The Inevitable Policy Response 2022

Balancing Forecasting and Aligning – For Asset Owners

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https://www.linkedin.com/company/inevitable-policy-response
PRI commissioned the Inevitable Policy Response in 2018 to advance the industry’s knowledge of climate transition risk, and to support investors’ efforts to incorporate climate risk into their portfolio assessments.

A research partnership led by Energy Transition Advisers and Vivid Economics conducts the initiative’s policy research and scenario modelling and includes 2Dii, Carbon Tracker Initiative, Climate Bonds Initiative, Planet Tracker and Quinbrook Infrastructure Partners.

The consortium was given the mandate to bring leading analytic tools and an independent perspective to assess the drivers of likely policy action, and the implications on the market.
Who supports the Inevitable Policy Response?

**Strategic partners** consisting of leading financial institutions have joined the IPR in 2021 to provide more in-depth industry input, to further strengthen its relevance to the financial industry.

**Core philanthropic support** since IPR began in 2018. IPR is funded in part by the Gordon and Betty Moore Foundation through The Finance Hub, which was created to advance sustainable finance and the ClimateWorks Foundation striving to innovate and accelerate climate solutions at scale.
How we support Asset Owners

• Provide clarity around “climate scenario” choices
• Highlight the application and integration challenges of the inevitable transition
  – To help implement climate strategy including engagement
• Offer insight into 1.5 degree alignment vs. maximising returns
• Discuss insights into Asset Manager selection, incentivisation, and alignment

All IPR resources are publicly available on the PRI website at: https://www.unpri.org/sustainability-issues/climate-change/inevitable-policy-response
The pressure on institutional investors is at an all time high
Drivers of momentum makes an accelerated forceful policy response more likely

- Extreme weather events
- Impacts on security
- Cheaper renewable energy
- Uninsurable world
- Civil society action
- Financial regulator warnings on stability
- New climate research
- Influence shifting
- New geopolitics of energy
# IPR Policy Forecast Drivers Process

## Core Drivers

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<th>Extreme weather events</th>
<th>Drives pro-active climate policy supplemented by:</th>
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<td>Impacts on security</td>
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<td>Civil society action</td>
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<td>New climate research</td>
<td>General geopolitics of energy</td>
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<td></td>
<td>Financial regulator actions</td>
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<td>Uninsurable world</td>
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## Disruptive unpredictable risks

- Covid 19
- Ukraine
The structure of the IPR framework

Drivers of policy
- Extreme weather events
- Uninsurable world
- New climate research
- Impacts on security
- Civil society action
- Influence shifting
- Cheaper renewable energy
- Financial regulator warnings on stability
- New geopolitics of energy

IPR Policy Forecast
A high-conviction policy-based forecast of forceful policy response to climate change and implications for energy, agriculture and land use

IPR Scenarios

IPR 1.8°C Forecast Policy Scenario (FPS)
A fully integrated climate scenario modelling the impact of the forecasted policies on the real economy up to 2050, tracing detailed effects on all emitting sectors

IPR 1.5°C RPS Scenario
A ‘1.5°C Required Policy Scenario’ (1.5°C RPS) building on the IEA NZE by deepening analysis on policy, land use, emerging economies, NETs and value drivers. This can be used by those looking to align to 1.5°C

IPR value drivers
A set of publicly available outputs from the FPS and 1.5°C RPS that offer significant granularity at the sector and country level allowing investors to assess their own climate risk

Note: IPR analyses transition risk only, not physical risk
Climate transition presents challenges and investment opportunities for Asset Managers

Likely outcomes:
- Reduce emissions at the portfolio level
- Questionable impact in real world without re-allocation of capital to low carbon assets
- Return loss if RPS 1.5 policies do not materialise
- Possible unintended consequences of divestment

Desired and likely outcome:
- Reduce emissions at the portfolio level but less than RPS
- Maximisation of risk and return
- Real world emission reduction aligning with policy materialisation
Key role of service providers

- **Investment Consultants / OCIOs:**
  - Asset Owners should assess their investment consultants’ climate capacity
  - Investment consultants are critical to developing strategies for climate transition
  - Barriers: perception of “risky advice” and going against traditional SAA approaches

- **Ratings Agencies** – Can integrate IPR into ratings analysis ([Fitch](#) already doing so)

- **Data providers** – Can build new offerings integrating IPR public data

- **Index Providers** – Can create new benchmarks and semi-passive product

- **Proxy advisers** – Can make voting recommendation based on IPR realism
The Inevitable Policy Response: Investor Brief for Asset Owners

Scenario market in terms of emissions outcomes in energy related sectors

• Note strong COVID bounce backs for both IPR FPS and IPR RPS
• Delay on NGFS DDT (Disorderly Delayed Transition) is beyond IPR inflection point
• Neither IEA nor NGFS include full land use emissions or sequestration potential

* Data on IEA CO2 pathways are published in 5-year intervals ** IPR FPS 2019 was modelled in 5-year increments
Note: IEA scenario data based on May 2021 Net Zero Emissions report; in WEO2021, IEA APC is renamed Announced Pledges Scenario (APS), with a slightly modified emissions pathway
IPR scenarios in terms of key investor time horizons

* Data on IEA CO2 pathways are published in 5-year intervals ** IPR FPS 2019 was modelled in 5-year increments
Note: IEA scenario data based on May 2021 Net Zero Emissions report; in WEO2021, IEA APC is renamed Announced Pledges Scenario (APS), with a slightly modified emissions pathway
Russia Ukraine War - Implications for IPR

For IPR Forecasts we see four overarching themes at this stage:

1) Reinforcement of medium (3-5 Years?) and long-term term IPR renewable energy and Green Hydrogen policies and sector forecasts

2) Short term (1-2 years) energy supply crisis for EU with many uncertainties and sourcing of Fossil Fuel supplies outside of Russia

3) For the IPR 1.8°C Forecast Policy Scenario this means that the fossil fuel sector supply dynamics will need reassessing eg split between piped natural gas and LNG, geography of origin etc

4) But we do not see any divergence from trend in demand side sectors, if anything an eventual acceleration towards more green outcomes

Note that one potential outcome is an “all of the above” where fossil fuels remain longer in the system as security back up (low-capacity utilisation) and the cost is borne in effect as an energy security cost.
Ukraine-Investor implications for the new geo-politics

- Strong reinforcement of IPR medium term renewables forecasts with good upside – implications for renewable infrastructure and transitioning companies
- Russian exposed debt, sovereign and corporate, requires urgent analysis whilst ratings agencies calculate impact
- Net Zero aligners will miss out on fossil fuel short term boom
- Net Zero alignment even lower probability
- No divergence from trend in demand side sectors, if anything an acceleration towards more green outcomes.
- Non aligners need to beware Capex expansion will be justified in the short term but will increase stranded asset risk
- Engagement - will O&G companies use windfall for transition?
Policy developments are scored using a 10-point scale to indicate magnitude and direction of impact on IPR scenario forecasts

A 10-point scale applied to policy developments to indicate impact on IPR 1.8°C FPS policy forecasts (implications for the 1.5°C RPS policy forecasts can also be drawn)

- 0-1 indicates increasing evidence for deceleration in policy forecast
- 2-4 indicates evidence for deceleration in policy forecast
- 5 indicates no change in policy forecast
- 6-8 indicates evidence for acceleration policy forecast
- 9-10 indicates increasing evidence for acceleration in policy forecast

A similar 10-point scale is applied to energy/land technology developments

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<th>Scale</th>
<th>Details</th>
<th>Impact on policy forecast</th>
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<td>Potential for 10+ year upgrade</td>
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* The IEA’s ‘Stated Policy Scenario’ or STEPS reflects current policy settings based on a sector-by-sector assessment of the specific policies that are in place, as well as those that have been announced by governments around the world.
Between COP 26 and June 2022, majority of energy/land policy & technology developments mostly show confirmation of IPR Forecasts

**Greater likelihood of 2.3°C IEA STEPS* scenario**

**1.8°C IPR FPS**

**Greater likelihood of 1.5°C IPR RPS scenario**

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i. This assessment covers the period from COP 26 to mid-June 2022

ii. The IEA’s ‘Stated Policy Scenario’ or STEPS reflects current policy settings based on a sector-by-sector assessment of the specific policies that are in place, as well as those that have been announced by governments around the world.
## IPR Value Add

<table>
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<th>Characteristics of Scenarios</th>
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<th>Most “aligned” Scenarios</th>
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Example of differences between 1.8°C FPS and 1.5°C RPS in key sector – Unabated Coal

Phase out of existing unabated coal

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* reduction in coal generation as a share of 2020 levels
Example of differences between 1.8°C FPS & 1.5°C RPS in key issue – Deforestation

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<td>11</td>
<td>12</td>
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</tbody>
</table>

Deforestation of natural forest halted through strong and effective command and control policy.

Countries/regions like CAN, GCC, JAP, SA, SK, UK have virtually zero net deforestation.

Carbon pricing and NDC commitments combine to stop net deforestation by 2030. Biggest changes need to occur in BRZ, CSA, INDO, SEAO, SSA.
Achieving 1.5°C with less aggressive action on fossil CO₂ emissions would require substantially more negative emissions technologies (NETs)
The Value Drivers Database Explained

The IPR Value Drivers database is the largest and most comprehensive in the world enabling direct input into investor valuation models

- Data summary:
  - All major jurisdictions covered
  - Annualised data
  - Emissions by GHG type
  - Investment by technology type by jurisdiction by sector
  - Power Demand by fuel type by jurisdiction
  - All major sectors covered
  - Huge Land Use component
  - Price data derived
  - Macro-economic assumptions

- Designed in collaboration with IPR Strategic Partners and Research Consortium Partners
- Will facilitate opportunity to build new wave of product
- Hundreds of thousands of data points

- **Jurisdiction**: 21 world regions including 12 G20 countries
- **Countries**: Australia, Brazil, Canada, China, India, Indonesia, Japan, Russia, South Africa, South Korea, United Kingdom, United States
- **Composite regions**: Central and South America, Eastern Europe, Eurasia, Gulf co-operation Council; Middle East and North Africa, South Asia, South East Asia and Oceania, Sub-Saharan Africa, Western Europe
The Inevitable Policy Response: Investor Brief for Asset Owners

GDP impact: Global

• The majority of negative final impacts are significantly mitigated by 2050 (see the pink line)
• The next 10 years appear to be crucial to cut emissions but also for economic cost to erupt
• FPS’s carbon tax and abatement shocks could have a mild impact in the global economy by 2030 (less than 1.5%)
• This is partly offset by carbon revenue recycling back into the economy (through a combination of debt repayment, transfers, or government investments)

Source: NIGEM based on IPR inputs
Note: Delta is calculated as the relative % difference compared to the baseline scenario; no physical impacts are included in this analysis.
The Inevitable Policy Response: Investor Brief for Asset Owners

IPR Climate transition Integration

START

A
Align with 1.5°C → IPR 1.5°C RPS

B
Maximise risk and return through the transition → IPR 1.8°C FPS

C
BAU: The market will efficiently price the transition

Align portfolio with Science Based Targets by 2025 / 2030

Take pragmatic approach to short term (IPR RPS)

Design Interfaces and data conversion requirements for accepting External Value Drivers

Interface IPR Value Drivers

Conduct valuation analysis through IPR Value Drivers interface

ADIS

Integrate forecasts to adjust existing strategies and/or develop new products

Implement portfolio investment strategy

ASSET MANAGERS

Implement portfolio investment strategy

ASSET MANAGERS

Integrate forecast returns into Strategic Asset Allocation & Manager Selection

Interface IPR Value Drivers

Conduct valuation analysis through IPR Value Drivers interface

Possible early divestment

Divestment

Issue Net Zero Aligned AM Mandates

Value Drivers

Interface IPR

SAFETY

Divestment

Issue Net Zero Aligned AM Mandates

Possible early divestment

Divestment

Issue Net Zero Aligned AM Mandates

Possible early divestment

IPR Climate transition Integration

Make your portfolio transition choice

Maximise risk and return through the transition → IPR 1.8°C FPS

BAU: The market will efficiently price the transition

Do nothing

ASSET MANAGERS

Integrate forecast returns into Strategic Asset Allocation & Manager Selection

Interface IPR Value Drivers

Conduct valuation analysis through IPR Value Drivers interface

Possible early divestment

Divestment

Issue Net Zero Aligned AM Mandates

Possible early divestment

Divestment

Issue Net Zero Aligned AM Mandates

Possible early divestment

IPR Climate transition Integration

Make your portfolio transition choice

Maximise risk and return through the transition → IPR 1.8°C FPS

BAU: The market will efficiently price the transition

Do nothing
Asset Owners - key issues around Net Zero

• **Your Strategy**
  - IPR FPS is focused on real world impact, not portfolio impact. Net Zero portfolio targets can be challenging for portfolio teams to implement
  - Some fiduciary investors struggle with implications of large scale divestment - a blunt instrument that ignores company transition planning
  - Are you prepared to adjust your strategic asset allocation eg from equities to real assets / infrastructure for financial and climate returns?

• **Your Asset Managers**
  - Does giving your asset managers your short term portfolio intensity targets create unintended consequences?
  - Are you incentivising asset managers to go early or wait for clear policy and market signals?
  - What do you do with an asset manager who underperforms their benchmark for several years because they reduced exposure to carbon assets early and before policies and markets adjusted?

• **Your Climate Impact**
  - Divestment is driving assets off market where they can’t be influenced
Asset Owners – How the IPR thinks Net Zero could turn out

- Policies will not arrive in time to drive towards non NETS 1.5°C
- Without the policy progress, non NETS 1.5°C will lose credibility
- Non-divesting Net Zero aligners with 2025 targets will either start to divest or miss their targets
- Some aligners will lose return because of some strong performance by transitioning fossil fuel companies and concentration risk
- Discussion of some Net Zero realities will surely increase:
  - Divestment at scale will accelerate the selling of assets off market where they cannot be influenced
  - Without capital re-allocation to solutions in equal levels to divestment, real climate impact will be minimal - focus will turn to how investors are investing in solutions
  - It will become obvious that NZ aligners will achieve a clean portfolio will be clean but the world climate will be unaffected
  - Aligners will realise their so-called NZ portfolios are actually underpinned and supplied by non-OECD countries with high emissions
- NZ aligning Investment Managers will blame clients and policies
- Focus will turn to how to help non-OECD countries
- Focus will turn to NETS
Conclusion on Net Zero

Logical follow on:

- Engage policymakers on RPS 1.5
- Invest in NETs ASAP
- Invest in value-add infrastructure
- Re-incentivise managers towards medium term
Climate transition theme demands sector and asset class matrix analysis

<table>
<thead>
<tr>
<th>IT</th>
<th>Health</th>
<th>Consumer Discretionary</th>
<th>Financials</th>
<th>Comms services</th>
<th>Industrials</th>
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<th>Real Estate</th>
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</tbody>
</table>

Note: Not market cap weighted and not all sectors have presence in each asset class
The Inevitable Policy Response: Investor Brief for Asset Owners

The portfolio carbon switch by asset class

<table>
<thead>
<tr>
<th>Before</th>
<th>After (including companies in transition)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equities</td>
<td>Equities IPR benchmarks/Active selection</td>
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<tr>
<td>Corporate Fixed Income</td>
<td>Corporate Fixed Income Corporate FI Green Tilt</td>
</tr>
<tr>
<td>Sovereign Fixed Income</td>
<td>Sovereign Fixed Income Sovereign FI Green Tilt</td>
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<tr>
<td>Infrastructure</td>
<td>Infrastructure Value Add Allocation</td>
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<tr>
<td>Real Estate</td>
<td>Real Estate Green Building Stds</td>
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<tr>
<td>Private Equity</td>
<td>Private Equity New Tech, LBO, MBO</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Public Markets</th>
<th>Private Markets</th>
</tr>
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<tbody>
<tr>
<td>Relatively Unexposed</td>
<td>High Carbon</td>
</tr>
<tr>
<td>High Carbon Assets</td>
<td>Green Assets</td>
</tr>
</tbody>
</table>
Key philosophies challenged by the climate transition

• **Fiduciary duty**
  - Restriction on ignoring risk adjusted return maximisation?
  - Licence to act proactively on climate strategy

• **Agency responsibility**
  - Who is responsible for establishing a climate strategy?

Some may consider others such as EMH (Efficient Market Hypothesis) or MPT (Markowitz)
Human issues for asset managers to manage and consider

- Culture
- Behaviours
- Incentives
- Career Risk

Informational barriers to taking action on climate change:
- Data, tools, metrics, scientific evidence, knowledge

Behavioural barriers to taking action on climate change:
- Cognitive biases, psychological underpinnings
Asset Allocation – do we have barriers to investing in emerging markets where the decarbonization opportunities are?

- Note this is only in terms of scope 1 & 2 emissions as OECD “export” emissions to emerging markets through supply chains

- Non-OECD needs substantial investment from OECD to transition
- Potential Sovereign Debt Implications
Key 6 issues for an Asset Owner board

1) If we align with 1.5°C, and start to underperform, what happens?
2) Where is our house view relative to IPR?
3) What degree of climate transition is priced into the market?
4) Do we have the skills and ability to implement this mitigation plan?
5) What are the structural barriers?
6) What human, cultural, behavioural and incentive barriers exist to implementing this mitigation plan?
Whole system view - from asset allocation to company analysis and stock selection

**Asset Owners**

- Traditional SAA start point
- Overlay IPR assumptions
- Flexible portfolio Approach
- High/low carbon Taxonomy

**Asset Managers**

- High/low carbon asset split
- MANAGER SELECTION

**Challenges for Product Development / Integration**

- Possible divestment
- Select hold price
- Add to manager mandate universe

**Example Challenge:**

How do you deal with a utility in transition that might be the most emissions intensive company in its country but also the largest investor in clean energy?

- Companies/assets with credible transitions
- New transition benchmarks
- Active Transition selection funds

- IPR consistent green companies

- Optimal Carbon Risks / opportunities strategy
Issues in manager selection for Asset Owners

• All managers scrambling for solutions and expertise
• How do you and/or your investment consultant assess managers on this issue?
• You want innovative new product from your managers, but you also want:
  – 3 year track record
  – Limited tracking error on equities?
• You want to invest in solutions but:
  – You have limited experience in specialist infrastructure or PE managers
  – You have limits on emerging market allocations (where the emissions are!)
• With so much going in the space, isn’t it easier to ride the status quo?
Using IPR 1.8°C FPS 2021
PACTA Transition Disruption Metric

**Visual representation of the TDM**

- If we align with 1.5 deg and we underperform, what happens?

- **Full mitigation (0):** The portfolio is ahead of the FPS scenario pathway.
- **Managed mitigation (from 0 to 1):** Residual disruption consistent with the effort in years 1 to 5. Over 1, suggests that the portfolio needs to accelerate the transition relative to its current capital stock evolution projections, but this acceleration is in line with historical growth rates of the sector.
- **Managed disruption (1 to 2):** is in line with the FPS acceleration which involves some disruption that is still manageable.
- **Unmanaged or high disruption (over 2):** An unmanaged or high disruption suggests the portfolio is already lagging the FPS scenario benchmark and will involve significant unmanaged disruption over the next decade if / when the FPS scenario materializes.

See: [https://2degrees-investing.org/resource/pacta/](https://2degrees-investing.org/resource/pacta/)

* This visual representation should be considered as an example given that the metric is under construction and may have slight variations.

Period of analysis: 10 years
Start year of analysis: 2021
Example analysis from service providers on Strategic Asset Allocation – 2019 basis

1. Sovereign Debt: USD 6-year (average tenor for USD debt).
2. Corporate Bonds: based on bonds issued by companies within the iShares MSCI ACWI ETF.
3. Private Equity: details on portfolio in PE slide.
4. Real Estate: details on portfolio in Real estate section.
5. Equities: based on the MSCI ACWI ETF.
6. Infrastructure: based on iShares MSCI Infrastructure index.

Source: Vivid Economics (Net-Zero Toolkit)
Examples from 2019 Strategic Asset Allocation analysis

- **Sovereign Debt**: Green impacts from 10Y debt from Canada and the Netherlands.
- **Corporate Bonds**: Green and high carbon indices for Corporate Bonds, Private equity, Real Estate, Equities, and Infrastructure are constructed by applying sector weights to the 90th and 10th percentile of companies (in terms of valuation change in FPS). Sovereign debt Green / high carbon impacts are from 10Y debt from Canada and the Netherlands. Real Estate Green assumes carbon neutral building with no carbon costs, whereas high carbon is average buildings with no abatement.

*Green* and *high carbon* indices for Corporate Bonds, Private equity, Real Estate, Equities, and Infrastructure are constructed by applying sector weights to the 90th and 10th percentile of companies (in terms of valuation change in FPS). Sovereign debt Green / high carbon impacts are from 10Y debt from Canada and the Netherlands. Real Estate Green assumes carbon neutral building with no carbon costs, whereas high carbon is average buildings with no abatement.
Thank you!

Please see PRI website for further details:

https://www.unpri.org/climate-change/what-is-the-inevitable-policy-response/4787.article

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Policies with the greatest 2020-2050 Gt reduction between IPR 1.5°C RPS and IPR FPS 2021

<table>
<thead>
<tr>
<th>Rank</th>
<th>Policy</th>
<th>Country</th>
<th>IPR 1.5°C RPS vs IPR 1.8°C FPS (2021 Gt reduction)</th>
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<tr>
<td>1</td>
<td>Coal phase out</td>
<td>China</td>
<td>40.0</td>
</tr>
<tr>
<td>2</td>
<td>End deforestation and NBS</td>
<td>Sub-Saharan Africa, South East Asia and Latin America</td>
<td>19.0</td>
</tr>
<tr>
<td>3</td>
<td>100% clean industry</td>
<td>China</td>
<td>19.0</td>
</tr>
<tr>
<td>4</td>
<td>Coal phase out</td>
<td>India</td>
<td>14.1</td>
</tr>
<tr>
<td>5</td>
<td>100% clean industry</td>
<td>India</td>
<td>8.3</td>
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<tr>
<td>6</td>
<td>100% clean industry</td>
<td>MENA</td>
<td>7.2</td>
</tr>
<tr>
<td>7</td>
<td>100% clean power</td>
<td>MENA</td>
<td>6.7</td>
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<td>8</td>
<td>Fossil vehicle phase out</td>
<td>China</td>
<td>6.3</td>
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<tr>
<td>9</td>
<td>Coal phase out</td>
<td>Indonesia</td>
<td>5.4</td>
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<tr>
<td>10</td>
<td>100% clean industry</td>
<td>South East Asia</td>
<td>5.2</td>
</tr>
</tbody>
</table>

Note: Emissions reduction are approximate and include some additional sector-specific CO₂ reduction such as energy efficiency.

Reduction is also substantial for OECD countries e.g. for the United States accelerated 1.5°C RPS policies deliver:
- 20 GtCO₂ reduction beyond FPS across all policies
- 4.9 GtCO₂ reduction beyond FPS for 100% clean industry policy

Reduction is also substantial for methane and nitrous oxide emissions that result from accelerated 1.5°C RPS policies related to animal protein demand:
- 24 GtCO₂eq reduction beyond FPS across all countries
- 4.3 GtCO₂eq reduction beyond FPS in India alone
IPR role for investors in the climate landscape

**Investor Action**
- **IPR**
- **TCFD/NGFS**
- **CA100+**
- **COP26**
- **Net Zero Alliances**
- **Divest / Invest**

**Corporate Engagement**
- Can be used in engagement

**Investment**
- IPR creates a realistic outlook for investors

**Disclosure**
- Can be used as a reporting standard

**Policy Advocacy**
- Forecasts inform policymakers
- IPR brings realism to TCFD scenarios – already being used in PRI reporting
- IPR focuses policymakers on the inevitable

**IPR Required Policy Scenario**
- IPR uses risk framework to drive capital “recycling” within portfolios
The IPR Forecast Policy Scenario (FPS) forecasts higher policy ambition across eight policy levers

In March 2021, the IPR FPS update was informed by a rigorous evidence review and large-scale survey of country climate policy experts

<table>
<thead>
<tr>
<th>Carbon pricing</th>
<th>Coal phase-out</th>
<th>100% clean power</th>
<th>Zero emission vehicles</th>
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<tbody>
<tr>
<td>● Carbon taxes</td>
<td>● Prohibiting regulations</td>
<td>● 100% clean power targets</td>
<td>● 100% zero emission vehicle (ZEV) sales legislation</td>
</tr>
<tr>
<td>● Emissions trading systems</td>
<td>● Emissions performance standards</td>
<td>● Renewables capacity auctions and other support policies</td>
<td>● Manufacturer ZEV obligations</td>
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<tr>
<td>● Border carbon adjustments</td>
<td>● Electricity market reforms</td>
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<td>● ZEV consumer subsidies</td>
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<table>
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<tr>
<th>Low-carbon buildings</th>
<th>Clean industry</th>
<th>Low-emissions agriculture</th>
<th>Forestry</th>
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<tbody>
<tr>
<td>● Prohibiting regulations for fossil fuel heating systems</td>
<td>● Emissions performance standards for industrial plant</td>
<td>● Methane or nitrous oxide emissions tax or cap-and-trade system</td>
<td>● Strong policy action against deforestation, such as monitoring and penalties, supported by consumer pressure</td>
</tr>
<tr>
<td>● Purchase subsidies for low-carbon heating systems</td>
<td>● Subsidy for new or retrofit clean industrial processes</td>
<td>● Subsidy for low-emissions agricultural practices and technologies</td>
<td>● Incentives for reforestation and afforestation via domestic action and carbon markets</td>
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<tr>
<td>● Thermal efficiency regulations for new build and retrofit</td>
<td></td>
<td>● Farmer education and technical assistance programmes</td>
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<tr>
<td>● Minimum energy performance standards for new appliances</td>
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</table>

Source: IPR (2021)
The implications of company transition challenge

**Drivers of Transition**

- Policy
- Shareholder Engagement / Management Incentives
- Reputation

**Company X**

**A**
- Resist Transition

**B**
- Decision to transition
  - Decision to wind down

**C**
- Produce Transition Strategy

**Transition Options**

- Merge/MBO / LBO
- Sell Assets
- De-list
- Enter new markets
- Buy assets from PE / Infrastructure
- Restructure capital base
- Issue Transition / Green Bonds

**Investor Due-Diligence**

- Is the transition strategy credible?
- Does the transition strategy occur quickly enough?
- Do we trust the company to execute the strategy?