Energy Perspectives 2017
Long-term macro and market outlook
TCFD-BoE Conference, London, 31 October 2017
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Energy Perspectives 2017
Macro and market outlook to 2050 – www.statoil.com/energyperspectives
Three different tales of the future towards 2050

None are BAU – Renewal a tremendous challenge, Rivalry unpleasant

- Rivalry
- Reform
- Renewal

- Market-driven
- Constructive market rule
- Policy-driven
- Destructive market rule
- Global precautionary focus
- Local/national permissive focus

- Energy supply security concerns
- Local pollution concerns

19 October 2017
Key scenario features

- Central case versus base case
- Probabilities
- No Business as Usual
- Black swans
Key assumptions distinguishing the scenarios

GDP growth
Average annual % change

Per capita growth
Population growth

Energy intensity
Index, 1990=100

Reform
Renewal
Rivalry

Total Primary Energy Demand
Btoe

New RES
Biofuels and waste
Hydro
Nuclear
Gas
Oil
Solid fuels

Source: IEA (historical demand), UN (Population/historical GDP), Statoil (projections)
Key assumptions distinguishing the scenarios (2)

**Sales light duty vehicles**
- Millions
- Key data for 2014 and 2050
- Categories: Other, Plug-in hybrids, Electric vehicles, Diesel, Gasoline

**Electricity generation mix**
- %
- Key data for 2014 and 2050
- Categories: Geothermal, Solar, Wind, Hydro, Biomass, Nuclear, Gas, Oil

**Fuel mix for other sectors**
- Btoe
- Key data for 2014 and 2050
- Categories: Heat, Electricity, New RES, Biomass, Gas, Oil, Coal

**Source:** IEA (history), Statoil (projections)
Data and methodology challenges

- Historical data
- New renewables in TPED
- Temperature targets and carbon budgets
- The role of prices and taxes
- S-curves
- The role of CCS
Wide outcome space for oil and gas demand

CO₂ emissions determined by demand and mix

Policies, markets, and technology having varying impact

World CO₂ emissions
Billion tons

Source: IEA (history), Statoil (projections)
There’s never been a better time for good ideas

Thank you!

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