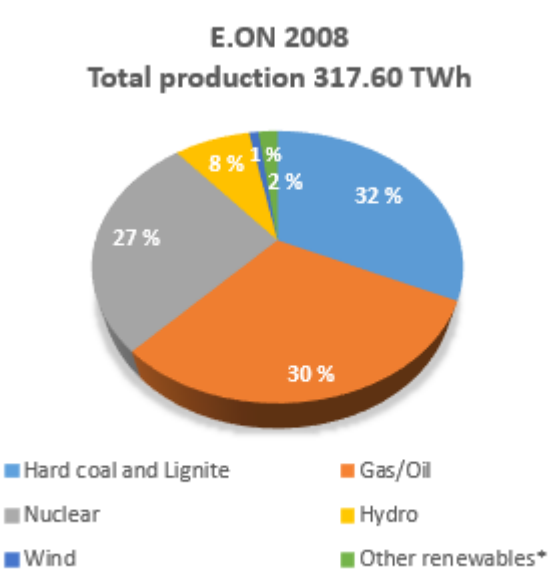


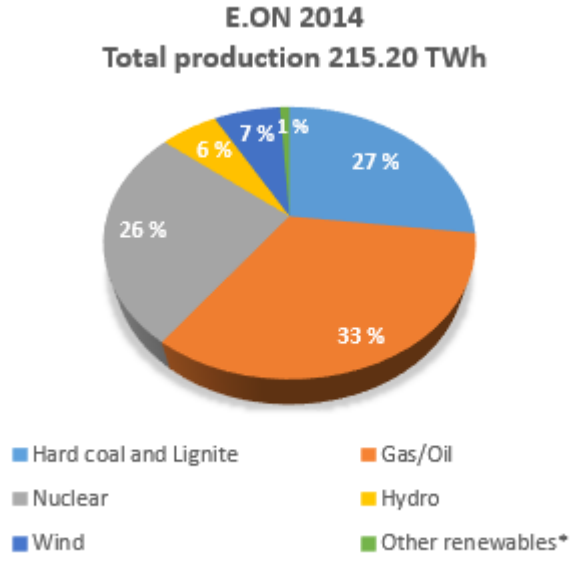
Monthly spot prices for Electricity



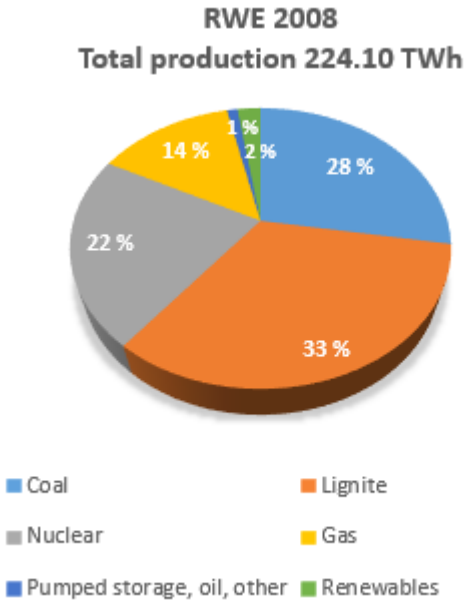
Source NordPool Spot

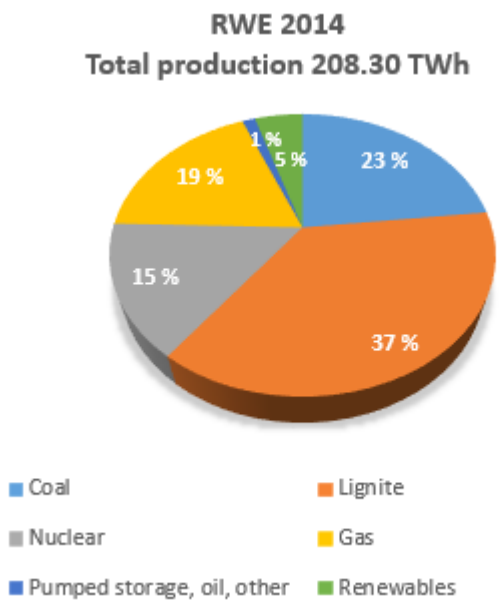
Source-Mix Under Crisis and Transformation



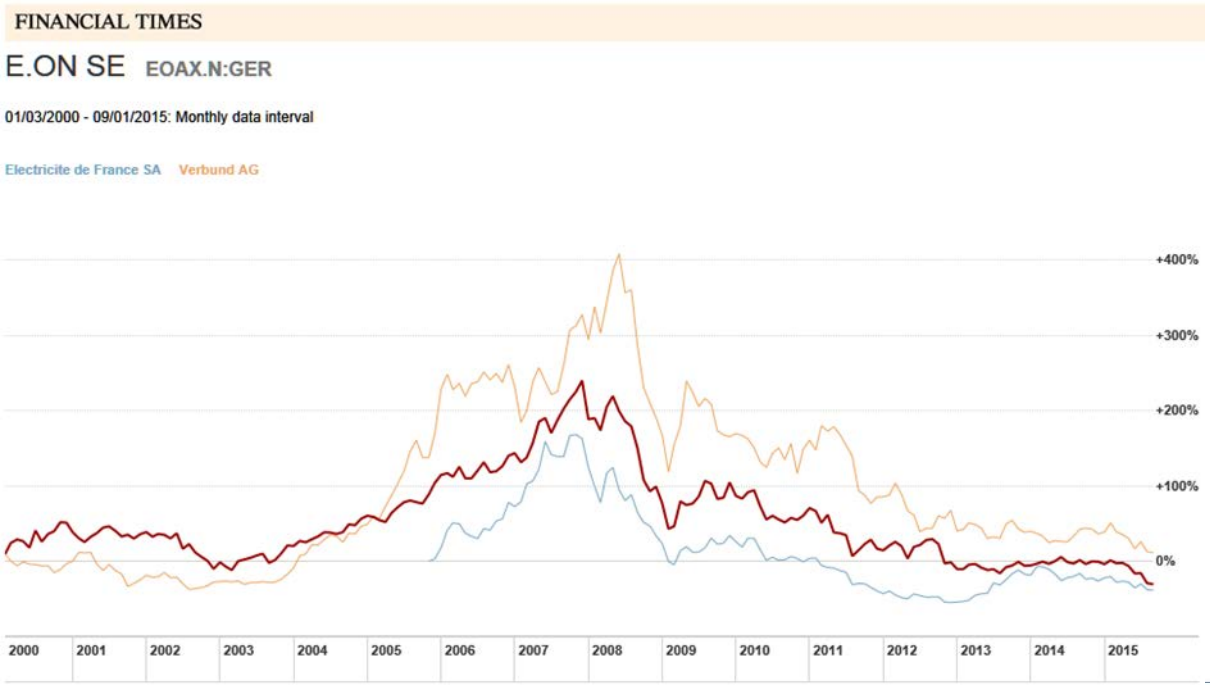


RWE Source Mix

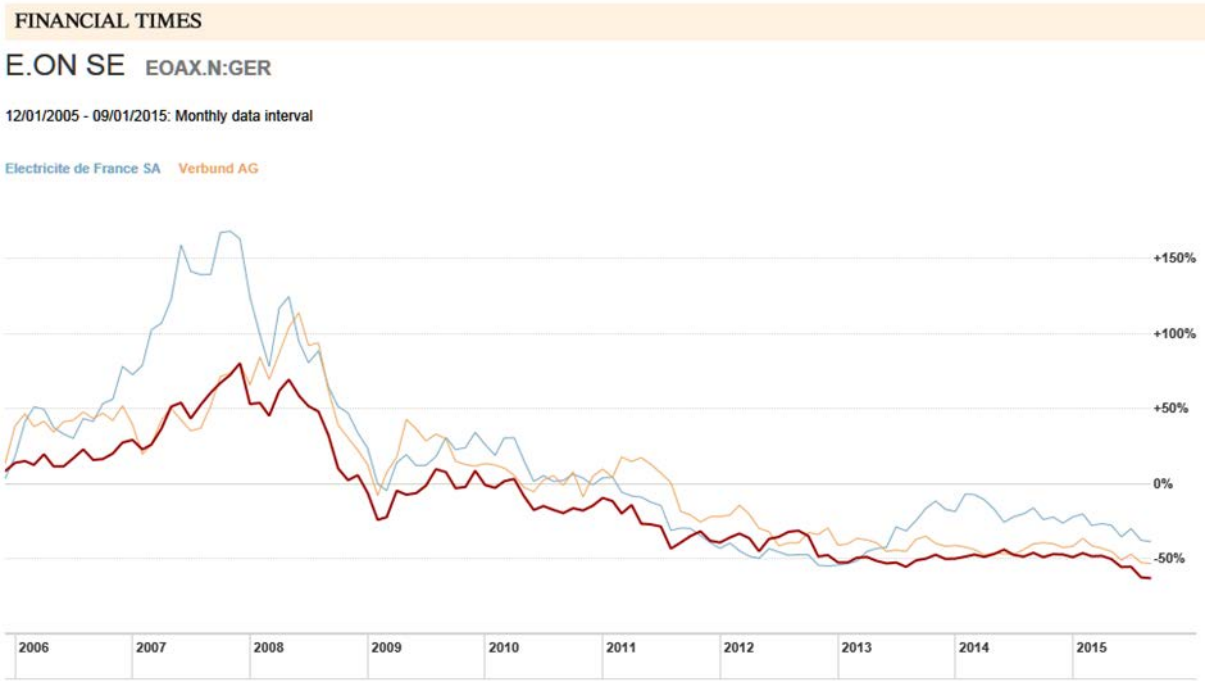




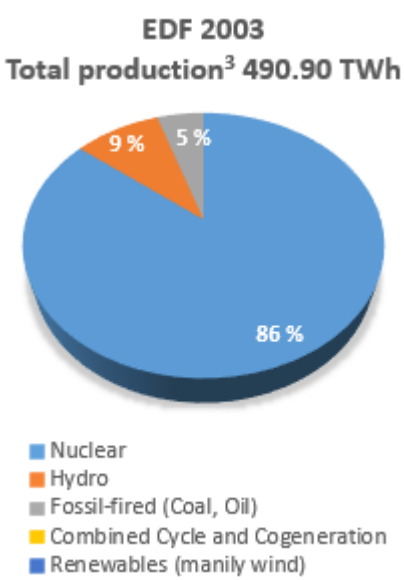
Other Problem Cases I

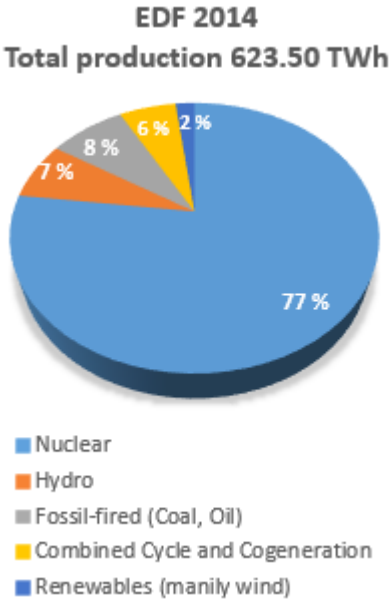


Other Problem Cases II

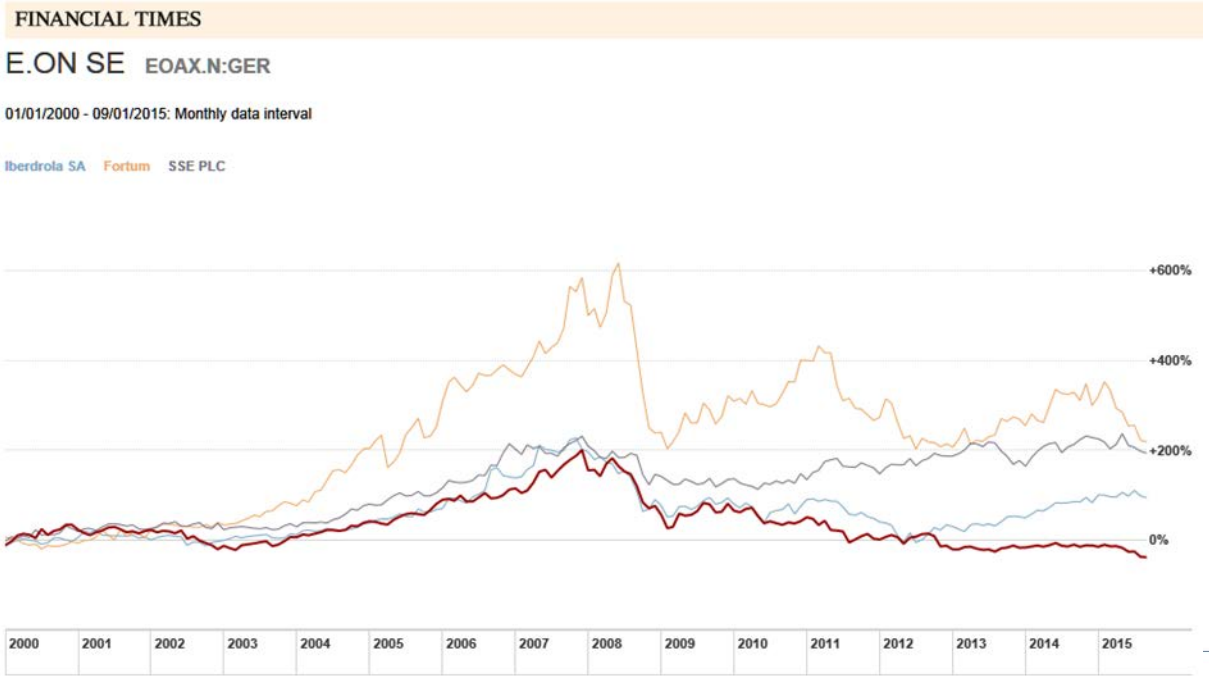


EDF Source Mix

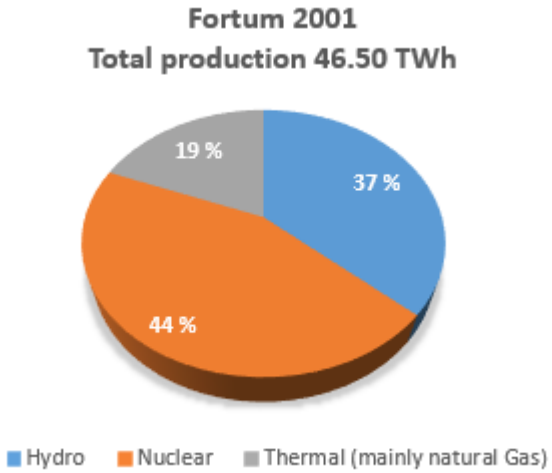


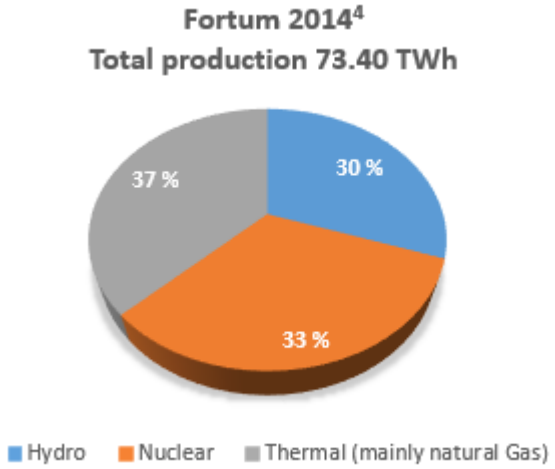


Incumbent Winners

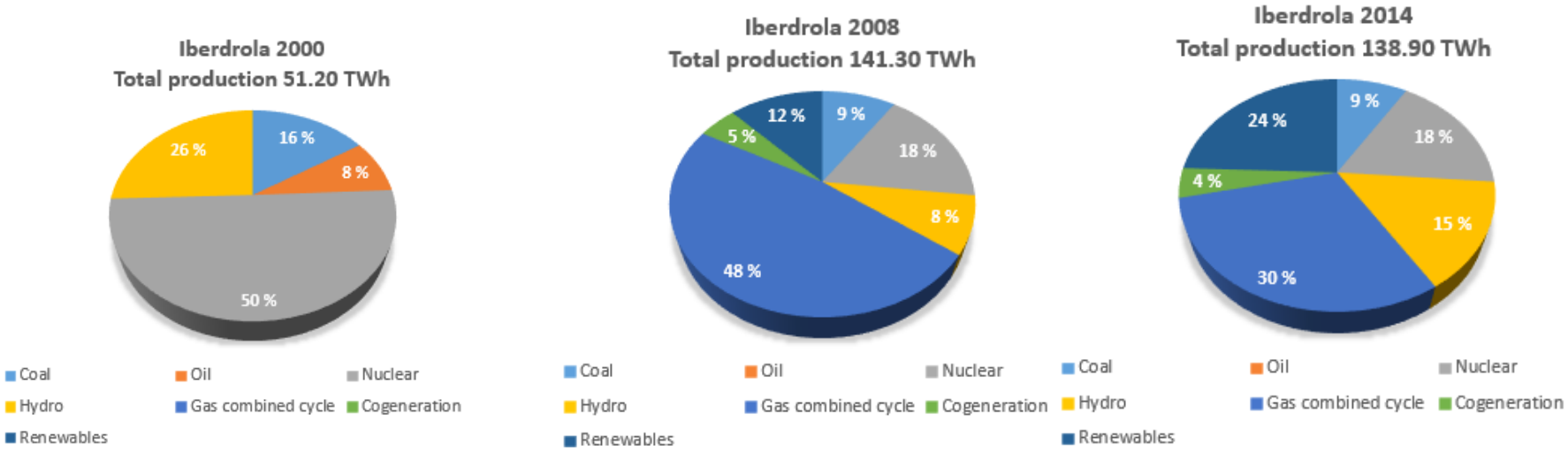


Fortum Source Mix

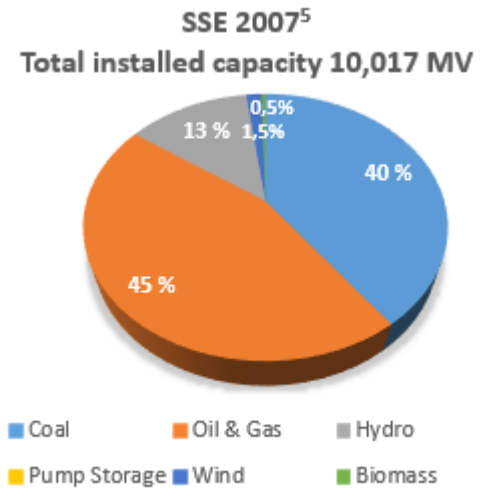


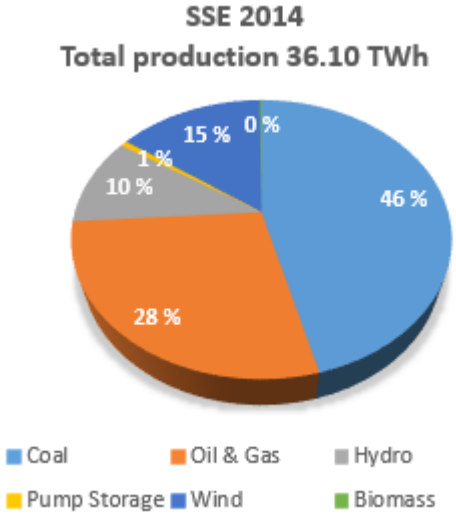


Iberdrola Source-Mix



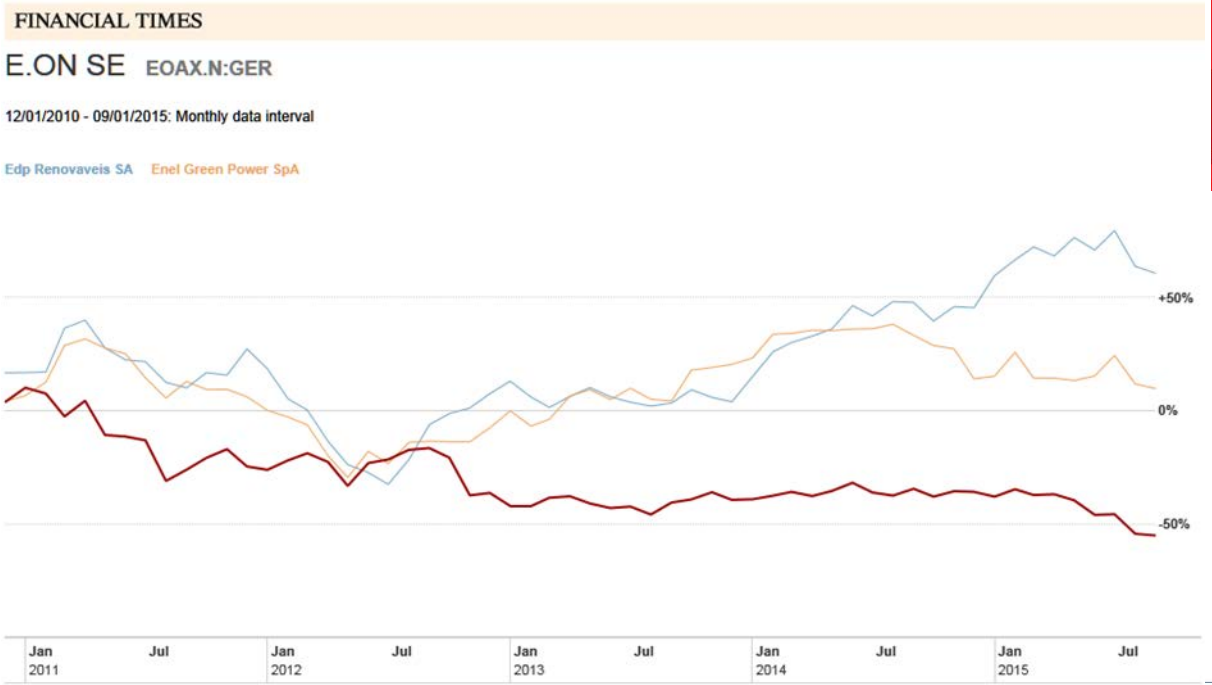
SSE Source Mix





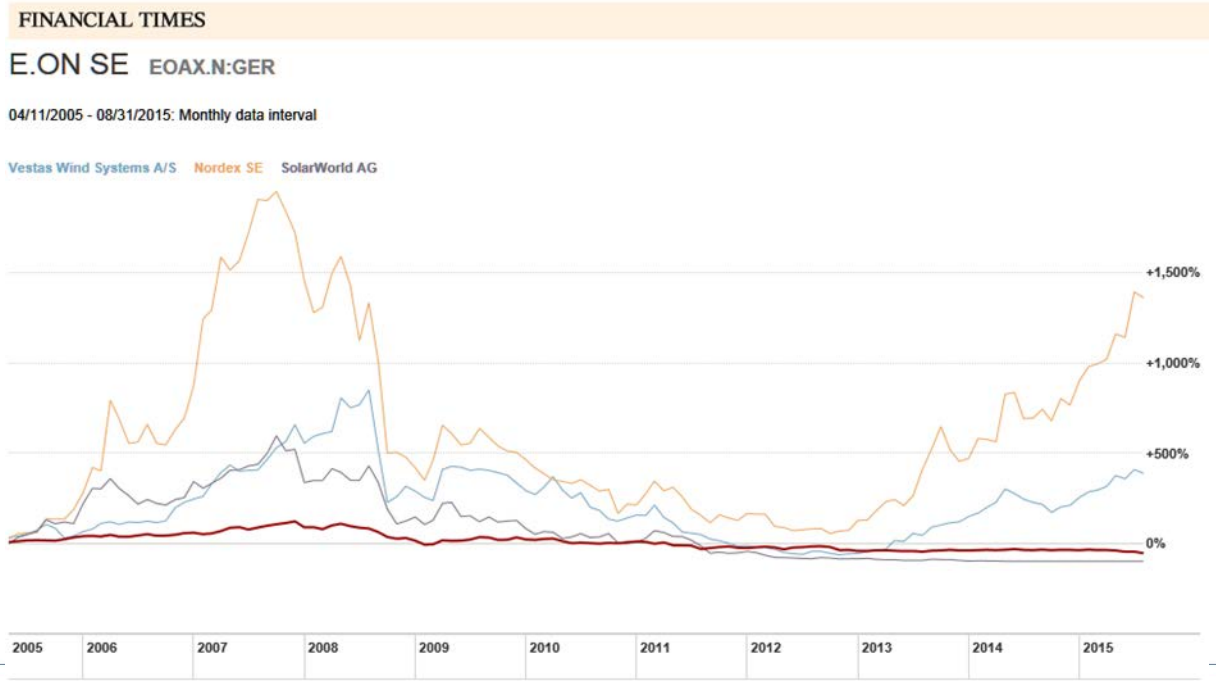
Since production figures Were not available, we Have used installed Capacity for SSE

The Green Spin-off Winners

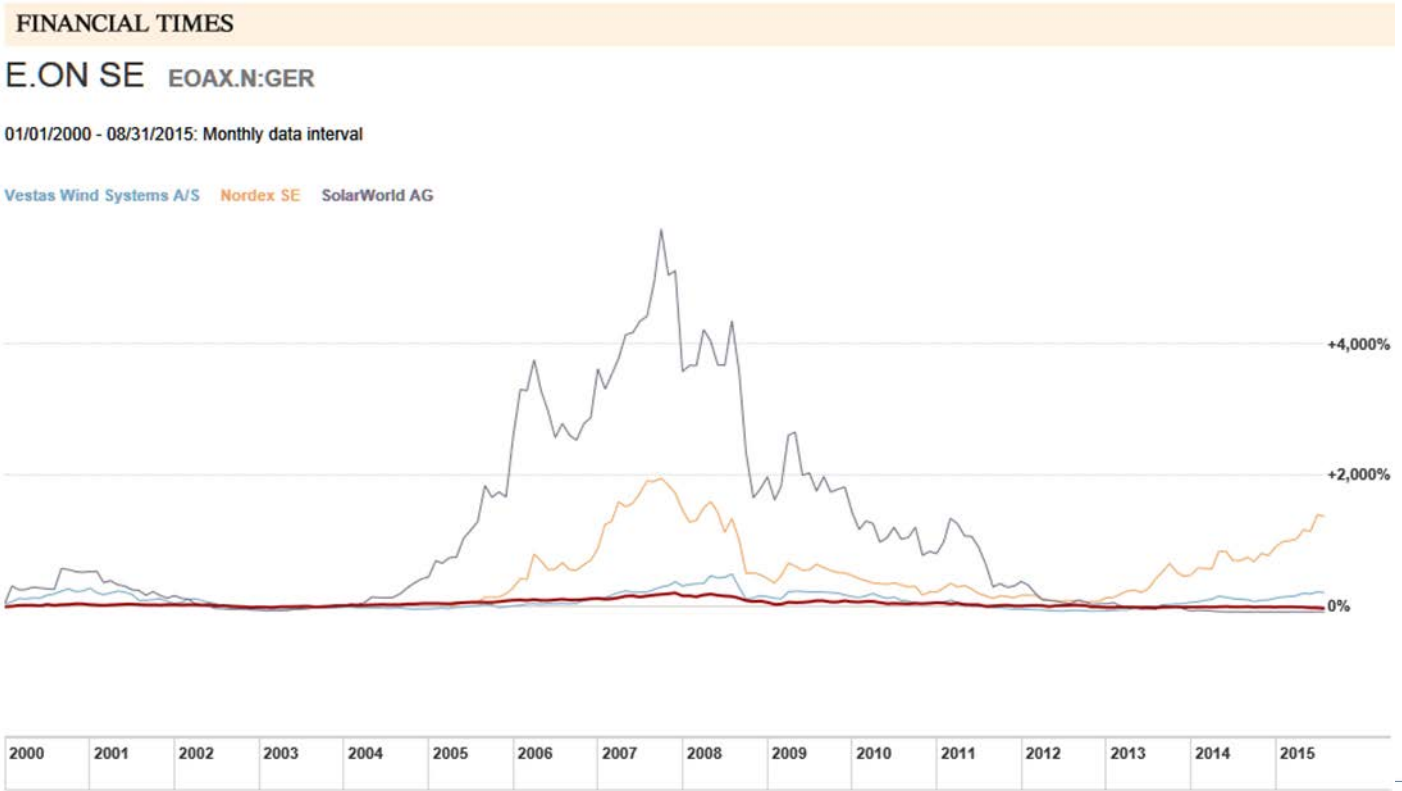


Enel Green Power

Green Technology Suppliers



The Green Suppliers

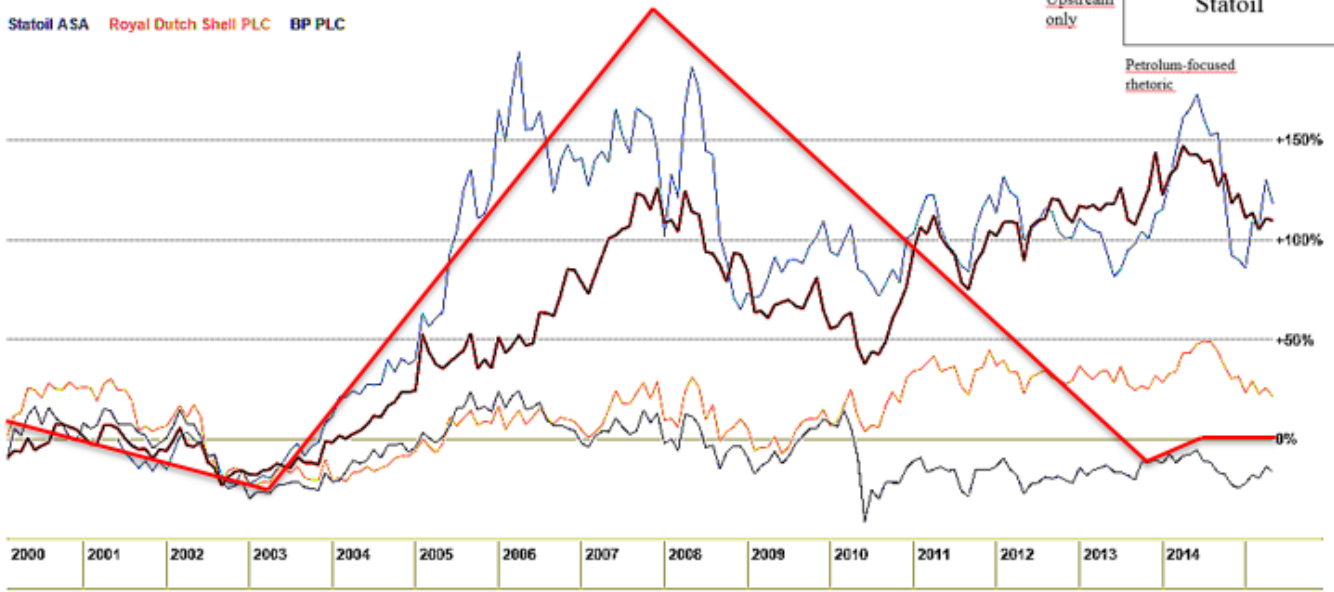


Petroleum industry

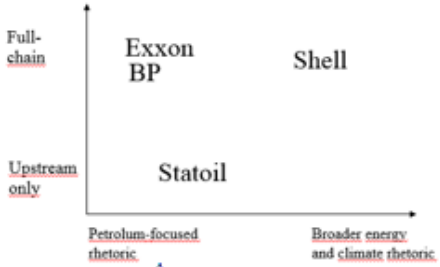
Exxon Mobil Corp XOM:NYQ

01/03/2000 - 05/19/2015: Monthly data interval

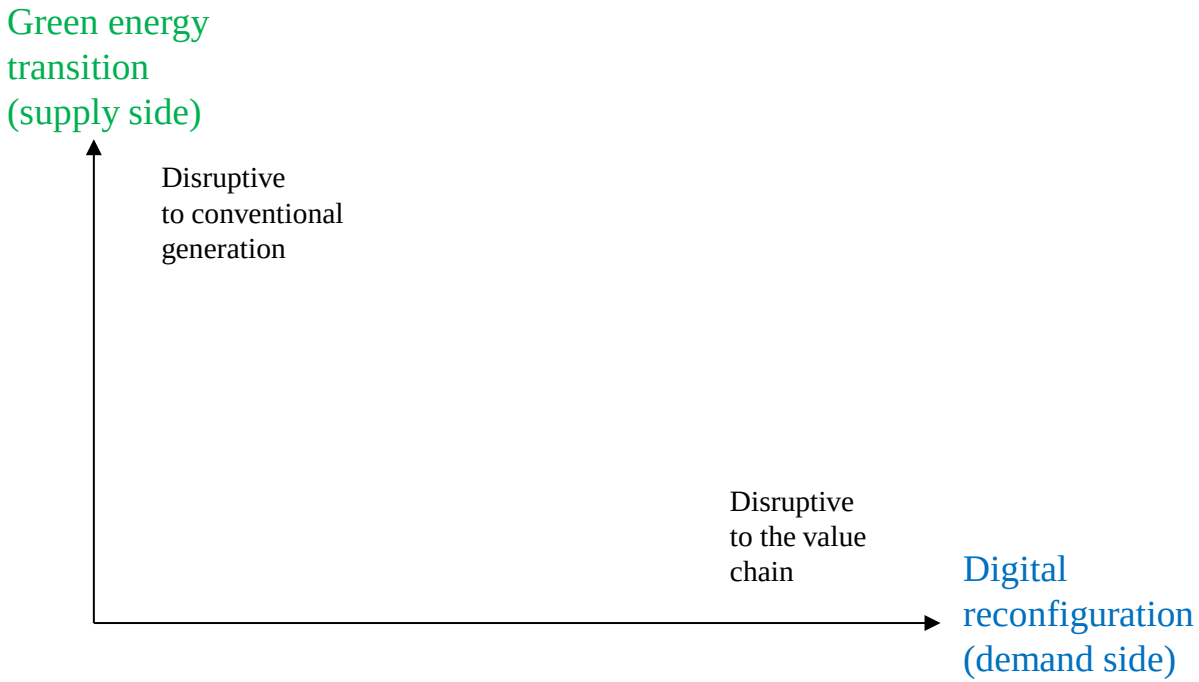
Statoil ASA Royal Dutch Shell PLC BP PLC



Petro-Strategies



Two Dimensions of Transition



Qivicon is an initiative of Deutsche Telekom partnering with a number of leading German and international companies and brands in all sectors that want to join a smart home via a single open platform.

Qivicon offers a partnership that enables its members to overcome bottlenecks in the development of new business models in their portfolio, and not only an automization gateway in itself. Qivicon has connected to a large amount of well-known white goods producers for installing devices that communicates with the Qivicon platform, making the platform into a market place where the consumer meets the providers of different components and appliances.

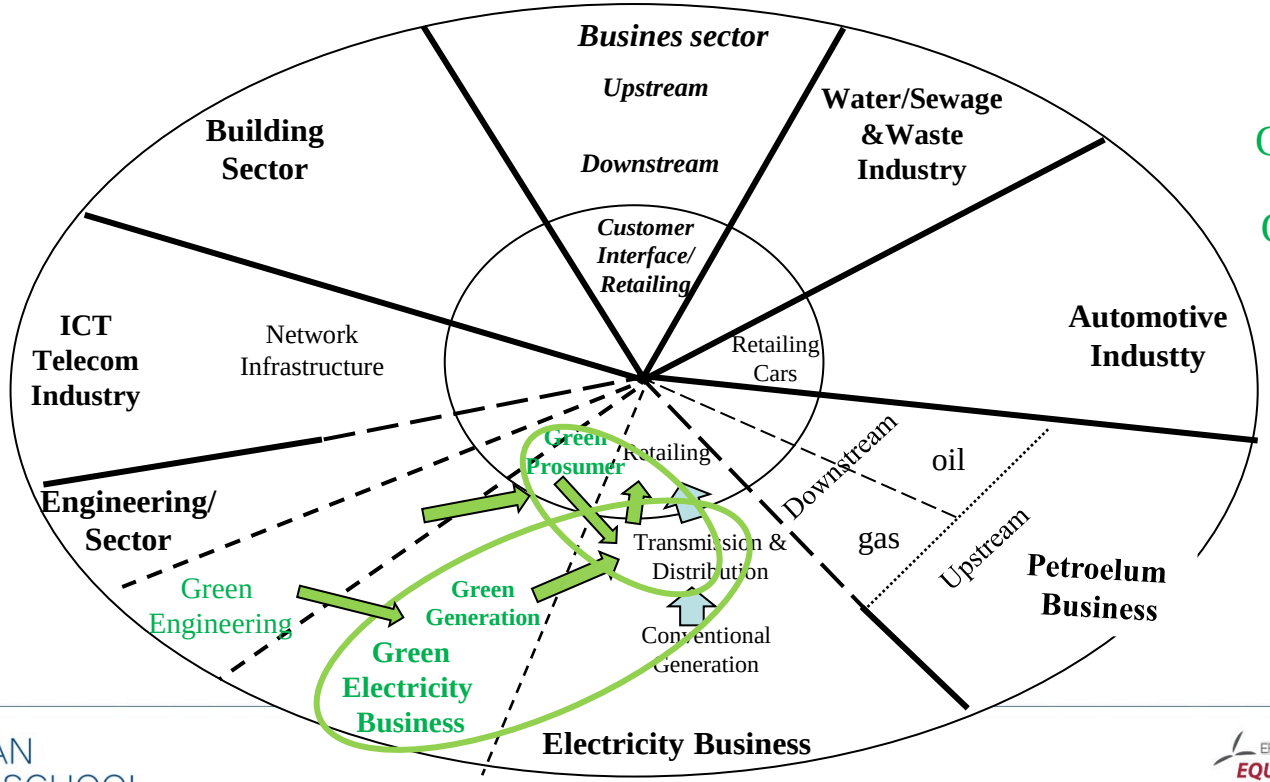
Qivicons competitive landscape is dominated by ABB Group, Robert Bosch GmbH, and Cisco Systems Inc which have said they plan to establish a joint-venture company to develop and operate an open software platform for smart-home equipment and applications (Dec 2014).

Sungevity is a global based company focused on making it easy and affordable for the consumer, mainly homeowners, to benefit from solar power. Sungevity provide access to qualified team of designers to develop the solar system. The financing can be done either through leasing or by providing loans; hence the business model contains financing of the product for the customer.

The company has a community focus and aim to connect everyone under the sun with a new purpose: cleaner, safer, lower-cost energy for a brighter world. Founded in 2007, it was the first American solar company to design residential solar energy systems remotely over the Internet, using satellite imagery.
By leveraging proprietary remote solar design technology, Sungevity can deliver a firm quote including financing instantly without a home visit (Remote Solar Design (RSD) strategy).

Sungevity provide access to qualified team of designers to develop the solar system. The financing can be done either through leasing or by providing loans; hence the business model contains financing of the product for the customer.
Sungevity has risen $129.6M in 8 rounds. The latest round was in 2014. Some of Sungevity's investors include E.ON, GE Ventures and Brightpath Capital Partners. Sungevity's latest acquisition was Zonline. The companies Co-Founder & CEO, Andrew

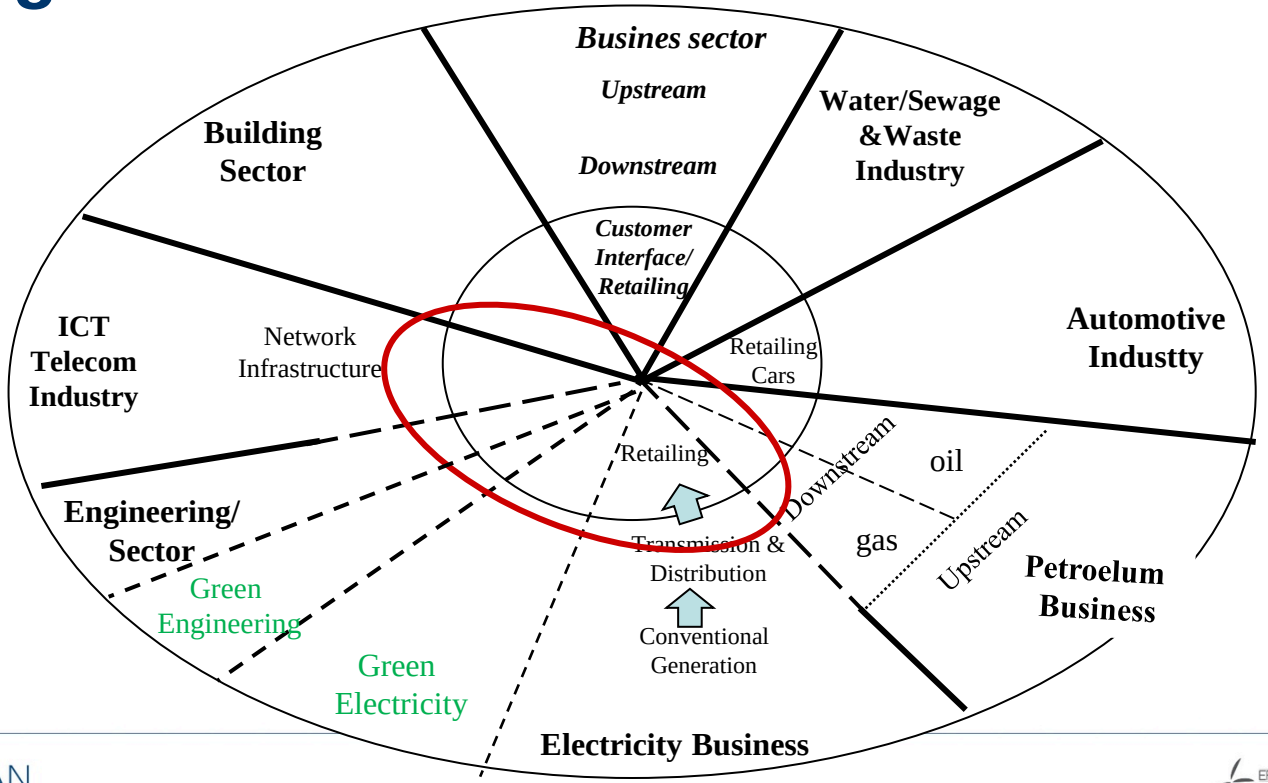
New Business Models: Supply Side and Demand Side Green Electricity



Green el I

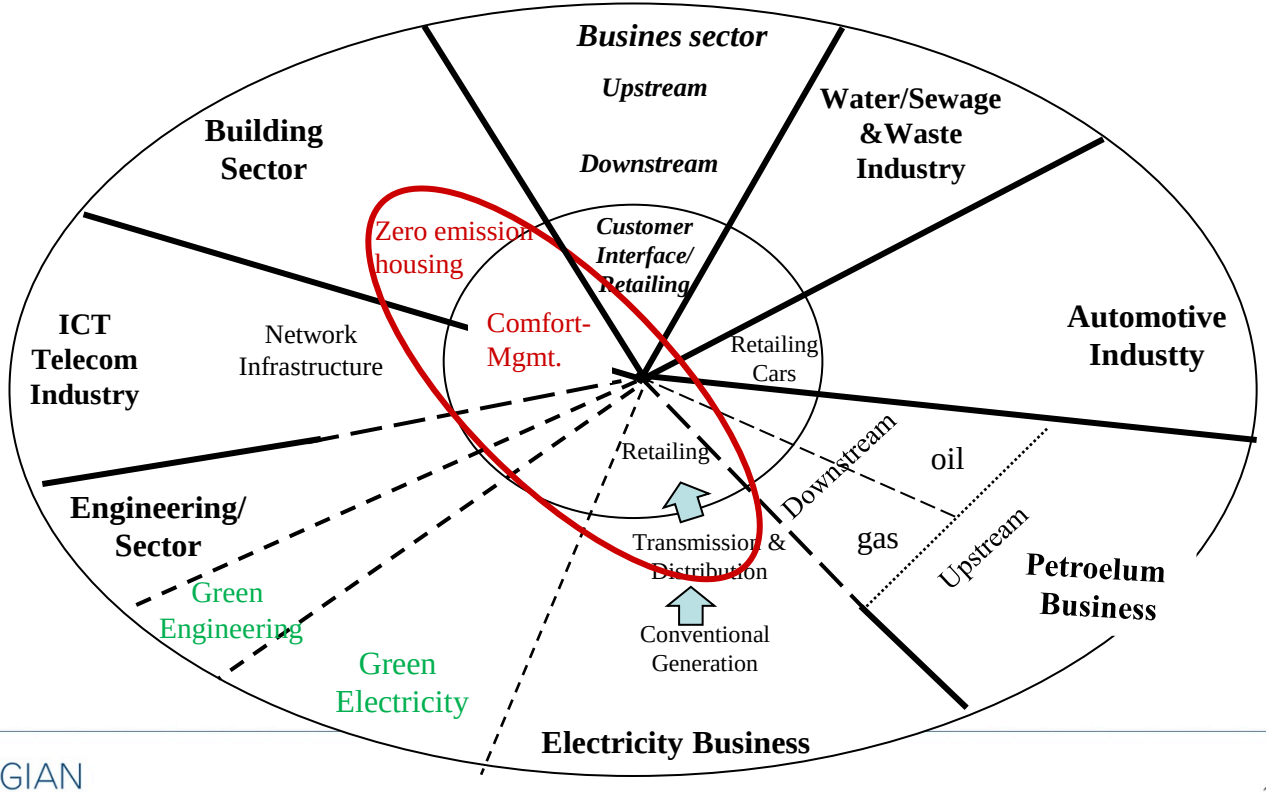
Green el II

New Business Models; ICT Based System Integration



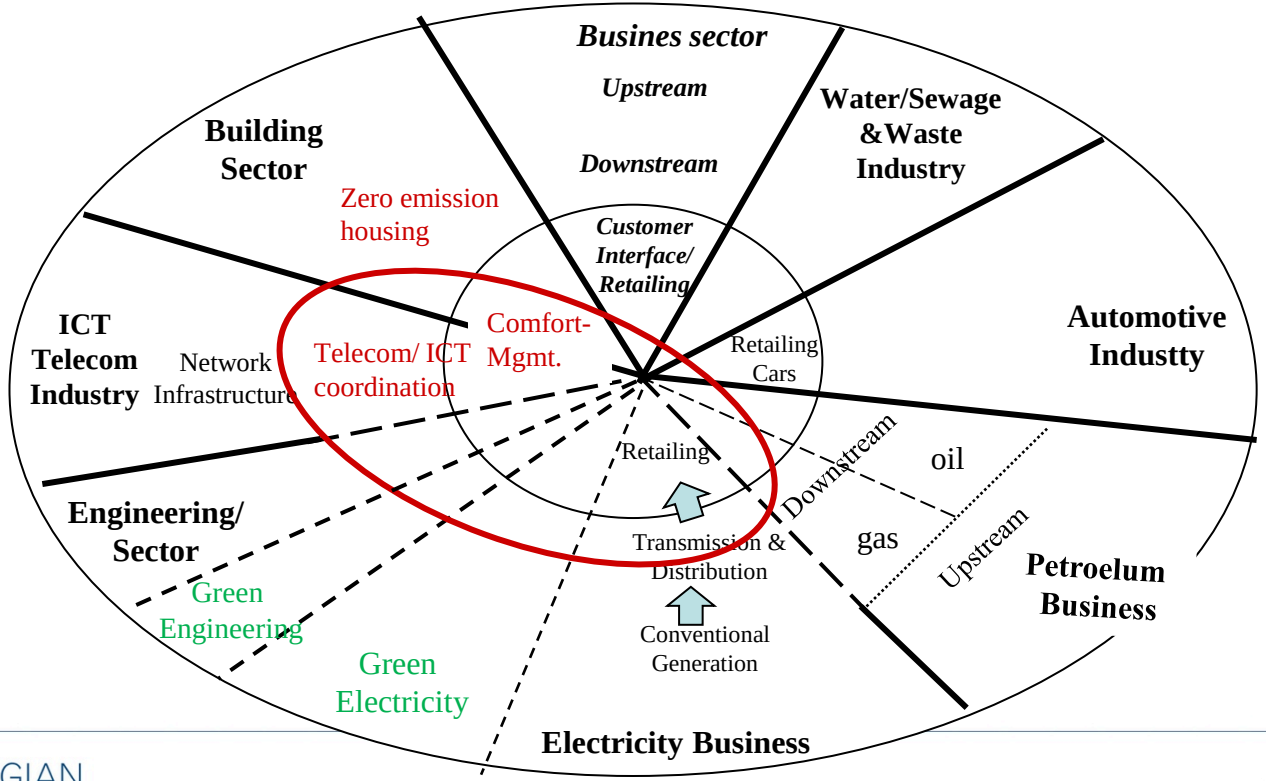
ICT based System integration

New Business Models: Systemic Integration Through Extended Property Management



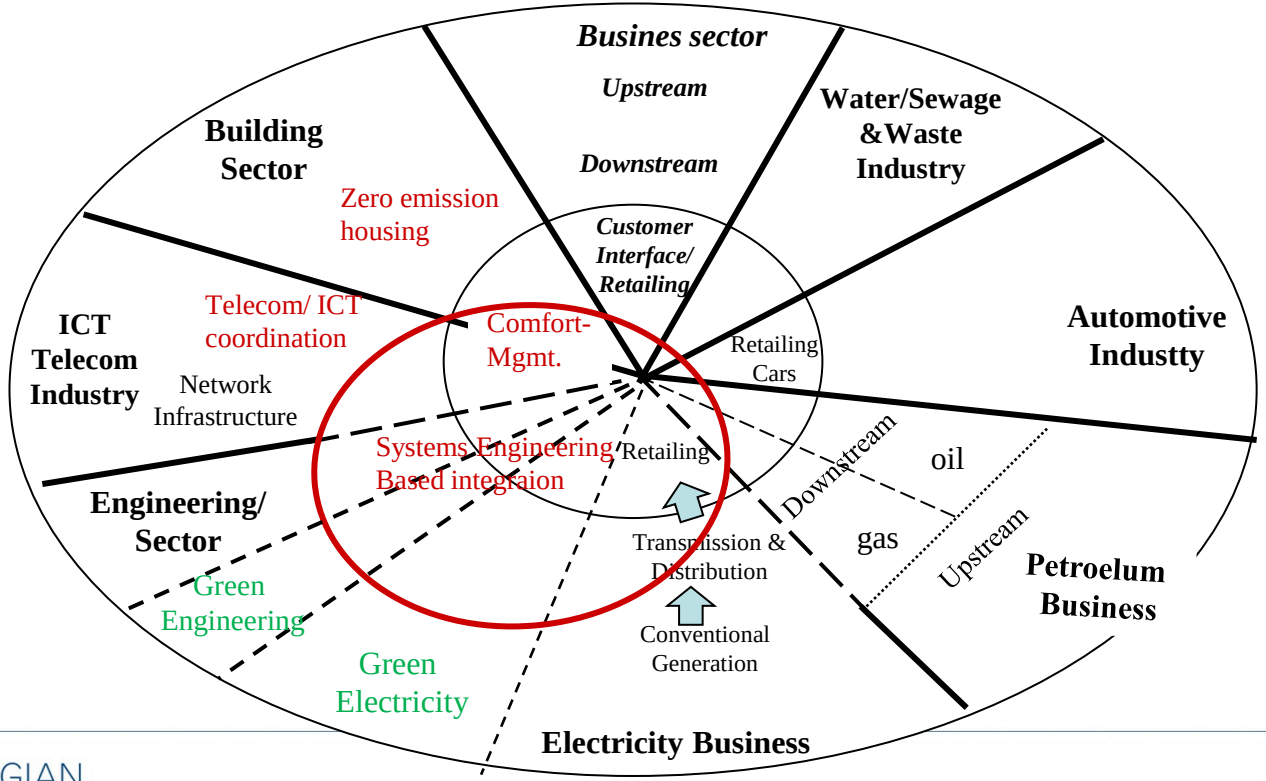
ICT based Systemic integration I Extended property Management

New Business Models: Systemic Integration Under Extended IT& Telecom control



ICT based Systemic integration II Extended Telecom/ ICT Management

New Business Models: Systemic Integration Under Extended Engineering Control.



ICT based
Systemic integration III
Extended Systems
Engineering Control

Business Model Canvas – (Ostervalder)