Transition Pathway Initiative

The State of Transition in key energy intensive sectors

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Co-Chair Transition Pathway Initiative (TPI)

About the Transition Pathway Initiative

Transition Pathway Initiative

What is TPI and what is it for?

A global initiative led by Asset Owners, supported by Asset Managers

Established in January 2017, investors supporting TPI have over £7/$9.3 trillion Assets Under Management

An open access online tool, now with data on 187 companies in 7 sectors with a high impact on climate change

TPI assesses companies' carbon management and performance, in line with the recommendations of the TCFD

Enabling investors to understand how the transition to a low-carbon economy could affect their portfolios

TPI Partners

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Grantham Research Institute on Climate Change and the Environment

FTSE Russell

PRI Principles for Responsible Investment

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TPI Supporters

Aberdeen Standard Investments
Aviva Investors
BNP Paribas Asset Management
Brunel Pension Partnership
CalPERS
CCLA for the Church of England
Central Finance Board of the Methodist Church
The Church Commissioners for England
The Church of England Pensions Board
Environment Agency Pension Fund
AP Fjärde AP-Fonden
AP Första AP-Fonden
generation_
gmpf
Hermes Investment Management
Legal & General Investment Management
Local Authority Pension Fund Forum
LPP Local Pensions Partnership
NorthernPool The Collective Asset Pool for Greater Manchester Merseyside and West Yorkshire Pension Funds
PGGM
Representative Church Body of the Church of Ireland
RPMI Railpen
Robeco The Investment Engineers
Ruffer
Schroders
AP3 Tredje AP-fonden
UBS
Union Investment
USS
Wespath Benefits | Investments
West Midlands Pension Fund

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An overview of the TPI Methodology and Tool

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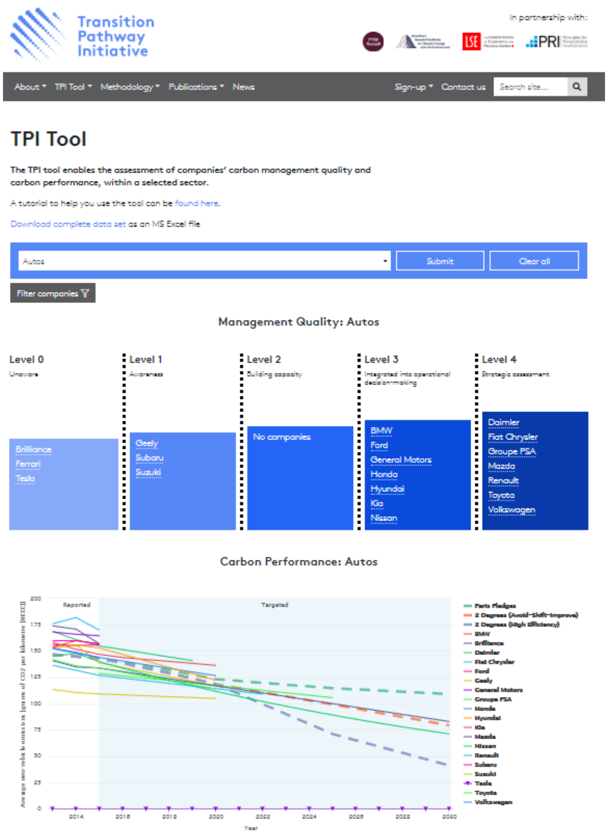
Overview of TPI Tool

TPI assesses companies on:

1. Management Quality
2. Carbon Performance

Largest public companies by market cap and highest emitters in 7 sectors:

- 64 fossil fuel producers (coal mining and oil and gas)
- 41 electricity utilities
- 58 carbon-intensive manufacturers (cement, paper and steel)
- 20 auto manufacturers



TPI Design Principles

Company assessments based only on publicly available information

Outputs useful to Asset Owners and Asset Managers

Builds on existing initiatives and disclosure frameworks, such as TCFD

Pitched at a high level of aggregation; applies to firm as a whole

Management Quality

Data provided by FTSE Russell

Level 0
Unaware

- Company does not recognise climate change as a significant issue for the business

Level 1
Awareness

- Company explicitly recognises climate change as a relevant risk/opportunity for the business
- Company has a policy (or equivalent) commitment to action on climate change

Level 2
Building capacity

- Company has set GHG emission reduction targets
- Company has published info. on its operational GHG emissions

Level 3
Integrating into operational decision making

- Company has nominated a board member/committee with explicit responsibility for oversight of the climate change policy
- Company has set quantitative targets for reducing its GHG emissions
- Company reports on its Scope 3 GHG emissions
- Company has had its operational GHG emissions data verified
- Company supports domestic & international efforts to mitigate climate change
- Company has a process to manage climate-related risks
- Company discloses materially important Scope 3 GHG emissions (coal, oil and gas)

Level 4
Strategic assessment

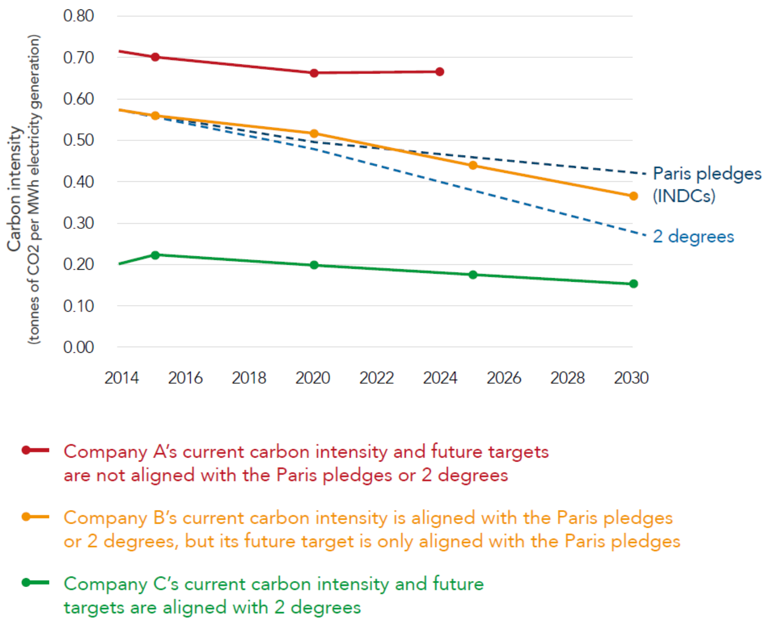
- Company has set long-term quantitative targets (>5 years) for reducing its GHG emissions
- Company has incorporated ESG issues into executive remuneration
- Company has incorporated climate change risks and opportunities in its strategy
- Company undertakes climate scenario planning
- Company discloses an internal carbon price

Carbon Performance

Tests alignment of company targets with Paris goals: science-based targets

Benchmarks:

- National pledges (NDCs) to the Paris Agreement; the 'Paris Pledges'
- 2°C target
- *New* Below 2°C target



Latest results: coal mining, electricity, and oil and gas

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Management Quality level

Level 0	Level 1	Level 2	Level 3	Level 4
Unaware	Awareness	Building capacity	Integrating into operational decision making	Strategic assessment
1 company	18 companies	33 companies	24 companies	29 companies
1 coal mining company	8 coal mining companies	2 coal mining companies	2 coal mining companies	6 coal mining companies
	4 electricity utilities	10 electricity utilities	12 electricity utilities	15 electricity utilities
	6 O&G producers	21 O&G producers	10 O&G producers	8 O&G producers

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Management Quality level

Average company is going from “Building capacity” (Level 2) to “Integrating into operational decision making” (Level 3), i.e. it:

- Explicitly recognises climate change as a business risk/opportunity
- Has made a policy commitment to action

And is at the point of:

- Setting an emissions reduction target
- Disclosing operational emissions

4* companies

Some companies satisfy all Management Quality criteria

These companies do all the basics, and:

- Have quantitative, long-term targets
- Incorporate ESG into executive remuneration
- Incorporate climate change risks/opportunities in company strategy
- Undertake climate scenario planning
- Disclose an internal carbon price

4* Company	Sector
AGL Energy	Electricity
Anglo American	Coal mining (general mining)
BHP Billiton	Coal mining (general mining)
National Grid	Electricity
Equinor (formerly Statoil)	Oil and gas
Repsol	Oil and gas

Trends in Management Quality

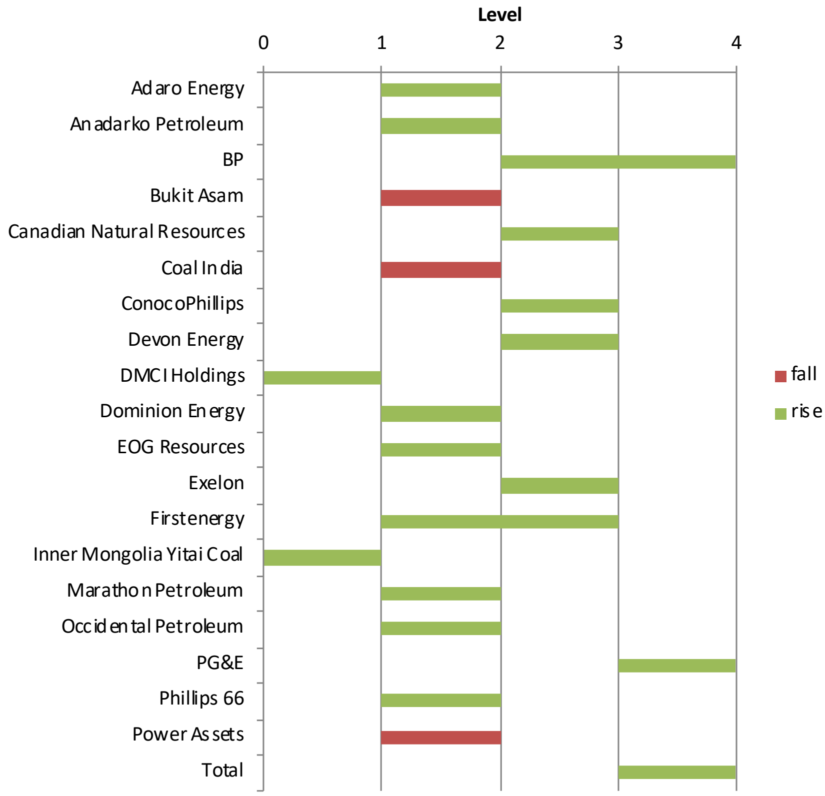
We see progress from 2017

17 out of 54 companies have moved up; 3 have moved down

8 companies move up by explicitly recognising climate change as a business risk/opportunity

Another 6 companies move up by setting emissions reduction targets

There is more progress at lower levels



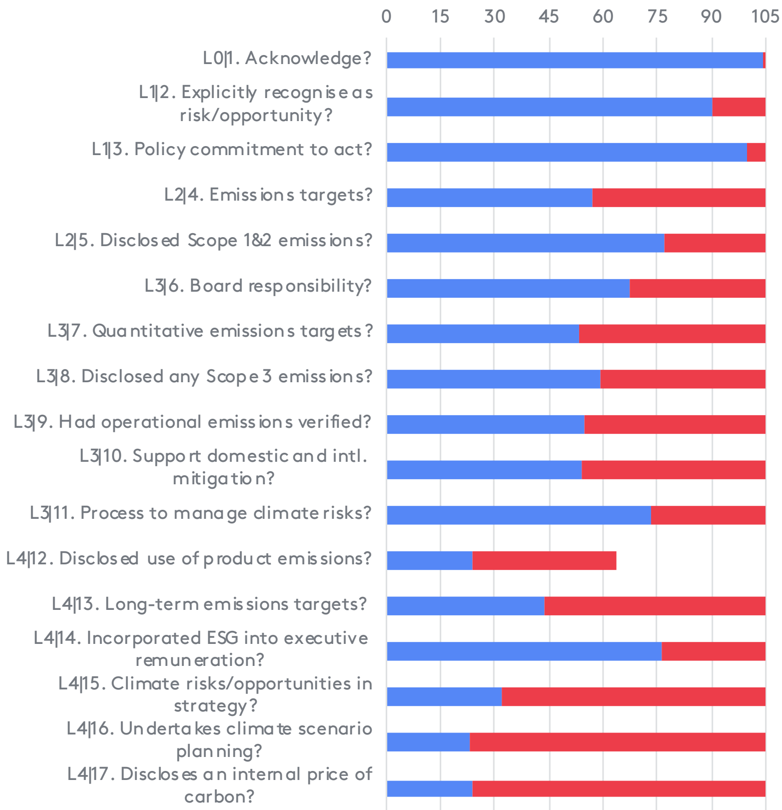
Management Quality: indicator by indicator

Most companies do basics; few take the more advanced steps

Almost all have policy and explicitly recognise climate change as business risk/opportunity

Most disclose emissions, manage climate change risks, and incorporate ESG into executive remuneration

Few incorporate climate change risks/opportunities into strategy, undertake climate scenario planning, or disclose internal carbon price



Carbon Performance of electricity utilities

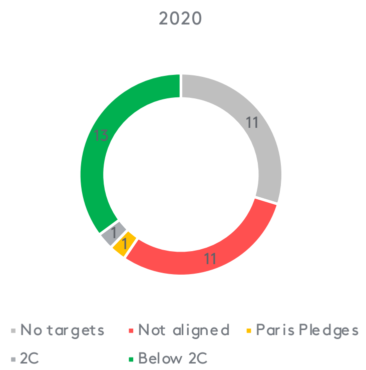
We assess 37 electricity utilities with a significant electricity generation business

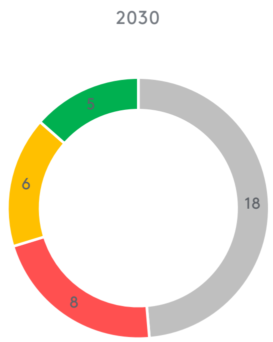
Quantitative emissions targets are relatively common in electricity, but still many are missing

In 2020, >50% of targets are aligned with Paris Agreement in some form

But failing to keep pace by 2030

Little difference between Below 2°C and below 2°C





Carbon performance in coal mining, and oil and gas

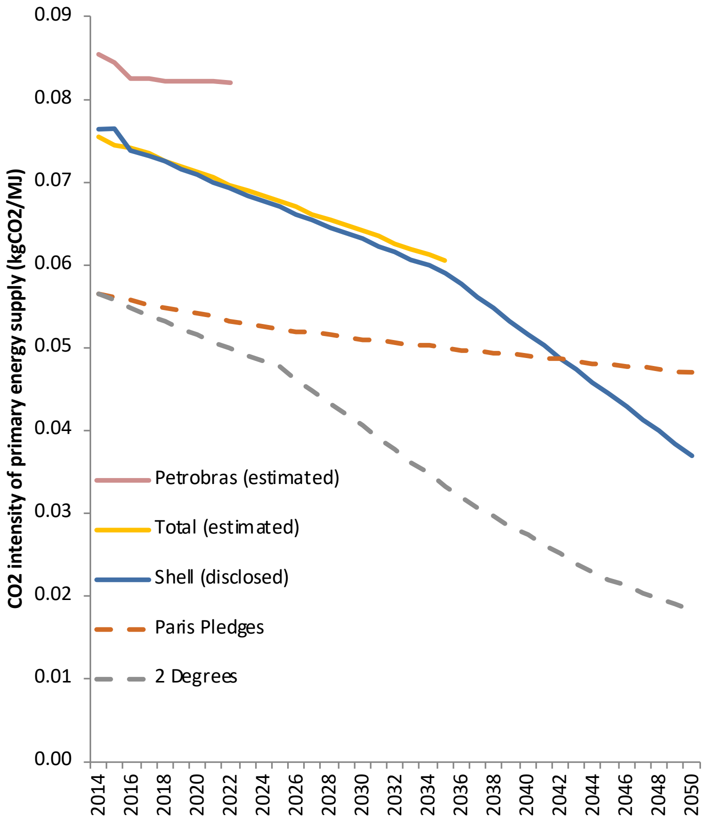
No targets in coal mining, or oil and gas, which include downstream emissions from use of sold products

TPI proposal for how to assess Carbon Performance in oil and gas, assesses Shell's recently stated ambitions

Performance measure: carbon intensity of primary energy supply

Long-term goal: *diversify* out of oil and gas

Similar approach possible in mining, perhaps looking at carbon intensity of revenue



Summary of results

Measurable progress over the past 18 months, particularly in carbon management

More electricity utilities are making the transition to renewable energy

However, most companies still not taking a strategic approach to climate change (are not on Level 4)

Most electricity utilities either do not have quantitative, long-term emissions targets, or their targets do not keep pace with what the Paris Agreement requires

Using TPI

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How investors are using TPI

Deliberately non-prescriptive in how people can use it and funds highlighted a variety of ways at recent TPI Summit as follows:

- Understanding transition risk
- Inform investment decision making
- Supporting below 2 degree alignment of pension funds
- To inform the construction of an index
- Reporting tool for Managers to Asset Owners
- To guide voting
- To target and track engagement

Next Steps

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Next Steps for TPI

- Case studies of how people are using TPI
- CA100+ list of companies to be assessed and expansion into other sectors – by close of 2018 coverage 280-300 and in 2019 400/500+
- Possible inclusion of lobbying indicators from 2019
- Consideration of the bridge between MQ & Performance
- TPI informed index
- Expansion of TPI approach to Sovereign Bonds
- State of Transition Asset Owners Summit in 2019

Thank you

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Towards Benchmarking Carbon Performance in Oil and Gas, and Mining

Simon Dietz & Dan Gardiner, Grantham Research Institute, London School of Economics

TPI's March Discussion Paper on Carbon Performance Assessment in Oil and Gas

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A reminder of TPI's approach to benchmarking Carbon Performance

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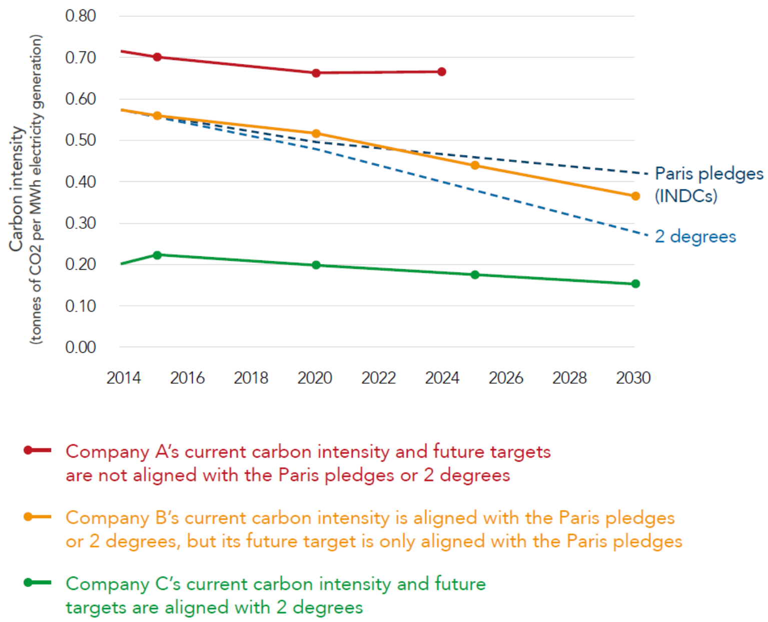
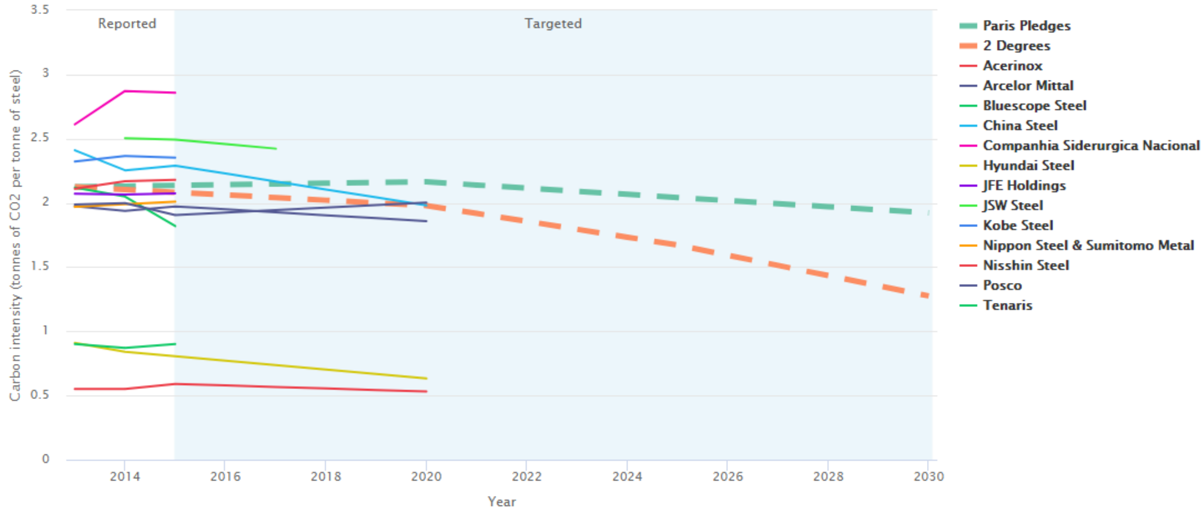
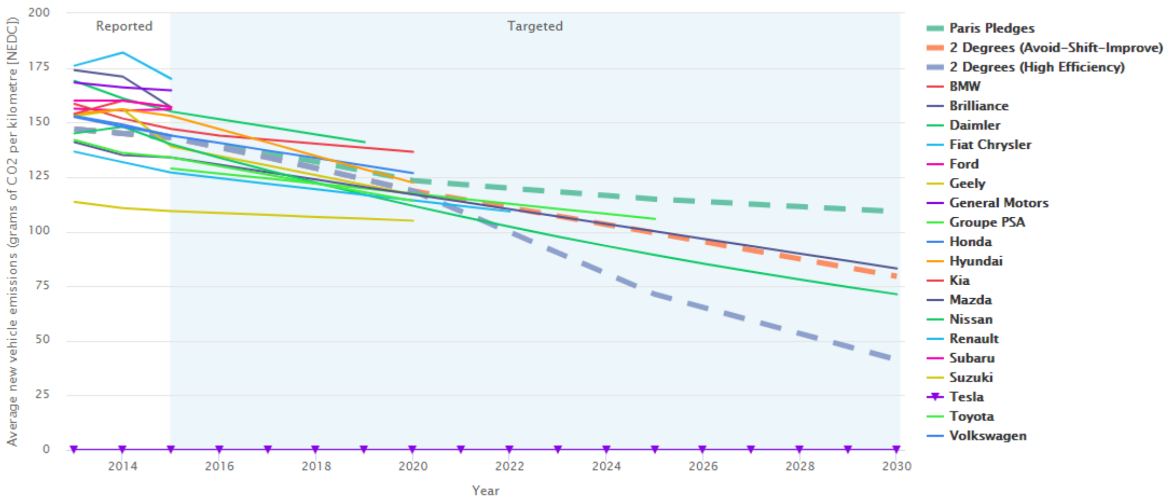


Example: Carbon Performance in steel



Example: Carbon Performance in automotive



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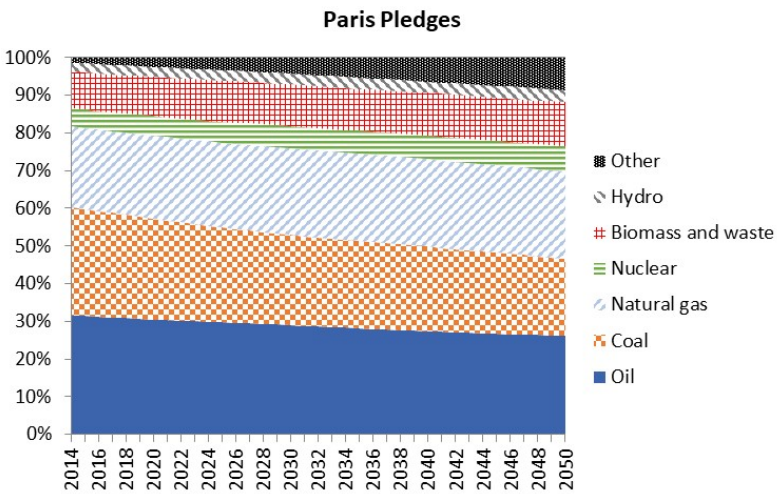
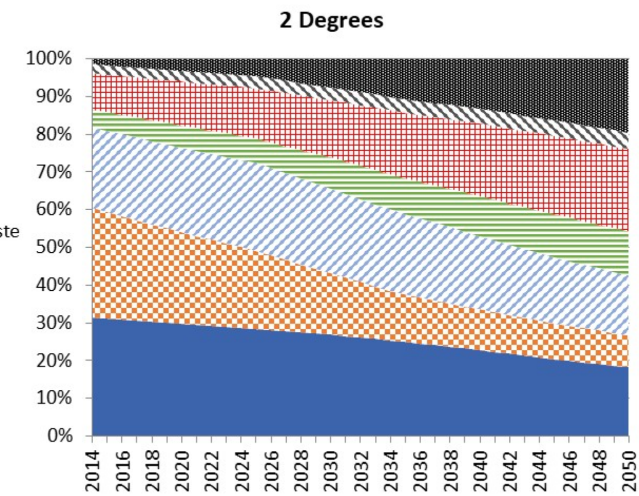
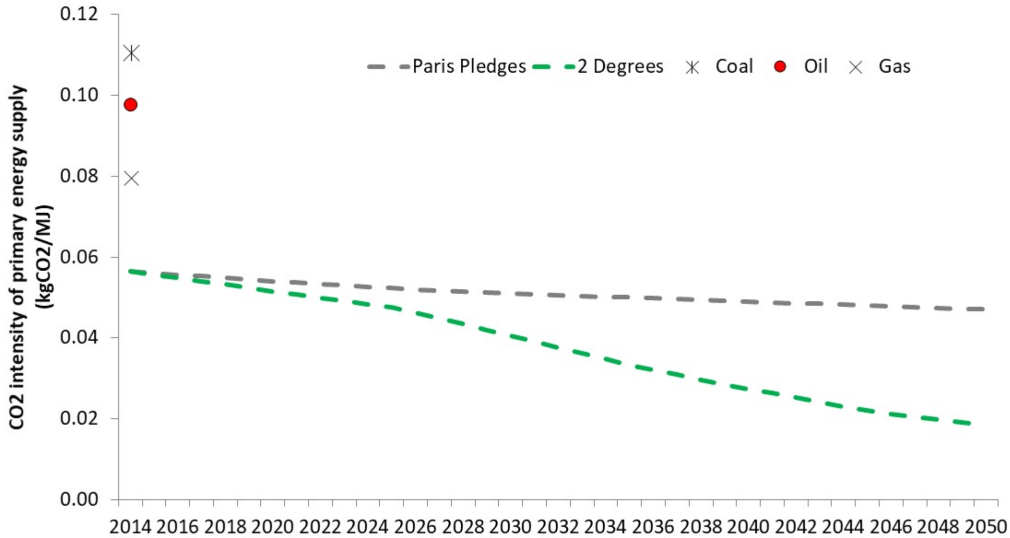
The low-carbon transition in primary energy supply





Benchmarking the O&G sector by carbon intensity of energy supply



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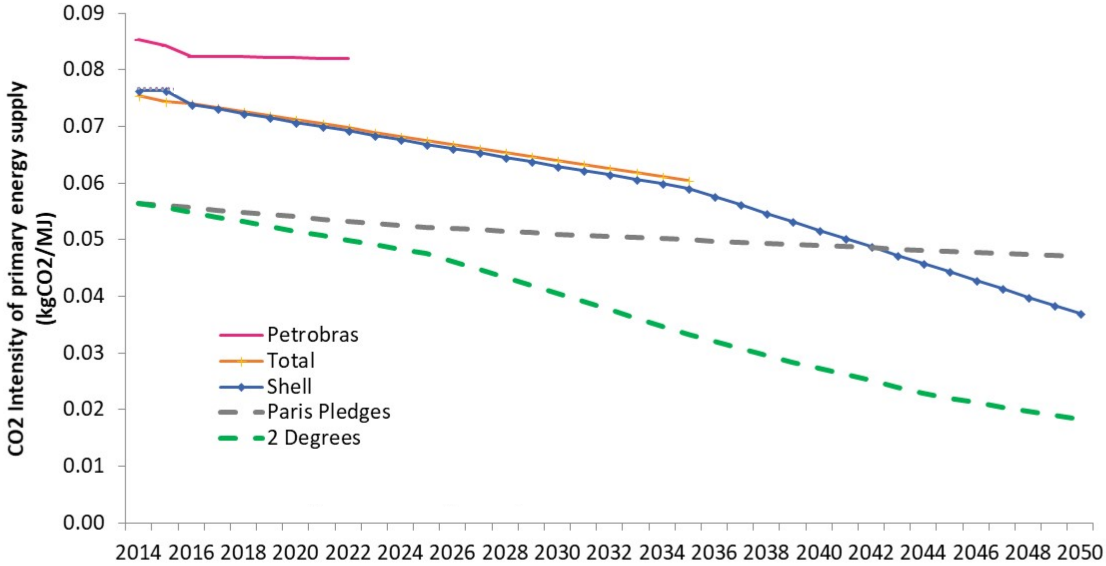
Preliminary carbon intensity pathways for Shell, Total & Petrobras vs. benchmarks



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Main limitations

Compatible with diversification strategies, but other transition strategies possible (e.g. gradual wind down)

May need to add other metrics, e.g.:

- absolute emissions
- competitiveness of reserves
- non-energy O&G products

Without disclosures of lifecycle carbon intensity (as provided by e.g. Shell), we have to estimate it from the bottom up

Accuracy of estimates limited by quality of public information

Refining TPI's O&G Methodology and Applying it to Mining

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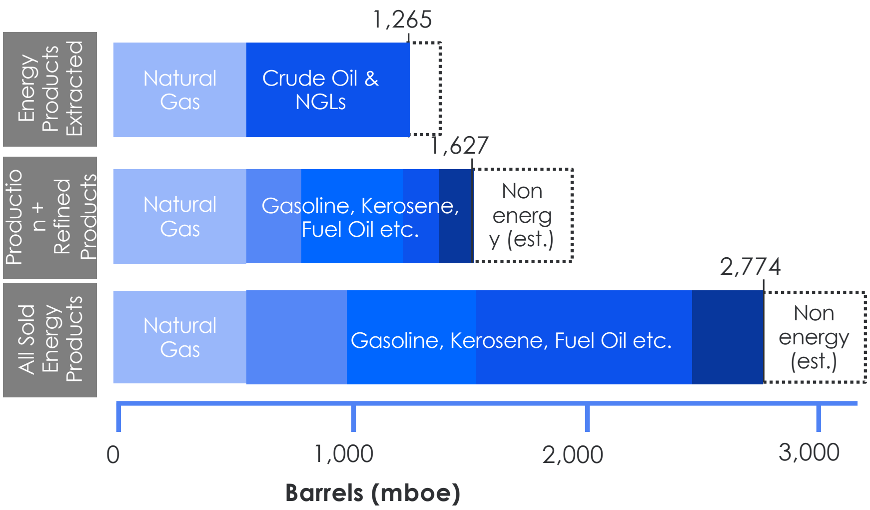
Improved methodology for estimating the carbon intensity of integrated O&G companies on a consistent basis

Using Shell data we can estimate Scope 3 emissions from “All Sold Energy Products”

Could be applied to other companies, without relying on comparable disclosures of ‘net carbon footprint’



Emissions (mT)	/	Energy (mGJ)	=	Intensity (kgCO2/MJ)
438		6,842		0.064
596		9,061		0.066
1,061		15,477		0.069

Disclosure: the evolution of best practice

Disclosure in the O&G sector must continue to improve

Current Minimum

- Oil and gas sales volumes
- Oil sales volumes split by product
- Direct + indirect (scope 1+2) emissions

Current Best Practice

- Scope 3 "Use of sold products" based on **All Sold Products**
- Non-energy production
- Scope 3 emission intensity and
- … emission intensity targets
- Consistency in boundaries
- + Current minimum

Future Best Practice?

- Published intensity targets
- Absolute emissions reduction plan
- Contribution of NET (Negative Emissions Tech.) to targets
- + Current Best Practice

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Analysing "Wind Down" strategies

Calls for O&G players to adopt a "Wind Down" strategy:

- Big environmental benefit
- Low-carbon transition creates big execution risk
- More efficient capital allocation

Can align with benchmarks by cutting absolute emissions

- But many deny transition will impact them
- Some claim they will be relatively advantaged
- None have announced a "Wind Down" so far

TPI could assess alignment on an absolute emissions basis if …

- Adoption of a "Wind down" strategy is communicated to investors ***and***
- Production targets (cuts) are explicitly stated

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Taking a similar approach to mining

Could apply the same approach to mining

Coal production data → carbon intensity of primary energy supply

However, for diversified mining companies this arguably doesn't capture transition risk:

- Companies supply a range of materials, not just primary energy products
- Companies also supply materials in demand in a low-carbon economy

One option is to benchmark against carbon intensity of revenue

- Low carbon intensity of revenue would reflect small coal business and to some extent low operational emissions

Could augment this with an analysis of share of business in low-carbon commodities

4. Next Steps

Engage with the broader O&G industry

Collect data on all the 10 largest O&G players

Refine methodology

- Incorporate downstream activities
- Non energy products
- "Wind down" scenario

Aim to publish an update to the original O&G paper in September

Continue dialogue with mining sector on comparable approach

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