Scenarios & Energy Transitions

Jeremy Bentham
Vice President Global Business Environment
Head of Shell Scenarios

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It is important to note that Shell’s existing portfolio has been decades in development. While we believe our portfolio is resilient under a wide range of outlooks, including the IEA’s 450 scenario, it includes assets across a spectrum of energy intensities including some with above-average intensity. While we seek to enhance our operations’ average energy intensity through both the development of new projects and divestments, we have no immediate plans to move to a net-zero emissions portfolio over our investment horizon of 10-20 years.

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Why use Scenarios?

- Forecasts & sensitivities are insufficient
- Grapple with genuine breadth of possibilities
- Stretch mindsets for better-informed decisions
- Learn & prepare

**Key Distinction:**
- Context-exploring
- Decision-centred

**Scenarios improve judgment in the face of radical uncertainty**
Value & Dangers

- Stretch perspectives & Enrich judgment
- Recognise both deeply rooted trends and also critical uncertainties
- “Memories of the Future”

- Gravitating towards a single “Most likely” or “Preferred” outlook
- External confusion of “Context” scenarios with mechanistic planning assumptions

Scenarios improve judgment in the face of radical uncertainty
Lessons & good practices

Two crafts

Developing insightful & compelling content
Bringing insight to life in the minds of decision makers

Drawing on multiple internal & external sources, and using formal and informal processes

Drawing key lessons from context-exploring scenarios

Insights continued...

**Sector-specific perspective is key**

- **Industry** 13Gt CO₂
- **Built environment** 9.3Gt CO₂
- **Power generation** 13.6Gt CO₂
- **Transport** 8.5Gt CO₂

Source: Shell analysis, World Energy Model

Less difficult to decarbonise

... More difficult to decarbonise

**Understanding sector/asset flexibility is key**

Decline in existing oil fields will outstrip demand uncertainty

Demand (Shell Oceans)

New supply required

Decline in mature supply

Source: Shell New Lens Scenarios

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A pathway to better-informed Strategic Choices using Scenarios

Context exploring....  Insight generating....  Decision-centred....

Future worlds

Pace of new technology/policy

Pace of growth in demand for energy-related activities
Communicating to multiple stakeholders

Publish & widely discuss summaries of context scenarios & insights

Communicate framework & principles for portfolio decision-centred Scenarios

*This is an example diagram of graphic representations that are considered by the Board. Not based on Shell’s actual portfolio.*
Concluding remarks

- Recognise distinctions & value of:
  - Context-exploring, Decision-centred, & Shorter/longer-term... outlooks

- Recognise regulatory, societal, commercial & physical challenges

- Recognise challenges are economy-wide & sector-specific

- Recognise investment & asset flexibility

- Place focus on capacity to Learn & Prepare for full range of possibilities

- Encourage transparency while respecting commerciality

Scenarios improve judgment in the face of radical uncertainty