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Major new policy forecast commissioned by PRI shows rapid policy acceleration by 2025 would bring 'below 2C' Paris Agreement within reach

Pursuing 1.5C requires immediate ramp up in Energy & Land Use policy action: electrify transport, retire coal, end deforestation

- As the world prepares for COP26, a comprehensive policy forecast commissioned by the $120 trillion UN supported Principles for Responsible Investment (PRI) forecasts a dramatic acceleration of climate policy is likely by the 2025 Paris Ratchet, which could result in warming being held to below 2C.

- The Inevitable Policy Response (IPR) Forecast Policy Scenario anticipates that the combination of investor, corporate and civil society pressure around Net Zero, climate impacts, volatile weather patterns and low-carbon technology developments over the coming years will push policymakers to make the changes necessary to reach a below 2C pathway by 2025.

- The 2021 Forecast Policy Scenario (FPS) outlines how sweeping policy changes in the next decade will lead to a transformation across the energy system, including:

    - Zero emissions vehicles make up around 30% of all vehicles on the road by 2030, accelerating the demise of oil, which is already near its all-time peak, and declines significantly after 2026/27.
    - Wind and solar power will represent over 30% of global electricity generation by 2030, over triple today's levels (around 10%).

- Rapid changes in the food and land systems, often overlooked in climate scenarios, also play a critical role. Huge shifts in food production see land use becoming a net carbon sink within 30 years as the world reaches 'peak meat' consumption in 2030, and Nature Based Solutions (NBS) accelerate.

- But despite rapid transformation, these forecasted changes would still not be enough to hold warming to 1.5C with Net Zero in 2050, which requires greater action, sooner.

- Brand new analysis via a Required Policy Scenario (RPS) highlights the key actions to deliver a 1.5C outcome, including:

    - An end to deforestation across the entire globe, ideally by 2025. If not, the energy system has to absorb greater reductions, potentially through BECCs. (Bioenergy and CCS)
    - Crucially, unabated coal fully decommissioned in China by 2035.
    - Phase out of new fossil cars in almost all markets by 2040 and transition to 100% clean power globally by 2045.

- Drawing on insights from two hundred global policy experts, the 2021 analysis provides for the first time from IPR a full regional breakdown which reveals complex and divergent landscape for policymakers and investors.

- In particular China stands out, accounting for 30% of forecast global emissions by 2050. Emissions are forecast to peak in the mid-2020s as a solid start to the task of reduction.

- Following progress in the last year leading up to COP 26, IPR expects accelerated policy ambition spanning the 2023 Paris Stocktake and 2025 Ratchet. The IPR consortium endorses the IEA's call for the COP 26 to send an "unmistakable signal of ambition and action" in the coming weeks.

LONDON: 18/10/2021: 00:00 GMT: As part of the Inevitable Policy Response (IPR) programme, the UN-supported Principles for Responsible Investment (PRI) today releases a major new forecast of accelerated climate policy before 2025, which shows achieving the Paris Agreement of well below 2C is possible if policy makers build on the current national decarbonisation plans with significant but realistic policy action.

In the run up to COP 26, global action to combat climate change remains far from sufficient. But the new global IPR Forecast Policy Scenario (FPS) - which provides a high conviction forecast of likely policy developments and assesses the impact on the real economy - finds that a significant acceleration in climate policy by 2025 is likely.

Building on the influential 2019 Forecast, which helped reset how investors approach climate policy risk and opportunity, this year's FPS update covers 21 major economies at a granular level and sees total CO2 emissions fall by 80% by 2050, giving a one in two chance of keeping warming to well below 2 degrees at (1.8 degrees).

Reductions in emissions are driven by forceful policy in the 2020s across the energy and, crucially, food and land systems:

- Energy sector emissions fall 75%, from around 34 GtCO2 in 2020 to around 9 GtCO2 in 2050.
- Land sector emissions fall 125%, from around 6 GtCO2 in 2020 to around -1 GtCO2 per year by 2050, returning land to be a net CO2 sink.

But there is a lag before full effects are realised. Absolute CO2 emissions are forecast to fall slightly to 2030, in line with countries' current Nationally Determined contribution (NDC) commitments, in contrast to the last decade where emissions grew by 16%.

Emissions peak in mid 2020s and then an inflection point in the rate of reduction is reached in 2030, as post 2025 policy implementation comes into force and older, fossil technologies are replaced by clean alternatives, which begin to dominate.

2023-25: A policy tipping point

The Forecast Policy Scenario is based on a detailed review of key climate policy developments in all major countries alongside an extensive survey of 200+ leading experts in national climate policy.

Analysts found the doubling of net zero commitments by countries, now representing 70% of global GDP, have made a forceful and accelerated policy response to climate change even more likely than before the pandemic: 48% of 124 forecasts show higher policy ambition, and only 6% lower, versus IPR's 2019 outlook.

The forecast finds the period of 2023 to 2025 will become a key trigger moment with two major pressure points converging to pressure governments to accelerate forceful policy:

1. In 2025, countries under the Paris Agreement submit their third round of climate pledges following the Global Stocktake in 2023, which will detail just how far the world is from meeting the Paris goals and act as a crucial forcing mechanism for governments to accelerate policy.

2. At the same time, as technology costs fall and the realities and impacts of climate change become increasingly visible, civil society, business and investor pressure on governments will increase around the globe.

Sweeping transformation across major sectors

As key regions and countries will be pushed to stock-take and convert commitment into action, every major sector will be transformed, deeply disrupting established industries and economies:

1. Rapid transformation of the energy system
   - Global use of all fossil fuels (Oil, coal, and natural gas) will fall 60% by 2050.
   - Oil demand is already near its all-time peak, and will drop after the mid-2020s, driven by the mass transition to electric vehicles.
   - Demand for coal will fall by around 75% by 2050, due to less use by the power industry.
   - Wind and solar power will represent over 30% of electricity generation by 2030 and will be the primary sources of power generation (accounting for over 60% of the mix) by 2050.

2. Seismic shift in transport within this decade
   - Fossil fuel-powered vehicles peak in 2025 and fall out of production by 2050 as people rapidly switch zero emission vehicles which account for around 30% of all cars on the road by 2030.
   - Global truck fleet will decarbonise more slowly but will still be almost fully decarbonised by 2050 as the fleet transitions to electric and hydrogen fuelled vehicles.

3. All sectors will see reductions in CO2 emissions, but some remain difficult to decarbonise
   - CO2 emissions from the power sector will decline rapidly and steadily until 2050.
   - Although transport emissions will continue to rise until mid-2020, they will decrease sharply towards 2050
   - In industry the fall in emissions is less rapid; as the limited options and technical immaturity of low-carbon solutions means the costs of decarbonising industry are typically higher than for power and transport. By 2050 CO2 emissions fall around 45% and account for the largest share of remaining emissions

Food and Land Use: Peak animal meat by 2030

Unlike many climate models IPR addresses a major blind spot by integrating the food and land use system and modelling its interaction with the energy system and real economy. This reveals how critical often-overlooked assumptions on food and land use emissions and Nature-Based Solutions (NBS) are to achieving climate goals.

The analysis finds:

- Meat consumption will peak by 2030 globally and will rapidly decrease after alternatives become cost competitive by 2035. 400 million hectares of pasture and rangelands will be replaced with forests, cropland and NBS globally by 2050.
- These changes mean land will be a net CO2 sink before 2050 and will yield 7Gt of emissions reductions by 2050 compared to 2020 values. A 4.7Gt reduction will come from NBS that remove carbon from the atmosphere, and the rest will come from avoiding deforestation.
- Together negative emissions (forestry, mangroves, agroforestry, among others) and avoided deforestation projects will lead to an investment opportunity with an estimated $167bn annual revenue by 2050, with China having the highest potential cumulative NBS deployment to 2050

Closing the gap to 1.5C: The Required Policy Scenario (RPS)

Even with this rapid transformation, the forecasted changes in the FPS would not yet be enough to keep warming to 1.5C – the temperature scientists have shown to be critical to avoiding the worst impacts and most costly effects of climate change.

The 2021 Forecast Policy Scenario (FPS) is IPR's current assessment of what is expected to happen, in terms of future policy developments and the subsequent impact on emissions reduction and temperature outcomes.
To bolster policy advocacy around the world and help prepare the $90 trillion of banks and investors committed to align with net zero by 2050 ambition, the IPR has developed the new 1.5C Required Policy Scenario (RPS).

The 2021 1.5C Required Policy Scenario (RPS) is IPR's current assessment of future policy developments needed to accelerate emissions reduction and hold global temperature increase to a 1.5 Degree outcome.

The new 1.5C RPS is comparable to the IEA Net Zero Emissions (NZE) Scenario, but by deepening the analysis of the food and land systems provides the first roadmap of policies needed across both the energy and land use systems to hold temperature increases to 1.5C.

In the FPS, rising carbon prices play a key role in driving change through the economy. But analysis suggests it would not be politically feasible to drive carbon markets and carbon pricing further, and rapidly enough to achieve the required shift.

Accordingly, to push for 1.5C, governments around the globe would need to pursue immediate policy action which directly intervenes in markets to set performance standards, including strict bans, to drive a step change in the energy system:

- Phase out new fossil cars in almost all markets by 2040.
- Transition to 100% clean power globally by 2045.
- Eliminate unabated coal in most advanced economies including China by 2035.

An end to deforestation

The food and land use system again proves to be critical. In the 1.5C Required Policy Scenario ending deforestation by 2025 puts the planet on a path to 1.5C. This could be driven by stronger government intervention in the food system – further integrating carbon price across agriculture; subsidising the development of plant-based and cellular meat; running large education programs to drive consumer shifts while directly limiting consumption of animal protein.

Failure to pursue such significant policy changes within the next two years would leave a significant ramping up of Negative Emissions Technologies (NETS) in the 2030s as a potential alternative to keep warming to 1.5C. But given food and land use constraints, and the fact that many technologies are unproven at scale, pushing beyond the already forecasted acceleration in Nature Based Solutions would also require significant and urgent policy support.

Holding at 1.5C requires significant ratchet in policy action across major regions

At a regional level, the 1.5C Required Policy Scenario analysis uncovers a significant gap between forecasted policy action and what would be required for the world to reach 1.5C, particularly in the major emitting nations:

- The USA faces the most urgent need to decarbonise in the OECD. The FPS suggests it will meet its current 2030 NDC. However, under 1.5C Required Policy Scenario emissions from industry would need to fall to half of FPS levels by 2035, a 60% reduction on 2020.

- The 2021 FPS predicts China, which today generates more emissions than the OECD combined, will reach peak emissions in 2025 to beat its current target of 2030.

- However, to reach 1.5C, the Required Policy Scenario highlights the importance bringing forward the end of unabated coal use to 2035, ten years sooner than FPS currently forecasts it will take place.

- In Brazil, the challenge remains the end to deforestation on any time frame. The FPS predicts and end by 2030, but the 1.5C Required Policy Scenario highlights need for end as soon as 2025.

- India is currently forecast to take until 2060 to achieve 100% clean power but under the 1.5C Required Policy Scenario shows a need for a more rapid transition by 2045 at the latest.

Achieving 1.5C requires rapid change at a truly global level and the RPS analysis highlights that policy acceleration in developing nations will be especially critical, reinforcing the importance of significantly increasing climate finance to developing countries and investing in the energy and land use transitions in these countries from both the public and private sector in the coming years.

Next Steps for Investors

IPR is working with its strategic partners, including BlackRock, BNP Paribas Asset Management and Nuveen to define which data elements are key for asset owners and managers for application in company and sector valuation models.

In November, IPR in conjunction with the PRI will publish its next significant update, an investor-based announcement, releasing the FPS & RPS Value Drivers Database for both Energy Systems and Food and Land Use forecasts, including an array of open-source tools including full data sets for investors to produce portfolio level analysis.

Fiona Reynolds, CEO, Principles for Responsible Investment (PRI):

"Global finance has an increasingly vital role to play in rapidly moving capital markets and corporations towards sustainable outcomes. IPR is now a significant tool for investors committed to making that a reality."

"IPR scenarios for investors encompass both the large-scale market shifts to come in carbon, energy and land use as well as invaluable granular analysis to help guide investment directions. The 2021 IPR forecasts signal to investors that they must focus on the transition, 2030 and net zero pathways and the investment opportunities emerging as policy makers respond to growing climate challenges."

Ashley Schulten, Head of ESG Investment, Global Fixed Income, BlackRock:

"BlackRock believes climate risk is investment risk and assessing climate risk on the path to net zero requires credible scenarios outlining not only what is possible but what is likely. The detailed policy forecasts in this work help the market conceptualize the key changes that could occur in energy and land systems across the world if the forecasted climate policy acceleration occurs. We look forward to partnering with PRI and other financial sector participants to further hone the data and analytics that will be most helpful in constructing these scenarios and making informed investment decisions."

Alex Bernhardt, Global Head of Sustainability Research, BNP Paribas AM:

"Forward-looking scenarios are critical in a changing world. This new analysis from IPR provides a wealth of information to support company and sector analysis, portfolio construction and guide stewardship initiatives as we navigate the economic transition underway.

"The discrepancy between the Forecast and Required Policy Scenarios reiterates the fact that we're not going to get to 1.5C without serious action: companies, investors and governments committed to achieving net zero by 2050 must accelerate their efforts now more than ever. That is the key message heading into COP26."

Alex Griffiths, Managing Director, Head of Corporate Ratings, EMEA, Fitch Ratings:
“We believe that the detailed policy assumptions underpinning the IPR FPS are a real advantage for those interested providing credible forecast outcomes for sectors and companies. The 2021 reforecast brings it up to date with the latest policy announcements and a refreshed set of assumptions around how the world might tackle the climate crisis.”

Carola van Lamoen, Head of Sustainable Investing, Robeco:
“Things are heating up over the next few years. That’s the central view of Robeco’s recent 5-year Expected Returns report titled The Roasting Twenties and today’s IPR forecast only underlines that view. IPR provides a detailed, realistic forecast of how governmental climate policies will gear up towards a policy trigger point between 2023 and 2025. Alongside the role of central banks, Robeco considers climate change a key factor in the build up of “the roasting twenties.”

Radha Kuppalli, Managing Director, Impact & Advocacy, New Forests:
“The latest IPR forecasts demonstrate how critical sustainable land use is to achieve the Paris Agreement. To ensure land use is central to net zero, investors have the opportunity to engage, invest, and innovate: engage in policies that support deforestation-free supply chains; invest in sustainable forestry and agriculture and in food system transformation; and innovate through exposure to new markets, such as carbon finance-driven reforestation and landscape restoration. Over the next 10 years investment needs to create climate-positive landscapes integrating conservation, restoration, and sustainable production.”

Jakob Thomae, Managing Director, 2° Investing Initiative:
“The new forecast by the IPR is both cause for hope and a call to action, showing that the Paris goals remain in reach but only with sweeping changes in energy and land use. This will require concerted action by government and the financial industry to shift regulation and financial flows to help close the gap to 1.5C. We’re proud to contribute to this important work by integrating the new IPR scenarios into the PACTA portfolio alignment tool as well as our new stress-testing module.”

Robin Millington, CEO, Planet Tracker:
“The Inevitable Policy Response challenges corporates and investors to seriously think about the 1.5C pathway and consider the extensive transformation required by many sectors of the economy. The inclusion in their models of rapid changes in the land system, which is often ignored in climate scenarios, demonstrates the value of this significant tool from the IPR.”

Sean Kidney, CEO, Climate Bonds Initiative:
"We're moving into a world of huge economic and industrial changes, fuelled by the ambitious emission reduction targets of now every major economy. The Inevitable Policy Response is our window into that future."

Mark Campanale, Founder & Executive Chair, Carbon Tracker:
“The IPR’s Forecast Policy Response highlights that it is viable to electrify the majority of global transport fleet by 2040, whilst also transitioning to 100% global clean power by 2045. The technologies to achieve this are available now, but we need stronger, explicit policy signals and immediate investor action.”

“With global use of all fossil fuels (Coal, O&G) needing to halve by 2050, IPR’s conclusions underpins the IEA’s 1.5C Net Zero scenario which says no new investment is needed, anywhere, in new fossil fuels. Investors should act accordingly, withdraw financing of stop financing planned expansion in fossil fuel infrastructure, and cease all participation in fossil fuel IPOs, new bond issues and syndicated loans.”

Ends

<Notes to Editors>

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About Inevitable Policy Response (IPR): The IPR is a climate forecasting consortium that aims prepare institutional investors for the portfolio risks and opportunities associated with a forecast acceleration of policy responses to climate change. IPR contends that governments will be forced to act more decisively than they have thus far, leaving financial portfolios exposed to significant transition risk.

The IPR was commissioned by the Principles for Responsible Investment (PRI) in 2018 and is amongst international investor based initiatives supported by the PRI.

The IPR is led by Vivid Economics and Energy Transition Advisors (ETA). Existing research consortium partners also include 2° Investing Initiative, Carbon Tracker Initiative, Climate Bonds Initiative and Planet Tracker.

Strategic Partners to IPR include BlackRock, BNP Asset Management, Fitch Ratings, Goldman Sachs Asset Management, New Forests, Nuveen and Robeco.

IPR has been funded by the Gordon and Betty Moore Foundation through The Finance Hub which was created to advance sustainable finance, ClimateWorks Foundation and the KR Foundation. IPR receives in-kind support from the PRI.

IPR provides two core scenarios for institutional investors and policy makers:

The Forecast Policy Scenario (FPS):
Unlike other climate scenarios that are reverse-engineered from a pre-defined temperature goal, the Forecast Policy Scenario works up from a high-conviction policy forecast based on a detailed, realistic and probabilistic assessment of policy and technology developments, considering current institutional and behavioural limitations.

To help prepare markets and investors IPR then models in detail the impact of the forecasted policies on the energy system, food land use system and real economy. The FPS provides investors with a unique tool for navigating a complex, evolving policy and regulatory landscape to enhance portfolio resilience and inform strategic asset allocation.

The 2021 Forecast Policy Scenario (FPS) is IPR's current assessment of what is expected to happen, in terms of future policy developments and the subsequent impact on emissions reduction and temperature outcomes.

The 1.5 Required Policy Scenario (RPS):
Momentum has grown around the world in support of reaching Net Zero by 2050 to result in 1.5C of warming with minimal use of Negative Emissions Technologies and CCS. To bolster policy advocacy around the world and help prepare the $90 trillion of banks and investors committed to align with this ambition, the IPR has this year developed the new Required Policy Scenario (RPS).

This builds on the IEA's Net Zero Pathway (NZE) by deepening the analysis of policy, land use, emerging economies and NETs to provide the first roadmap of policies needed across both the energy and food land use systems to hold temperature increases to 1.5C. Unlike the FPS, the 1.5C RPS scenario works back from the goal of reaching 1.5C and asks what would be needed to get there, rather than what is likely to unfold given current political realities.

The 2021 1.5C Required Policy Scenario (RPS) is IPR's current assessment of future policy developments needed to accelerate emissions reduction and hold global temperature increase to a 1.5 Degree outcome.

IPR Forward Program: In November 2021 IPR will be releasing:
IPR FPS 2021 Detailed Energy & Land System Value Drivers for investors
1.5C RPS Detailed Energy Systems & Land Systems Results & Value Drivers for investors
IPR FPS 2021 & 1.5C RPS Investor Report

About the PRI: The Principles for Responsible Investment works to understand the investment implications of environmental, social and governance (ESG) factors and to support its international network of investor signatories in incorporating these factors into their investment and ownership decisions. The PRI acts in the long-term interests of its signatories, of the financial markets and economies in which they operate and ultimately of the environment and society as a whole. Launched in New York in 2006, the PRI has grown to more than 4,300 signatories, managing over US $121 trillion AUM.

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