



Quarterly
Forecast Tracker
Global progress against
IPR policy scenarios

Quarterly Forecast Tracker

Update of global energy/land policy and
technology developments




Q2 2023

July 13, 2023



IPR HAS DEVELOPED HIGH-CONVICTION POLICY-BASED FORECASTS OF FORCEFUL POLICY RESPONSES TO CLIMATE CHANGE AND IMPLICATIONS FOR ENERGY, AGRICULTURE AND LAND USE, ACROSS TWO SCENARIOS

Please see the IPR [Home Page](#) on the PRI website for further details

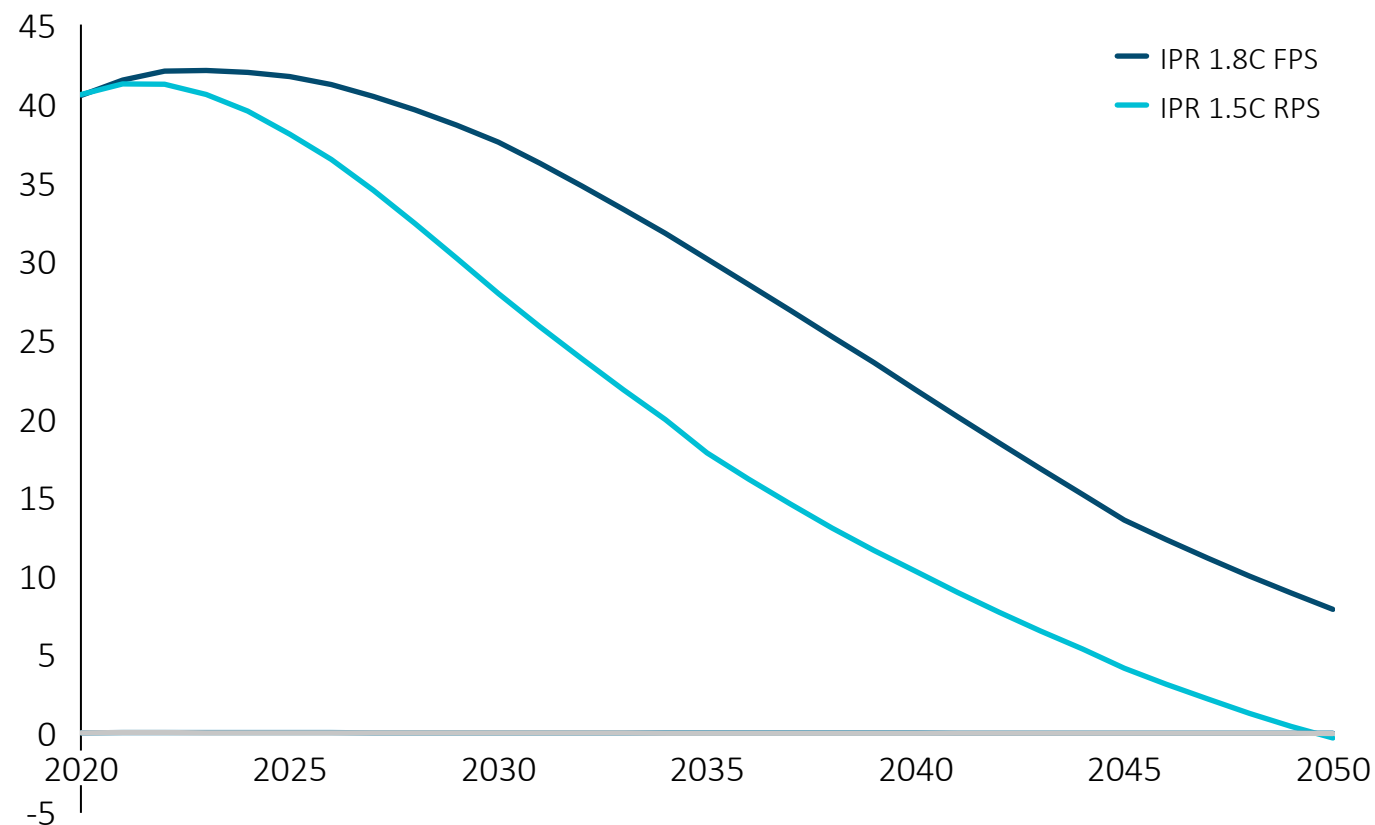
Scenario	Policy Forecast Details	Open Access Database
 <p>IPR 1.8°C Forecast Policy Scenario (FPS)</p> <ul style="list-style-type: none"> Models impact of forecasted policies on the real economy Global emissions fall by 80% by 2050, aligned with warming below 2C (1.8°C) 	<p>IPR 1.8°C FPS Policy Details</p> <p>IPR 1.8°C FPS Energy and Land Use System Results Summary</p> <p>See Appendix for summary of key FPS forecasts</p>	<p>IPR FPS 2021 Value Drivers</p>
 <p>IPR 1.5°C Required Policy Scenario (RPS)</p> <ul style="list-style-type: none"> Required policies to align to a 1.5°C objective building on the International Energy Association’s Net Zero scenario and deepening analysis on policy, land use, emerging economies and value drivers 	<p>IPR 1.5°C RPS Energy and Land Use System Results including Policy Details</p> <p>See Appendix for summary of key RPS requirements</p>	<p>IPR RPS 2021 Value Drivers</p>
 <p>IPR Forecast Policy Scenario + Nature (FPS + Nature)</p> <ul style="list-style-type: none"> First integrated climate and nature scenario for use by investors 	<p>IPR FPS + Nature Detailed Results</p>	<p>IPR FPS + Nature Value Drivers</p>

IPR has published a set of publicly available outputs from the 1.8°C FPS and 1.5°C RPS that offer significant granularity at the sector/country level, allowing investors to assess their own climate risk across 4,000+ variables

THE IPR FPS (2021) RESULTS IN TOTAL CO₂ EMISSIONS (LAND AND ENERGY) EQUATING TO 1.8°C. THE IPR 1.5°C RPS REQUIRES EMISSIONS BELOW ZERO BY 2050

Inevitable Policy Response 1.8°C FPS and 1.5°C RPS scenarios

Billion metric tons CO₂-equivalent (MtCO₂e)



- IPR's **Forecast Policy Scenario (FPS)** models the impact of forecasted policies on the real economy, where global emissions fall by 80% by 2050, aligned with warming below 2°C (1.8°C).
- **IPR 1.8°C FPS (2021)** sees emissions rising **in the short term** through 2025/6 before they start declining. **IPR 1.5°C RPS (2021)** declines slightly by 2025.
- IPR forecasts policy action **by 2025** that drive momentum from then through to 2050.
- When we assess **quarterly policy developments in the QFTs** we do this against **these longer-term outcome forecasts**.

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SIGNIFICANT POLICIES IN Q2 ARE CONSISTENT WITH THE POLICY AMBITION EXPECTED IN THE FORECAST POLICY SCENARIO



The EPA proposed **expanding emissions standards to include existing coal fired plants and some gas-fired plants**. The proposed emissions standards for fossil fuels power plants will phase out unabated coal by 2040 at the latest. In addition, some states enacted new state-level policy, including New York's ban on fossil fuel heating and California's policy for 100% zero-emissions heavy duty vehicles.



The **European Parliament and the Council of the European Union approved a series of new legislation**. These laws include **Fit for 55 measures**, developing a CBAM on imports in carbon-intensive industries starting from 2026 and creating a new ETS for buildings and road transport to begin from 2027. The EU Council and Parliament also adopted new regulation to **reduce deforestation in supply chains** by requiring importers of some agricultural products to ensure that their products have not contributed to deforestation, with the main obligations to be applicable from December 2024.



The Brazilian government unveiled details on how it **plans to meet President Lula's pledge to achieve net deforestation in the Amazon by 2030**. The government's Action Plan outlines policy strategies across more than 12 ministries through to the end of Lula's term in 2027. Brazil's government has stated that deforestation fell by 33.6% in the first six months of Lula's administration compared to the same period in 2022.



Japan announced a target to invest roughly **US\$107 billion in the hydrogen industry over the next 15 years**. The government pledged to provide roughly half of this investment, while the private sector is expected to invest the remainder. Japan also announced **new targets for expanding carbon capture, utilization and storage**, selecting seven projects that could store 13 mil Mt/year CO2 by 2030.



Australia published its **National Electric Vehicle Strategy**, which aims to increase electric vehicle (EV) supply, encourage EV demand, create infrastructure to enable EV uptake, and includes a commitment to introduce a light vehicle fuel efficiency standard. The Government is holding public consultations before finalizing the fuel efficiency standard.

INDUSTRY POLICY DEEP DIVE: SEVERAL COUNTRIES HAVE ANNOUNCED NEW FUNDING OR TARGETS TO SUPPORT GREEN HYDROGEN AND CCUS



Green hydrogen



The Australian Government has created the Hydrogen Headstart initiative with around **\$1.3 billion USD in funding for large-scale green hydrogen production.**



The US government has published a **strategic framework for achieving large-scale use and production of clean hydrogen**, setting a target for 10 million metric tonnes annually by 2030 for domestic clean hydrogen production



Japan announced that it aims to invest **\$107 billion USD** in the hydrogen industry over the next 15 years. Japan also set a target of **12 Mt of yearly hydrogen supply by 2040**, a sixfold increase from the country's current supply.



India announced a **\$4.3 billion USD investment in clean energy**, with a share of this funding earmarked for green hydrogen.



Carbon capture and storage



Japan approved seven CCS projects which are projected to collectively **store 13 mil Mt/year CO2 by 2030.**



Canada's 2023 federal budget includes around **\$380 million USD in new subsidies for CCUS.**



The European Commission proposed the Net Zero Industry Act which includes CCS as one of eight types of **strategic net zero technologies**. The Act sets a target of **50 million tonnes of annual CO2 storage capacity by 2030.**

POLICY DEVELOPMENT DEEP DIVE: THE EPA HAS PROPOSED NEW EMISSIONS STANDARDS FOR FOSSIL FUEL POWER PLANTS THAT WILL PHASE OUT UNABATED COAL BY 2040 AT THE LATEST

The standards extend to cover all coal plants, all new gas plants, and some existing gas plants²

- Currently covered by EPA
- Additional with new proposal

New coal fired power plants



- Plants must meet an **emissions standard** in line with **40% carbon capture**
- The standard for new coal generation has been **in place since 2015**
- The regulation remains unchanged given that **no new coal plants are expected to be commissioned**

Existing coal fired power plants



- Plants must meet **emissions standards** in line with:
 - **90% carbon capture** by **2030** for plants **operating beyond 2040**
 - **Co-firing with 40% natural gas** by **2030** for plants that pledge to **retire before 2040**
 - Maintaining a **constant emission rate** for plants that commit to **retire before 2035** and operate with a **capacity factor of 20% or lower** or plants that **retire before 2032**

New natural gas stationary combustion turbine



- **All plants** must meet a **generation efficiency** standard upon start up
- **Intermediate and baseload** plants must meet a **second standard** based on:
 - **Co-firing with 30% low-carbon hydrogen** by **2032** for **intermediate load plants**³
 - **90% carbon capture** by **2035** or **co-firing with 30% low-carbon hydrogen** by **2032** & **96% by 2038** for **baseload plants**⁴

Existing natural gas turbine plants



- Applies to plants that are **>300 MW** with a **capacity factor >50%**
- **20-30% of existing natural gas** capacity in the US is **covered** by the standard
- Covered plants must meet an **emission standard** based on either:
 - **90% carbon capture** by **2035**
 - **Co-firing with 30% low-carbon hydrogen** by **2032** and **96% by 2038**

EPA estimated climate and health impacts



617 Mn

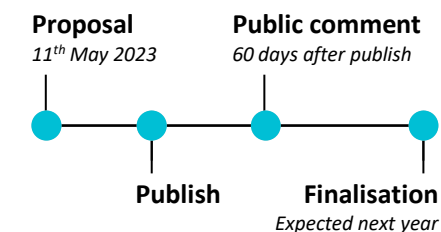
Metric tonnes
CO₂ avoided by
2042⁵

\$85 bn

Public health
benefits
by 2042

Source: [EPA](#) analysis

Timeline



1. Environmental Protection Agency

2. Complete plant names are as follows: new (existing) coal plants -> New (Existing) Fossil Fuel-Fired Steam Generating EGUs, new (existing) natural gas plants -> New (Existing) Fossil Fuel-Fired Stationary Combustion Turbines

Source: United States Environmental Protection Agency [source1](#), [source2](#); Technical Summary of proposal [source](#).

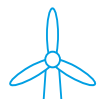
3. Capacity factor between 20% and a site specific upper bound

4. Capacity factor greater than site specific upper bound

5. For standards covering existing coal and new natural gas plants



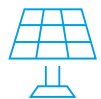
Multiple announcements support or in some instances suggest an acceleration in innovation, deployment and cost reduction, especially in renewables



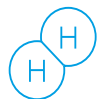
Increase in renewables deployment observed worldwide supportive of 1.8 FPS outlook and in some regions such as the UK, the USA and China, there is evidence of acceleration in the medium term is emerging



Increased investment in infrastructure and storage capacity to manage increasingly decarbonized grid and EV penetration



Continued innovation in solar and wind technologies, including new technologies and announcement for large projects signal an acceleration relative to 1.8FPS



Continued innovation in hydrogen technologies, including electrolysis, new strategies and announcement for large projects signal an acceleration relative to 1.8FPS



Innovation and advancement of regulatory approvals in alternative proteins continue to grow

IPR QUARTERLY FORECAST TRACKER METHODOLOGY



IPR categorizes policy announcements according to the following:

- **Legislated** covers any enforceable or funded policy from policymakers or regulators
- **Announced** but not yet legislated



Legislated or announced policies can:

- **Be supportive** of our policy forecasts, but where further strengthening of policies may be required
- **Be confirmatory**, or align closely with 1.8°C FPS forecast thereby moving the forecast into current policies
- Signal an **acceleration** or **deceleration** in policy forecast



In addition to legislated policy, IPR policy forecasts rest on a view that selected announced policies that are supportive or confirmatory will either become directly legislated or impact the real-world economy.


On top of this the IPR 1.8C FPS forecasts policies expected but not yet announced.

The IPR FPS Policy Forecast therefore goes beyond NDCs, and current policy commitments and ambitions.

2023 QUARTERLY BRIEFINGS HAVE ADOPTED A SIMPLER 5-POINT SCORING SCALE, ASSESSING POLICY IMPACT RELATIVE TO THREE REFERENCE SCENARIOS




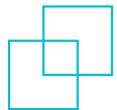

A 5-point scale applied to policy developments to indicate impact relative to three reference scenarios


Scale	Details	Impact on policy forecast	
1	Evidence for large deceleration in policy forecast	Potential for >5-year deceleration in transition speed	 <p>Greater likelihood of alignment to market expectations (IEA 2.3°C STEPS¹ scenario)</p> <p>Greater likelihood of Paris-aligned (i.e. well-below 2°C) scenarios including IEA APS, NGFS, IPR 1.8C FPS</p> <p>Greater likelihood of 1.5°C scenario (IEA NZE, IPR RPS 1.5C, NGFS)</p>
2	Evidence for moderate deceleration policy forecast	Potential for 5-year deceleration in transition speed	
3	Legislated or announced policies that 1) support and increase probability of 1.8°C FPS or 2) confirm FPS policy forecast	No change to 1.8C FPS forecast	
4	Some evidence for moderate acceleration in policy forecast	Potential for 5-year acceleration in transition speed	
5	Evidence for large acceleration in policy forecast	Potential for >5-year acceleration in transition speed	

* 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

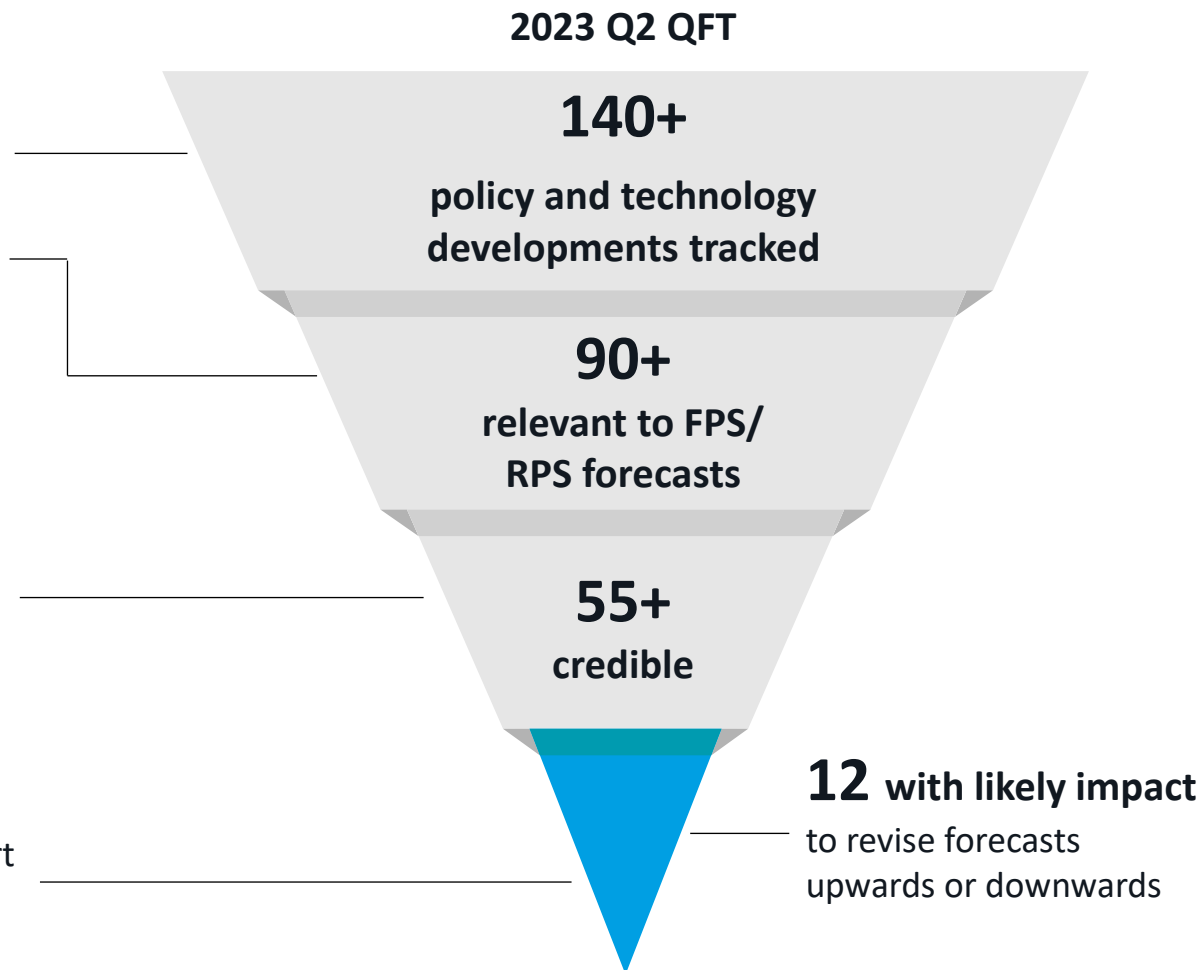
IPR QFT ASSESSMENT FOR 2023 Q2: A MULTI-STEP APPROACH FOR ASSESSING KEY POLICY & TECHNOLOGY DEVELOPMENTS IMPACTING 1.8°C FPS & 1.5°C RPS



- 1  **Track/compile** announcements between beginning of April 2023 to end of June 2023
- 2  Determine **relevancy** to IPR FPS and RPS forecasts:
- 3  Assess **credibility** of announcement


 - Less credible: off or on-the record statement
 - Credible: Public position on direction of travel
 - More Credible: Published strategy, or enacted legislation
- 4  **Score impact** of development on RPS and FSP forecast (see previous slide)

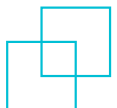
 - Legislated or announced policies that 1) support and increase probability of 1.8°C FPS or 2) confirm 1.8°C FPS policy forecast
 - Signal acceleration or deceleration of policy relative to forecasts




QFT ASSESSMENT FOR 2023 Q1 + Q2: A MULTI-STEP APPROACH FOR ASSESSING KEY POLICY & TECHNOLOGY DEVELOPMENTS IMPACTING 1.8°C FPS & 1.5°C RPS




- 1


Track/compile announcements between January – June 2023
- 2


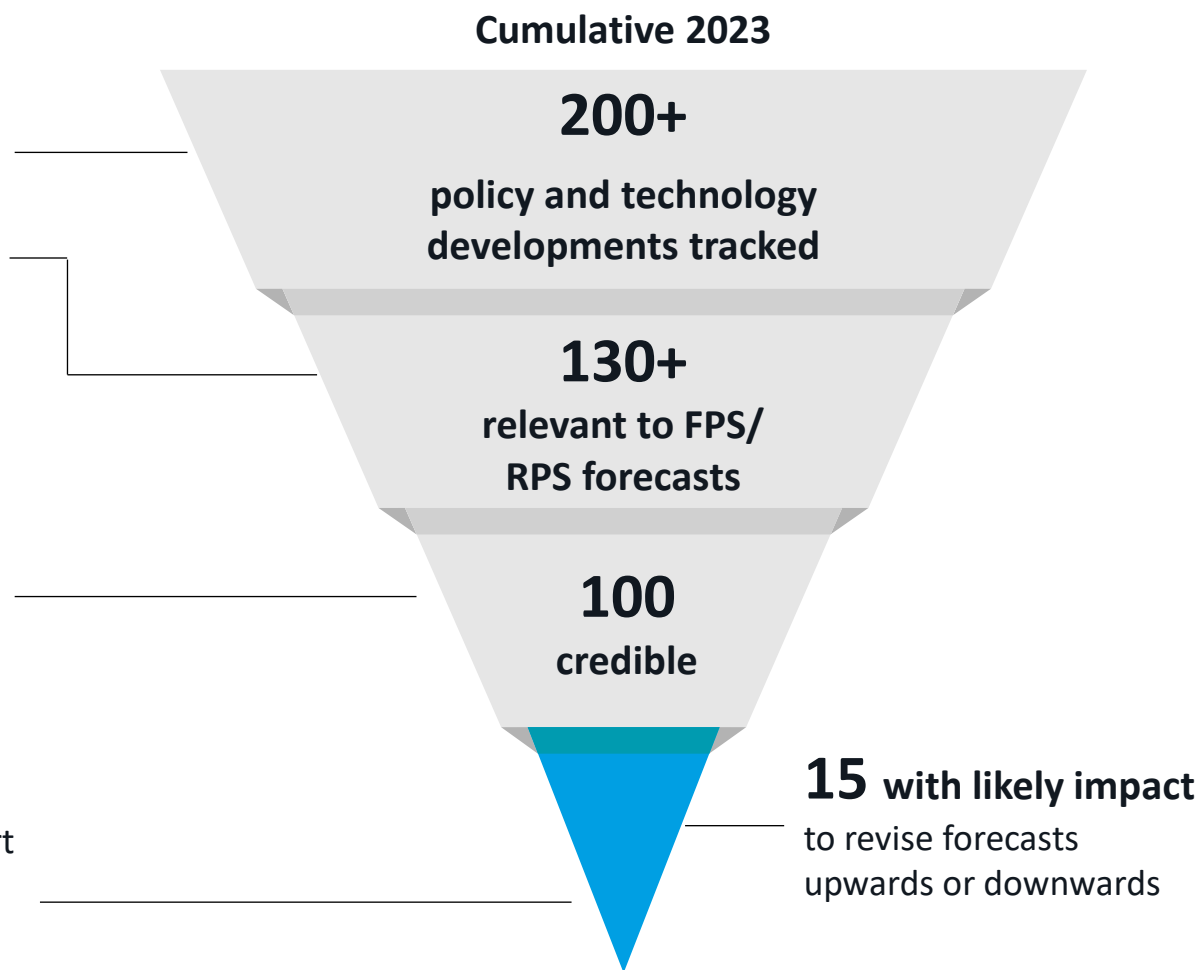
Determine **relevancy** to IPR FPS and RPS forecasts:
- 3


Assess **credibility** of announcement

 - Less credible: off or on-the record statement
 - Credible: Public position on direction of travel
 - More Credible: Published strategy, or enacted legislation
- 4


Score impact of development on RPS and FSP forecast (see previous slide)

 - Legislated or announced policies that 1) support and increase probability of 1.8°C FPS or 2) confirm 1.8°C FPS policy forecast
 - Signal acceleration or deceleration of policy relative to forecasts



IPR QUARTERLY FORECAST TRACKER: 2023 Q1 AND Q2 CUMULATIVE CLIMATE POLICY DEVELOPMENTS

Region / score	Greater likelihood of alignment to market expectations (IEA 2.3°C STEPS scenario)		Greater likelihood of Paris-aligned (i.e., well-below 2°C) scenarios including IPR 1.8°C FPS		Greater likelihood of 1.5°C scenario including IEA NZE and IPR 1.5°C RPS	
	Significant deceleration	Moderate deceleration	No change to policy forecast	Moderate acceleration	Significant acceleration	Total
	1	2	3	4	5	
Global	-	-	1	1	-	2
US	-	1	6	2	-	9
China	-	-	1	-	-	1
EU	-	-	13	2	-	13
Germany	-	1	3	3	-	7
France	-	-	4	-	-	4
UK	-	-	1	1	-	2
Brazil	-	-	2	-	-	2
India	-	-	5	-	-	3
Indonesia	-	-	1	-	-	1
Canada	-	-	0	-	-	-
Nigeria	-	-	1	-	-	1
South Africa	-	-	0	-	-	-
Saudi Arabia	-	-	0	-	-	-
South Korea	-	-	2	-	-	2
Japan	-	-	6	-	-	6
Australia	-	-	4	-	-	4
Mexico	-	-	0	-	-	-
Vietnam	-	-	0	-	1	1
Turkey	-	-	1	-	-	1
Italy	-	-	0	1	-	1
Total	0	2	51	10	1	64

i. This assessment covers the period from January 2023 to June 2023. An overview of 2022 QFT results is included in the Appendix.

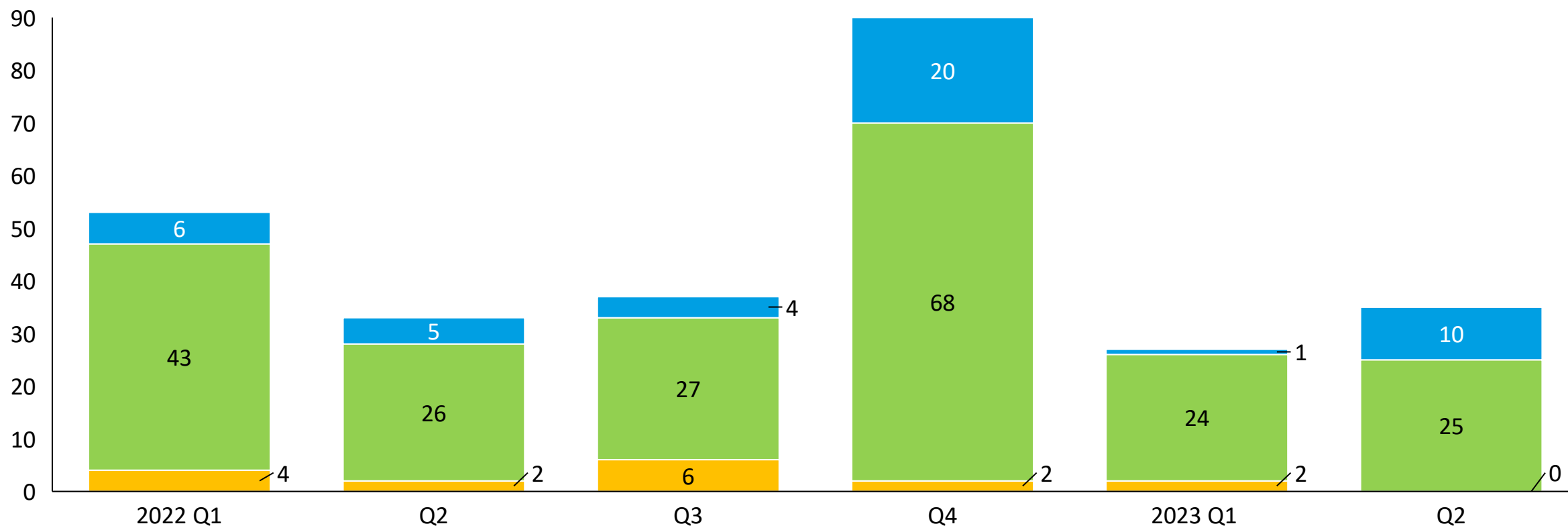
ii. The IEA's 'Stated Policy Scenario' or STEPS reflects current policy settings based on a sector-by-sector assessment of the specific policies that are in place, as well as those that have been announced by governments around the world.

MOST POLICY ANNOUNCEMENTS IN 2022 AND 2023 HAVE BEEN SUPPORTIVE OR INDICATE ACCELERATION COMPARED TO THE 1.8°C FPS FORECASTS

.....

■ Evidence of deceleration
 ■ Evidence of acceleration
 ■ Supportive/Confirmatory of well below 2°C

QFT announcements by quarter, 2022 and 2023 Q1 + Q2



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IPR 2023 GAP ANALYSIS OVERVIEW



What is the IPR Policy Gap Analysis?

Along with tracking announced policies, IPR also monitors policy areas that have not yet been addressed by governments. These areas with little policy activity are called ‘policy gaps’. Some current country-level policy gaps have significant implications in terms of emissions, which makes it essential to monitor their development.

These gaps will help inform IPR’s 2023 Policy Forecast Review leading into the FPS 2023 update.

Full gap analysis follows

Key current notable policy gaps

Deep dives follow



China and Turkey have policy gaps for the **phase out of coal-fired electricity** and are continuing to permit and build new coal-fired capacity.



Indonesia and Nigeria among other major forested IPR countries **have not announced targets to end net deforestation.**



Most IPR countries **have not yet announced or legislated policies for reaching 100% clean sales of heavy-duty vehicles,** with the exceptions of the US, Germany, France, the UK, Canada and Vietnam.

IPR 2023 Q2 GAP ANALYSIS RELATIVE TO IPR FORECAST POLICY 1.8C¹

FPS policy gap
Acceleration
Confirmatory
Supportive
Deceleration

	Carbon markets	New coal phase-out	All coal phase-out	Clean power	Clean LDVs	Clean HDVs	Zero-carbon heating	Industry	Low-carbon agriculture	Deforestation
China	Legislated	FPS policy gap	FPS policy gap	Announced	Announced	FPS policy gap	Announced	Announced	Legislated	Announced
United States	FPS policy gap	Legislated	Announced	Announced	Announced	Announced	Legislated	Legislated	Legislated	Announced
India	Announced	Announced	FPS policy gap	Announced	FPS policy gap	FPS policy gap	n/a	Legislated	FPS policy gap	Announced
Russia	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap
Japan	Announced	FPS policy gap	Announced	Announced	Announced	FPS policy gap	Announced	Announced	Legislated	FPS policy gap
Germany	Legislated	Legislated	Announced	Announced	Legislated	Legislated	Announced	Legislated	Legislated	Legislated
South Korea	Legislated	Announced	Announced	Announced	Announced	FPS policy gap	FPS policy gap	Announced	Announced	FPS policy gap
Indonesia	Announced	Announced	Announced	Announced	Announced	FPS policy gap	n/a	FPS policy gap	FPS policy gap	FPS policy gap
Saudi Arabia	FPS policy gap	n/a	n/a	Announced	FPS policy gap	FPS policy gap	n/a	Announced	n/a	Announced
Canada	Legislated	Legislated	Legislated	Announced	Announced	Announced	Announced	Legislated	Legislated	Legislated
Brazil	FPS policy gap	FPS policy gap	FPS policy gap	Announced	FPS policy gap	FPS policy gap	n/a	FPS policy gap	Announced	Announced
Turkey	Announced	FPS policy gap	FPS policy gap	Announced	FPS policy gap	FPS policy gap	FPS policy gap	Announced	FPS policy gap	Announced
South Africa	Announced	Announced	Announced	Announced	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap
Mexico	Legislated	FPS policy gap	FPS policy gap	FPS policy gap	Announced	FPS policy gap	n/a	FPS policy gap	FPS policy gap	Announced
Australia	Legislated	FPS policy gap	FPS policy gap	Announced	Announced	FPS policy gap	FPS policy gap	Legislated	Legislated	Legislated
United Kingdom	Legislated	Legislated	Legislated	Announced	Announced	Announced	Announced	Legislated	Legislated	Legislated
Vietnam	Announced	Announced	Announced	Announced	Announced	Announced	n/a	Announced	Announced	Announced
Italy	Legislated	Announced	Announced	Announced	Legislated	Legislated	Announced	Legislated	Legislated	Legislated
France	Legislated	Legislated	Legislated	Legislated	Legislated	Legislated	Announced	Legislated	Legislated	Legislated
Argentina	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap	Announced	FPS policy gap	FPS policy gap	FPS policy gap	FPS policy gap	Announced
Nigeria	FPS policy gap	FPS policy gap	FPS policy gap	Announced	FPS policy gap	FPS policy gap	n/a	FPS policy gap	FPS policy gap	FPS policy gap

1. Based on major announcements and developments tracked in IPR 2021 [Policy Forecast Detailed resource](#) (March 2021) and 2022 and 2023 QFTs.

Notes: Changes from IPR's previous Gap Analyses are the result of new policy developments plus an updated analysis methodology. Countries/regions ranked by current emissions (EDGAR). n/a indicates sectoral policy forecast not relevant to regional forecast (e.g. for zero-carbon heating, space heating less relevant in certain jurisdictions).

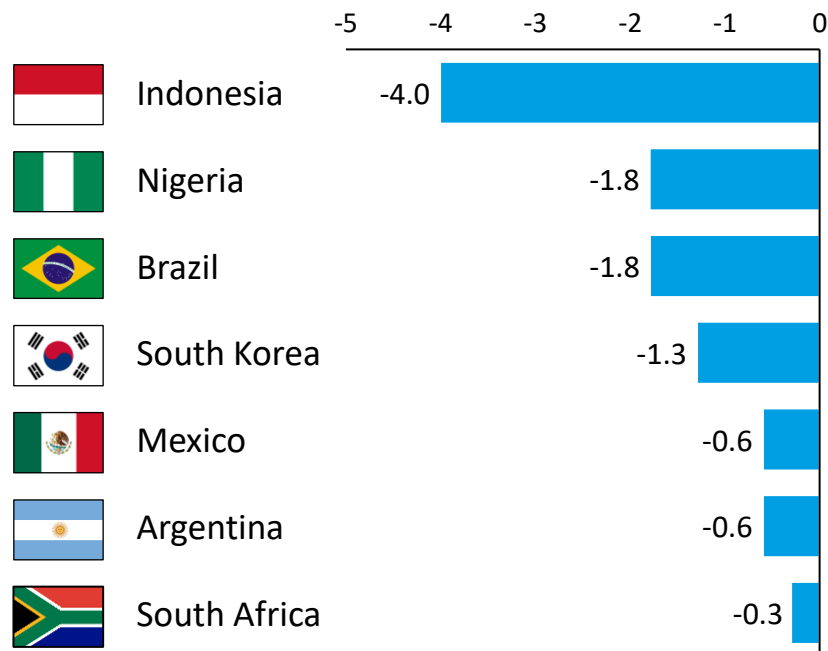
POLICY GAPS REMAIN IN SOME IPR COUNTRIES WITH DEFORESTATION BUT THERE HAVE BEEN SOME ANNOUNCEMENTS IN Q2 2023 TO ADDRESS THIS

■ FPS policy gap
 ■ Acceleration
 ■ Confirmatory
 ■ Supportive
 ■ Deceleration

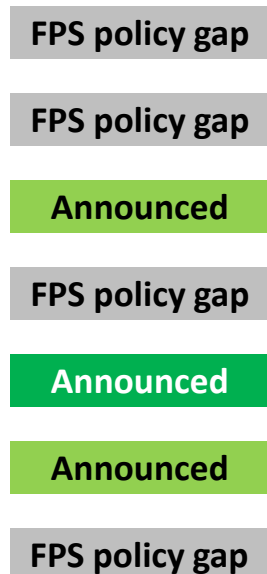
Several IPR countries are still seeing deforestation and have limited policy to end it ...

... but recent developments in Brazil and in supply chains indicate rising policy momentum to reduce deforestation

Change in forest cover from IPR countries with net deforestation 2010-20, pp¹



IPR Q2 2023 Policy Gap



Within country

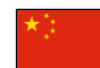


June 2023: President Lula released an **action plan** detailing how **net deforestation by 2030 in Brazil will be achieved**. Brazil's government stated that deforestation fell by 33.6% in the first six months of Lula's administration compared to the same period in 2022.

Supply chains



April 2023: The **EU will require importers** of some agricultural products to ensure that their products have **not contributed to deforestation**.



April 2023: China released a joint statement with Brazil with a pledge to **combat deforestation linked to illegal trade**.

Future path



Brazil will host the COP30 UN climate discussions in 2025. Countries may ramp up policy ambition on ending net deforestation in the lead-up to Brazil's COP30 meeting.

1. Source: [World Bank](#)

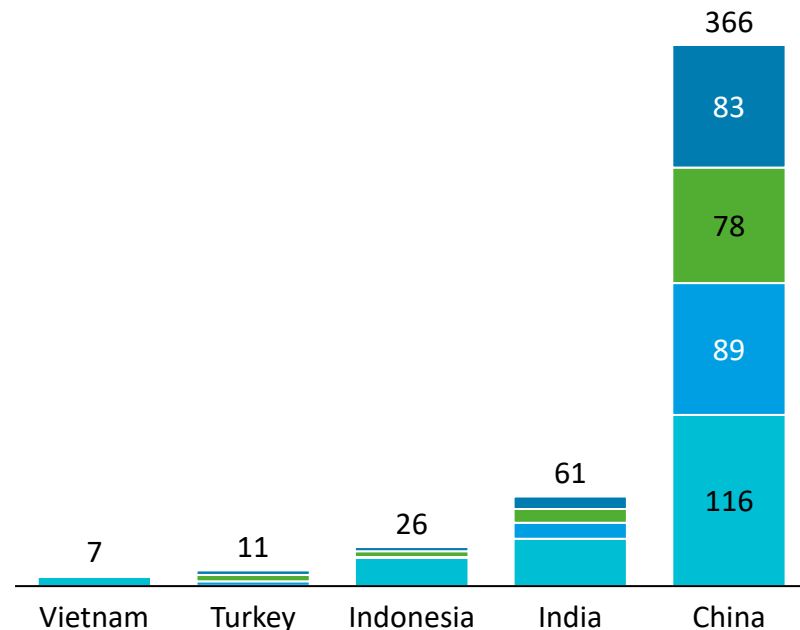
WHILE SOME COUNTRIES WITH COAL PIPELINES HAVE DEVELOPED PLANS TO PHASE COAL OUT, CHINA HAS LIMITED POLICY FOR ENDING EITHER NEW OR EXISTING COAL

Several IPR countries still have GW-scale pipelines of new coal

India has indicated an end to new coal construction while Indonesia and Vietnam have announced targets for coal-phase-outs ...

Coal pipeline as of Jan 2023¹, GW

■ Announced ■ Pre-permit ■ Permitted ■ Construction



India's draft National Electricity Plan includes an aim to **halt the addition of new coal power plants** apart from those already in the pipeline



Indonesia set a **conditional target to phase out unabated coal-fired electricity by 2040**, contingent on international funding



In May 2023, Vietnam's government restated its commitment to **phase out all coal-fired power by 2050**

... whereas China and Turkey have not introduced policies for phasing out coal-fired power or ending new construction



China approved **106 GW of new coal-fired capacity in 2022**



Turkey currently has **11 GW of new coal-fired power** in the pipeline

1. **“Announced:** Projects that have appeared in corporate or governmental planning documents but have not yet moved actively forward by applying for permits or seeking land, coal, or financing. **Pre-permit:** Projects that have actively moved forward in one or more of the following ways: applying for environmental permits, acquiring land, acquiring coal, acquiring water rights, acquiring transmission arrangements, or securing financing. **Permitted:** Projects that have secured all environmental permits but have not broken ground. **Construction:** Projects where physical construction (i.e. concrete and steel, not just a ground-breaking ceremony or early site preparation) has begun.

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OUTCOMES OF ASSESSMENT OF JUST TRANSITION ELEMENTS IN 22 KEY POLICY DEVELOPMENTS

The table shows the number of policies assessed as containing strong, moderate or weak just transition elements, or as being high risk the Just Transition or as having no significant Just Transition implications, per geography.

Country	No. policies assessed as high risk for Just Transition	No. policies with weak Just Transition elements	No. policies with moderate Just Transition elements	No. policies with strong Just Transition elements	No. policies with no significant Just Transition implications	Total no. policies assessed by country
Australia		1	4*			5*
Brazil				1		1
EU		1		3		4
France		2				2
Germany			3		1	4
India		1				1
Japan		2				2
Turkey					1	1
US		2	2*	1	1	6*
Vietnam		1				1
Total	0	10	8*	5	3	26*

*one bilateral policy announcement counted in tallies for both US and Australia

LSE JUST TRANSITION ASSESSMENT FRAMEWORK

- 1 **Apply Just Transition lens on IPR Policy Levers to determine relevancy to FPS and RPS forecasts and select policies**
 - 2 **Assess whether policies are sufficiently close to implementation level for meaningful analysis**
 - 3 **Analyse key Just Transition elements:**
 - Just Transition framing
 - Impact on vulnerable groups
 - Participatory processes and actor engagement
 - Forms of justice: distributive, procedural, restorative
 - Policy areas and sectors
 - Policy instruments
 - Implementation level
 - Duration
 - 4 **Assess presence and strength of Just Transition elements**
 - 5 **Assess placement on the Just Transition Policy spectrum**
-  **Policy by policy assessment is only part of the story. This assessment should be read alongside an assessment of existing labour laws, social protections, and participatory governance in the implementing country or countries**

UNDERSTANDING THE JUST TRANSITION: THE SPECTRUM OF JUST TRANSITION POLICIES

Analyse key Just Transition elements –
Strong / Moderate / Weak:

- Just Transition framing
- Impact on vulnerable groups
- Participatory processes and actor engagement
- Forms of justice: distributive, procedural, restorative
- Policy areas and sectors
- Policy instruments
- Implementation level
- Duration



Just Transition Element ⁽¹⁾	Conception of Just Transition	
	Managerial	Transformative
Type of Justice	<ul style="list-style-type: none"> • Procedural justice: managerial policies may focus on consultation with affected groups and other forms of participatory decision-making • Distributive justice: policies may focus on ensuring that certain groups are protected from costs of a transition, typically via the provision of compensation in cash or in-kind (e.g. training and skills) 	<ul style="list-style-type: none"> • Restorative Justice: policies may go beyond the idea of dealing with the distributional impacts of a specific policy and consider the need to address historic injustices • Recognition Justice: policies may contain specific reference to the needs and challenges faced by marginalized or vulnerable communities • Environment Justice: policies may incorporate other elements of environmental and social justice
Scope	<ul style="list-style-type: none"> • Likely to focus on a limited set of stakeholders or beneficiaries, such as workers in a given sector. 	<ul style="list-style-type: none"> • The policy takes a more expansive view of actors involved in the transition. These actors are considered agents, often involved in co-design, as well as stakeholders and beneficiaries.
Space/Location	<ul style="list-style-type: none"> • The policy is narrowly targeted at an industry in transition in one or more specified areas (e.g. coal regions; forests; agricultural areas) 	<ul style="list-style-type: none"> • The policy anticipates the impacts of the transition on the whole of society
Timeframe	<ul style="list-style-type: none"> • Policies are reactive, seeking to respond to events or anticipated impacts associated with specific elements of a planned transition • Policies may be focused on the short and medium term 	<ul style="list-style-type: none"> • Policies are proactive, focused on creating societal frameworks to enable long term change • Policies may be focused on long-term (2050 or beyond) transition



It is important to note that defining a policy as managerial or transformative does not imply a value judgment regarding the policy. Every country is likely to require both types of policy to ensure the implementation of a Just Transition

⁽¹⁾ Adapted from the Just Transition framework developed by Heffron & McCauley (2018)

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AUSTRALIA POLICY ANNOUNCEMENTS/DEVELOPMENTS (1/2)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
Australia 	Clean power 	\$2 billion AUD for scaling up green hydrogen production in Australia <ul style="list-style-type: none"> The Australian Government has created the Hydrogen Headstart initiative with around \$1.3 billion USD in funding for large-scale green hydrogen production. The initiative will provide a credit per kilogram of green hydrogen for producers in Australia through competitive tendering. 	100% new zero carbon production facilities from 2060	Announced and supportive. Government funding for green hydrogen could help support the rollout of zero carbon industry in Australia.	Weak just transition elements. <ul style="list-style-type: none"> Detailed selection criteria will be designed over coming months in consultation with industry and communities. Outcomes of this process will impact the extent to which this policy contributes to a just transition.
				Impact score: 3	Weak
	ICE ban - LDVs 	Australia announces strategy to promote electric vehicles <ul style="list-style-type: none"> Australia published its National Electric Vehicle Strategy, which is structured around three objectives: to increase electric vehicle (EV) supply, encourage EV demand and create infrastructure to enable EV uptake The strategy includes a commitment to introduce a light vehicle fuel efficiency standard on carmakers' fleet-wide average emissions. - Australia does not currently have a vehicle fuel efficiency standard in place, so this regulation would represent the first of its kind in the country The Government is holding public consultations for six weeks before finalizing the fuel efficiency standard. 	100% ZEV sales from 2040	Announced and supportive. Australia's strategy aims to increase EV sales and infrastructure which could help Australia move towards 100% emissions vehicle sales by 2040.	Moderate just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> Links to equity issues throughout (e.g., in relation to fuel efficiency standards, the costs of transport, and health costs of air pollution). Strategy and specific policies have been developed in consultation with industry, unions, state and territory governments, businesses, other key stakeholders. Includes skill development and training policies for emergency service and energy sector workers.
				Impact score: 3	Moderate



AUSTRALIA POLICY ANNOUNCEMENTS/DEVELOPMENTS (2/2)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
Australia 	Clean power 	<p>Australia has proposed opening an offshore wind zone which could provide up to 14GW of power</p> <ul style="list-style-type: none"> • Australia's Minister for Climate Change and Energy has proposed opening the Southern Ocean Zone for offshore wind development. • The area could ultimately host up to 14 GW of offshore wind capacity. • The zone is located near the state of Victoria, which has targets of generating 65% of energy from renewables by 2030 and 95% by 2035. • The Southern Ocean Zone is the third offshore wind development zone to be approved in Australia, while an additional three zones are still under consideration. 	<p>Strong policy to develop 100% clean power by 2050</p>	<p>Announced and supportive. The expansion of permitting for offshore wind development is in line with the FPS clean power forecast for Australia.</p> <p style="text-align: center;">Impact score: 3</p>	<p>Moderate just transition elements.</p> <p>Managerial conception of just transition.</p> <ul style="list-style-type: none"> • Introduction of offshore wind zones framed as an opportunity to grow regional job opportunities. • Participatory process to understand local concerns, including employment and cultural impacts. <p style="text-align: center;">Moderate</p>




BRAZIL POLICY ANNOUNCEMENTS/DEVELOPMENTS

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
Brazil 	Net zero targets 	Lula set to improve Brazil's climate target <ul style="list-style-type: none"> Brazil's President Lula is expected to update the country's 2030 emissions reductions target later this year, increasing its stringency compared to the target set by Brazil's previous administration. In 2021, the Bolsonaro government set a 50% emissions reduction target by 2030 compared to 2005 levels. President Lula is expected to maintain the same 50% reduction target while changing the baseline to make the target equivalent to a higher absolute emissions reduction. 	Net zero by 2050	Announced and supportive. Brazil's updated 2030 target indicates government ambition to reduce emissions in line with the country's 2050 net zero target, which is supportive of IPR's FPS forecast.	High-level policy announcement – insufficient information to assess.
				Impact score: 3	Not assessed
	Land use and forestry 	Brazil's Lula unveils plan to stop deforestation in Amazon by 2030 <ul style="list-style-type: none"> The Brazilian government has unveiled details on how it plans to meet President Lula's pledge to eliminate deforestation in the Amazon by 2030. The Action Plan for the Prevention and Control of Deforestation in the Amazon sets policy across more than 12 ministries through the end of Lula's term in 2027. It calls for increased use of intelligence and satellite imagery to track criminal activity. Degraded forests will be recovered to native vegetation through increased economic incentives. The plan also calls for the creation of a tracing system for wood, livestock, and other agricultural products from the Amazon. 	End of deforestation by 2030	Announced and supportive. The Lula administration's plan shows policy ambition to end deforestation in Brazil by 2030 which is consistent with IPR's FPS forecast.	Strong just transition elements. Transformative conception of just transition. <ul style="list-style-type: none"> Plan developed through a participatory process and will be implemented with input from organised civil society and Amazonian populations.
				Impact score: 3	Strong



CHINA POLICY ANNOUNCEMENTS/DEVELOPMENTS

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition Assessment
China 	Clean power 	China Sets Out Proposals to Underpin Its Massive Renewables Push <ul style="list-style-type: none"> The Chinese government is in the process of putting together proposals to ensure its grid can successfully incorporate the continued build out of renewable generation capacity in the country. The proposals come as part of a plan to even out power demand pressures to prevent blackouts, support energy storage, bolster grid finances and create more flexible pricing. 	Strong policy to develop 100% clean power by 2050	Announced and supportive. Indicates ambition to expand renewable power capacity in China's grid, which is supportive of a 100% clean electrical system by 2050 in line with the FPS forecast.	High-level policy announcement – insufficient information to assess at this stage. <ul style="list-style-type: none"> Proposals may pose some challenges for procedural and distributional justice depending on implementation detail.
				Impact score: 3	Not assessed




EUROPEAN UNION POLICY ANNOUNCEMENTS/DEVELOPMENTS (1/2)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
EU 	Carbon pricing 	EU lawmakers approve legislation in the EU's 'Fit for 55' package <ul style="list-style-type: none"> The EU Council and Parliament have approved five laws which had previously been provisional in the EU's 'Fit for 55' package. The approved pieces of legislation call for: <ul style="list-style-type: none"> A Carbon Border Adjustment Mechanism (CBAM) on imports in carbon-intensive industries beginning in 2026 and being fully operational by 2034. There will be a simultaneous phase-out of free allowances associated with the EU ETS. Adding shipping to the EU's Emissions Trading System (ETS) from 2024. A new ETS for buildings, road transport, and additional sectors from 2027. The creation of a Social Climate Fund from 2026 intended to support business and citizens cope with costs of carbon pricing. 	US\$75 by 2030	Legislated, acceleration. The tightening of the EU ETS allowances will likely lead to an increase in carbon prices which represents an acceleration compared to the IPR forecast of a carbon price floor of \$75 by 2030, particularly given that carbon prices in the EU ETS were roughly \$88 USD on average in 2022.	Strong just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> Social Climate Fund is designed to balance the distributional impact on households. Social Climate Plans must be created with public participation.
				Impact score: 4	Strong
	Net zero targets 	EU lawmakers push to force companies to disclose carbon footprint in milestone vote <ul style="list-style-type: none"> The European Parliament has approved amendments to the EU's Corporate Sustainability Due Diligence Directive (CSDDD). The CSDDD will require large companies to identify, prevent, mitigate or end human rights abuses or environmental damage in their value chains. Additionally, the regulation will require companies to publish plans on how their business strategies will be consistent with 1.5C. The rules will apply to large EU-based companies as well as large non-EU companies that generate a certain amount of revenue in the EU. The EU Parliament will now negotiate with the EU Council and member states before the policy is formally adopted. 	Net zero by 2050	Legislated, acceleration. The law will require companies based in or operating in the EU to develop plans for how they will transition their businesses in line with a 1.5°C future, which likely represents an acceleration compared to the EU's 1.8°C Forecast Policy Scenario net zero forecast. However, exact details of what it means for businesses to be consistent with 1.5°C remain unclear.	Strong just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> Extensive consultation in development of directive. Policy creates processes for impacted groups to obtain justice.
				Impact score: 4	Strong




EUROPEAN UNION POLICY ANNOUNCEMENTS/DEVELOPMENTS (2/2)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
EU 	Clean industry 	Strategic Technologies for Europe Platform <ul style="list-style-type: none"> The Strategic Technologies for Europe Platform (STEP) was announced on June 20th by the European Commission and is the European reply to the need to boost investments in critical technologies in Europe. It replaces the EU Sovereignty Fund announced by the Commission which did not receive broad enough member state support. With existing funding, and an extra €10 billion that the Commission is hoping to raise to inject into STEPS, the aim is to reach up to €160 billion in investments in the coming years. 	100% new zero carbon production facilities from 2060	Announced and supportive. The STEP could lead to increased funding in clean industry technologies which is supportive of IPR's FPS forecast.	Weak just transition elements. Managerial conception of just transition. Whilst this policy primarily addresses industry through funding development of critical technologies, there is a reference to including jobs created (or maintained) and the number of participants in trainings as metrics for ongoing monitoring.
				Impact score: 3	Weak




FRANCE POLICY ANNOUNCEMENTS/DEVELOPMENTS (1/2)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
France 	Clean power 	France proposes tax credits for green technology <ul style="list-style-type: none"> The French government has proposed a new tax credit worth \$500 million euros per year for investments in low-carbon industries. The tax credit will cover 25 – 40% of companies’ capital spending in industries including wind, solar, heat pumps and batteries. The credit will be available until 2025 with the possibility of an extension to 2029. The credit takes advantage of the EU’s relaxing of state aid rules under the EU’s Green Deal Industrial Plan. 	Strong policy to develop 100% clean power by 2035	Announced and supportive. Subsidies for renewable energy rollout which is supportive of France’s grid moving towards 100% clean power by 2035 in line with IPR’s FPS forecast.	Weak just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> Developed through consultative co-construction process. Creates a new form of green savings fund for children under 18 Proposed changes to some environmental permitting processes may pose challenges for procedural justice.
				Impact score: 3	Weak
	Clean power 	French Parliament endorses the construction of 6 nuclear EPR <ul style="list-style-type: none"> The French Parliament has removed the country’s previous 63.2 GW cap on authorised nuclear capacity and withdraws the objective to limit nuclear to 50% of power generation by 2035. This opens the door for previously announced plans to build 6 new next-generation nuclear EPRs (European Pressured Reactors II) and to launch studies on the construction of a further 8 as well as small modular reactors (SMRs). The new reactors could result in 25 GW of nuclear generation capacity by 2050. 	Strong policy to develop 100% clean power by 2035	Announced and supportive. The French government has indicated support for the expansion of nuclear power generation which contribute towards a 100% clean power grid by 2035 in line with IPR’s FPS forecast.	No just transition elements. <ul style="list-style-type: none"> Proposed changes to permitting and participatory processes may pose challenges for procedural justice, although review by the Conseil d’Etat found current provisions consistent with Constitutional protections for the right to a healthy environment.
				Impact score: 3	

FRANCE POLICY ANNOUNCEMENTS/DEVELOPMENTS (2/2)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
France 	Net zero targets 	France presents new, more ambitious emissions-cutting plan <ul style="list-style-type: none"> The French government has announced a plan to accelerate its GHG emissions reduction target to 50% by 2030, compared with 1990 levels. To meet this target, emissions from buildings will need to be reduced by 53% relative to 2022 levels, the energy sector's emissions by 43%, and the industrial sector's by 37%. 	Net zero by 2050	Announced and supportive. The French government's strategy for 2030 emissions reductions will contribute to France's target of achieving net zero emissions by 2050, in line with IPR's FPS forecast.	Weak just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> No detail on social issues or inclusion in plan itself however, it was developed in partnership with a participatory forum. Acknowledgment of distributive aspects with the government indicating that the aim of the plan is to require major emitters to do more to mitigate their impact.
				Impact score: 3	Weak
	Clean industry 	France Launches Its First Carbon Capture Storage And Use Strategy <ul style="list-style-type: none"> The French government has released a draft CCUS strategy which includes new targets for carbon capture: <ul style="list-style-type: none"> 4 to 8.5 million tons of CO2 captured a year by 2030. 15 to 20 million tons of CO2 captured a year by 2050. An extra 10 million tons of CO2 captured a year in non-industrial sectors around 2050. The plan also indicated that France will launch a contracts for difference program to support industry CCUS and decarbonization projects. The draft plan will now be open for feedback from manufacturers until the end of September before it is finalized. 	100% new zero carbon production facilities from 2060	Announced and supportive. France's targets for CO2 captured from CCUS in industry are supportive with the FPS clean industry forecast.	Weak just transition elements. Managerial conception of just transition. Strategy subject to public consultation and acceptance; notes that the distribution of the benefits of CCUS must be evenly spread and stranded assets avoided.
				Impact score: 3	Weak

GERMANY POLICY ANNOUNCEMENTS/DEVELOPMENTS (1/3)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
Germany 	Clean power 	Germany outlines strategy for 160GW onshore wind by 2035 <ul style="list-style-type: none"> The German Minister of Economics and Climate has announced a strategy to increase the country's onshore wind capacity to 160 GW by 2035. Germany's current onshore wind capacity is 58.1 GW. The strategy details several measures that will be implemented to help achieve the target including the introduction of simplified permitting processes; reduced emission rules for repowering; and better synchronization of grid expansion. 	Strong policy to develop 100% clean power by 2045	Announced and supportive. This strategy would see an increase in onshore wind capacity that is greater than IPR's FPS modelling expectations which indicates an acceleration compared to IPR's FPS forecast.	Just Transition assessment incomplete due to lack of information on details of policy. <ul style="list-style-type: none"> Proposed changes to permitting processes may pose challenges for procedural justice.
	Low carbon buildings 	Germany coalition staves off implosion with 11th-hour heating law amendment <ul style="list-style-type: none"> The German government has agreed to an amendment to its proposed heating law which originally would have banned new oil and gas heating systems from 2024 including in both new and existing buildings The revised law shifts the responsibility from individual households to municipal authorities, who will be tasked with expanding district heating planning and assessing households' suitability for connection to renewable energy systems. Gas heaters will be allowed in new and existing buildings from the 1st of January if they can be converted to hydrogen. In zones of new development, heating systems will have to use 65% renewable energy. For all other homes and buildings, this requirement will only apply once municipal authorities have presented their heating plans, which they are required to do by 2028. 	100% zero carbon heating sales from 2035	Announced and supportive. The current draft bill would require new gas heaters to be capable of running on hydrogen, which would mean that all new heating systems will be zero-carbon ready. The bill would not introduce a requirement for 100% zero carbon heating sale at this stage, though final negotiations may lead to the policy indicating an acceleration compared to FPS.	Moderate just transition elements. Both managerial and transformative conceptions of just transition. <ul style="list-style-type: none"> Policy considers different living realities and regional differences. Federal government funding will be provided with the intention of minimising social hardship.



Impact score: 4

Not assessed



Impact score: 3

Moderate




GERMANY POLICY ANNOUNCEMENTS/DEVELOPMENTS (2/3)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
Germany 	Net zero targets 	Germany's draft climate action programme 2023 <ul style="list-style-type: none"> The German Economy Ministry has presented a draft of a comprehensive climate action program aimed at achieving the country's 2030 emissions targets of a 65% reduction in overall greenhouse gas emissions relative to 1990 levels. The draft states that emission reductions must more than double or even triple in the coming years to reach the 2030 targets and achieve climate neutrality by 2045. The draft program includes reforms across the energy, buildings, transport, and agricultural sectors. Reforms include: <ul style="list-style-type: none"> Energy – speeding up renewable expansion to reach 80% of power consumption by 2030, with a target for 115 GW onshore wind by 2030 and that 2% of land area reserved by 2032 for onshore wind. Buildings – target for 50% of heat in buildings produced in a climate-neutral way by 2030. Industry - more funds for support programmes to decarbonise hard-to-abate industry (cement, steel and chemicals) Transport – target for rail freight transport 25% market share by 2030, fossil fuel tax adaptations, and improve charging infrastructure 	Net zero by 2050	Announced, acceleration. Germany's draft climate action programme includes a climate neutrality target for 2045 which indicated an acceleration compared to IPR's FPS forecast of 2050.	Moderate just transition elements. Both managerial and transformative conceptions of just transition. <ul style="list-style-type: none"> Focus on ensuring the transition is designed in a socially just and economically sensible manner. Developed through participatory processes, including youth engagement.
				Impact score: 4	Moderate



GERMANY POLICY ANNOUNCEMENTS/DEVELOPMENTS (3/3)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition Assessment
Germany 	Clean power 	German solar: German ministries have coordinated a proposal called the "Solar Package I" which aims to facilitate solar PV expansion <ul style="list-style-type: none"> The package aims to increase the annual expansion of solar PV from 7 GW to 22 GW through simplifying permitting, expanding grid infrastructure and improving sales processes from solar generation to the grid. The proposal is expected to be passed by the Federal Cabinet in the summer of 2023. It will then be debated in the Bundestag before it can be passed into law. 	Strong policy to develop 100% clean power by 2045	Announced, not proposed yet. This proposed package includes GW-level solar PV expansion targets which are higher than IPR's FPS modelling expectations, which indicates an acceleration compared to the FPS forecast.	Moderate just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> Underlying strategy proposes various initiatives to secure skilled workers in renewable energy, e.g., funding training programs in lignite regions, and helping youth obtain vocational qualifications Proposes tax benefits for single-family houses and a new model for tenant electricity
				Impact score: 4	Moderate



INDIA POLICY ANNOUNCEMENTS/DEVELOPMENTS

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition Assessment
India 	New coal phase-out 	India mulls end to coal plant construction <ul style="list-style-type: none"> India's draft National Electricity Policy does not include any intention to build additional coal-fired power plants, beyond those that are already in construction. This represents a change compared to the Central Electricity Authority's expectations from 2022, which had stated that India may need up to 28 GW of new coal-fired capacity beyond plants under construction. The National Electricity Policy will now need to be approved by India's federal cabinet before it is adopted. 	Actual and anticipated policy signals (bans, EPS, carbon pricing), and market reforms end new coal build from 2020	Announced and supportive. Indicates policy support for reducing coal's share of generation in the power mix in line with ultimately phasing out unabated coal generation by 2060 which is consistent with IPR's FPS forecast.	Weak just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> Consultation with consumers and stakeholders fed into policy design. Includes a recommendation to encourage implementation of tariffs for industries and commercial consumers in a phased manner, and to include domestic consumers later in the process.
				Impact score: 3	Weak
	Clean power 	India plans to add 50 GW of renewable energy capacity each year until 2028 <ul style="list-style-type: none"> The Indian Ministry of New and Renewable Energy has announced that it will invite bids for 50 GW of new renewable installed capacity in each year between 2023 and 2028. <ul style="list-style-type: none"> The tenders include a target of at least 10 GW of wind power capacity each year. The program is intended to help India reach its target of 500 GW of installed renewable capacity by 2030. 	Strong policy to develop 100% clean power by 2060	Announced and supportive. Targets to expand renewable power which are consistent with IPR's FPS modelling expectations.	High-level policy announcement – insufficient information to assess.
				Impact score: 3	Not assessed

ITALY POLICY ANNOUNCEMENTS/DEVELOPMENTS

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
Italy 	Clean power 	<p>Italy announced targets to increase renewable power to two thirds of total electricity by 2030</p> <ul style="list-style-type: none"> Italy's energy ministry has released an updated energy and climate plan which includes new targets for renewable energy. Italy aims to generate 65% of its power from renewable energy by 2030, compared to the country's previous target of 55%. The plan also includes a target for clean hydrogen to provide 42% of industrial hydrogen needs by 2030. Italy has now submitted the plan to the European Commission, which will review its compatibility with the EU's Fit-for-55 legislation. 	Strong policy to develop 100% clean power by 2045	<p>Announced, acceleration. Italy's updated targets for renewable energy's share of power generation are higher than IPR's FPS 2030 modelling expectations, which suggests an acceleration compared to the FPS forecast.</p> <p>Impact score: 4</p>	<p>High-level policy announcement – insufficient information to assess.</p> <p>Not assessed</p>

JAPAN POLICY ANNOUNCEMENTS/DEVELOPMENTS (1/2)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition Assessment
Japan 	Clean industry 	Japan aims to boost hydrogen supply sixfold by 2040 <ul style="list-style-type: none"> Japan has set a target of 12 Mt of yearly hydrogen supply by 2040, a sixfold increase from the country's current 2 Mt supply. The government plans to raise US\$113bn in public and private sector investments over the next 15 years to drive uptake of hydrogen energy. 	100% new zero carbon production facilities from 2060	Announced and supportive. Targets for green hydrogen production which could support the roll-out of 100% new zero carbon industry facilities in Japan by 2060, which is supportive of IPR'S FPS forecast.	Weak just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> Emphasises economic opportunities, alongside energy security and stability. Aims to enable continued dialogue to increase public acceptance of hydrogen as an energy source.
		Japan to invest \$107 billion in hydrogen supply over 15 years <ul style="list-style-type: none"> Japan has announced that it aims to invest roughly US\$107 billion in the hydrogen industry over the next 15 years, along with new targets for annual hydrogen production. The government has pledged to provide roughly half of this US\$107 billion in investment, while the private sector is expected to invest the remainder. Japan's announcement includes targets to achieve 12 million tonnes of domestic hydrogen supply annually by 2040 and 20 million tonnes annually by 2050. The previous hydrogen plan targeted 3 million tonnes of annual production by 2030 compared to 2 million currently. 	100% new zero carbon production facilities from 2060	Announced and supportive. Subsidies for green hydrogen production which could support the roll-out of zero carbon industry in Japan.	High-level policy announcement – insufficient information to assess.




Impact score: 3

Weak



Impact score: 3

Not assessed



JAPAN POLICY ANNOUNCEMENTS/DEVELOPMENTS (2/2)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition Assessment
Japan 	Clean industry 	Japan selects first seven CCS projects to store 13 mil mt/year CO2 by 2030 <ul style="list-style-type: none"> The Japanese Government has selected the first seven carbon capture, utilization, and storage projects. Collectively these projects will store 13 million MtCO2/year in Japan and abroad by 2030. These projects come as part of Japan's efforts to reach its CO2 storage capacity target of 6 to 12 MtCo2/year by 2030. 	100% new zero carbon production facilities from 2060	Announced and supportive. Policy support for CCS projects which could support the roll-out of zero carbon industry in Japan.	Just Transition assessment incomplete due to lack of policy detail.
				Impact score: 3	Not assessed
	Clean power 	Law enacted that allows nuclear reactors to operate beyond 60 years <ul style="list-style-type: none"> Japan has passed a new law that enables some nuclear reactors to operate beyond a 60-year age limit. Nuclear plants' periods of shutdown will now be excluded from the calculation of 60 years of operation, allowing some nuclear plants to continue operating for longer than what was previously permitted. 	Strong policy to develop 100% clean power by 2045	Legislated and supportive. Policy support for nuclear power generation which is supportive of Japan achieving a 100% clean power grid by 2045 in line with IPR's FPS forecast.	Weak just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> Public consultation informed policy development. Approval process for some projects revised to require efforts to inform local residents and the wider public.
				Impact score: 3	Weak



SOUTH KOREA POLICY ANNOUNCEMENTS/DEVELOPMENTS

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition Assessment
South Korea 	Clean industry 	South Korea announces plans to create CCUS value chain <ul style="list-style-type: none"> • South Korea has released an updated strategy for reaching its 2050 carbon neutrality target which includes further details on the country's plan to develop its CCUS sector. • The government intends to develop a carbon capture, utilization and storage value chain. • The updated CCUS plan also includes a target to secure 1 billion tonnes of CO2 storage by 2030 	100% new zero carbon production facilities from 2060	Announced and supportive. CCS strategy which could support the rollout of zero carbon industry in South Korea, which is supportive of IPR's FPS forecast. <div style="background-color: #00a651; color: white; padding: 5px; text-align: center; margin-top: 10px;">Impact score: 3</div>	JT assessment incomplete due to lack of policy detail. <ul style="list-style-type: none"> • Based on summaries, there appears to be some assessment of impact on workers but further policy detail is needed to complete full assessment. <div style="background-color: #808080; color: white; padding: 5px; text-align: center; margin-top: 10px;">Not assessed</div>



TURKEY POLICY ANNOUNCEMENTS/DEVELOPMENTS

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
Turkey 	Clean power 	Turkey seeks to reassure investors with new feed-in tariffs and benefits for hybrids with storage <ul style="list-style-type: none"> Turkey has announced a new feed-in tariff subsidy for renewable energy projects including onshore and offshore wind, solar PV and renewable plants that incorporate battery storage. The feed-in tariff will provide a subsidy of around \$0.05 to \$0.08 USD per kWh depending on the type renewable energy generation. The feed-in tariff will be higher for solar and wind projects that are built alongside battery storage capacity. The subsidy will be awarded to projects built between 2021 and 2030 and will be provided to projects for a period of ten years with a bonus for locally sourced content 	Strong policy signal to deliver 100% clean power by 2050	Announced and supportive. The Turkish government has introduced new subsidies for renewable energy development, which are supportive of IPR's FPS forecast.	No just transition elements. <ul style="list-style-type: none"> No changes to existing planning and consent processes, therefore there are no clear just transition impacts to assess.
				Impact score: 3	Not assessed




UK POLICY ANNOUNCEMENTS/DEVELOPMENTS

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
UK 	Carbon pricing 	<p>The UK ETS Authority announced new steps for increasing the cap stringency of the UK ETS and expanding its coverage.</p> <ul style="list-style-type: none"> Beginning in 2024, the ETS cap on emissions will be reduced over time in line with the UK's net zero goals. The UK's ETS will be extended to additional sectors including domestic maritime from 2026 and waste from 2028. In addition, the ETS Authority will phase out free allowances for the aviation industry beginning in 2026. 	US\$75 by 2030	<p>Announced, acceleration. The tightening of the cap allowance will likely result in higher prices in the UK ETS, which represents an acceleration compared to the IPR forecast of a carbon price floor of \$75 by 2030, particularly given that carbon prices in the UK ETS were roughly \$92 USD on average in 2022.</p>	<p>High-level policy announcement – insufficient information to assess.</p>
				<div style="background-color: #0099cc; color: white; padding: 5px; text-align: center;">Impact score: 4</div>	<div style="background-color: #cccccc; padding: 5px; text-align: center;">Not assessed</div>




US POLICY ANNOUNCEMENTS/DEVELOPMENTS (1/4)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
US 	Coal phaseout 	<p>EPA Proposes New Carbon Pollution Standards for Fossil Fuel-Fired Power Plants to Tackle the Climate Crisis and Protect Public Health</p> <ul style="list-style-type: none"> The Environmental Protection Agency has proposed new emissions standards for fossil-fuel power plants. The rules vary depending on the type of electricity generation and the capacity factor, with all coal-fired and new natural-gas electricity plants and a proportion of the existing natural-gas turbine fleet covered The proposed rules require the following: <ul style="list-style-type: none"> New natural-gas turbine plants – low load plants must be highly efficient, intermediate load plants must have 30% low-carbon hydrogen by 2032, while baseload plants must install CCS by 2035 with a 90% capture rate (or 30% co-firing with low-carbon hydrogen by 2032 and 96% by 2038) Existing natural gas turbine plants - must install CCS by 2035 with a 90% capture rate (or 30% co-firing with low-carbon hydrogen by 2032 and 96% by 2038) Applies to plants > 300 MW with a capacity factor > 50% Existing coal-fired plants Plants that will operate in 2040 and beyond must install CCS with a 90% capture rate in 2030 Plants that pledge to retire before 2040 must co-fire with 40% natural gas by 2030, with less stringent limits for plants that commit to retire before 2035 and 2032 The EPA’s proposal will now go through a public comment period before the rule is finalised. Once finalised, the rule may then face legal challenges. 	Phaseout of existing unabated coal by 2035	Announced and supportive. This regulation would require most coal plants to shut down or abate their emissions by 2035 which is supportive of IPR’s FPS forecast.	Moderate just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> Policy development included environmental justice analysis. Proposal will require states to engage with impacted communities and workers.
				Impact score: 3	Moderate



US POLICY ANNOUNCEMENTS/DEVELOPMENTS (2/4)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
US 	Low carbon buildings 	<p>New York becomes the first state to ban natural gas stoves and furnaces in most new buildings</p> <ul style="list-style-type: none"> New York State has approved a ban on natural gas and other fossil fuels in new buildings in the new state budget here. The law will prohibit appliances including gas furnaces, gas-powered stoves and propane heaters in most new buildings, with the exception of some industrial and commercial buildings. The ban will come into effect in 2026 for new buildings smaller than seven stories and in 2029 for larger buildings. This policy represents the first state-wide ban on fossil fuel use in buildings in the United States. 	100% zero carbon heating by 2040	Legislated and supportive. The ban will lead to 100% zero-carbon heating sales in New York by 2029 in new buildings, which is supportive of IPR's FPS US forecast of 100% zero carbon heating sales in all buildings by 2040.	High-level policy announcement – insufficient information to assess (implementation details to follow).
				Impact score: 3	Not assessed
	ICE ban - HDVs 	<p>California Approves World's First Regulation to Phase Out Dirty Combustion Trucks and Protect Public Health</p> <ul style="list-style-type: none"> The California Air Resources Board have approved the Advanced Clean Fleets regulation which will require all sales of medium- and heavy-duty vehicles in the state to be zero-emissions starting from 2036. Along with the ban on sales of new combustion vehicles, the regulation introduces phased requirements for transitioning to zero-emissions vehicles in existing fleets. The transition timelines will differ between vehicles types. <ul style="list-style-type: none"> For example, delivery vehicle fleets will have to be 100% zero-emissions by 2035, while sleeper cab tractors will need to achieve 100% zero-emissions vehicles by 2042. 	100% ZEV sales from 2045	Legislated, acceleration. The ban will lead to 100% zero-carbon heavy-duty vehicle sales in California by 2036, a nine-year acceleration compared to the 2021 FPS forecast for the US.	Moderate just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> Subject to participatory process through California Rulemaking procedure. Accompanied by upskilling programmes for disadvantaged communities. Threshold for scheme means small and medium enterprises will be excluded, potentially mitigating some just transition concerns.
				Impact score: 4	Moderate



US POLICY ANNOUNCEMENTS/DEVELOPMENTS (3/4)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
US 	Clean power 	California (US) approves a US\$7.3bn power transmission plan for 45 projects <ul style="list-style-type: none"> The California Independent System Operator (CAISO) has approved USD \$7.3bn worth of funding for a new power transmission plan. The plan includes 45 projects across California and Arizona which will support the development of 40GW of new renewable and battery storage capacity. 	Strong policy to develop 100% clean power by 2040	Legislated and supportive. Indicates state-level support for renewable energy rollout, which is supportive of a 100% clean power grid in California in line with the IPR FPS forecast.	No just transition elements. <ul style="list-style-type: none"> Further analysis would be needed to understand if the specific locations of the 45 approved projects pose just transition concerns.
				Impact score: 3	Not assessed
	Clean industry 	US Government unveils the nation's first National Clean Hydrogen Strategy and Roadmap <ul style="list-style-type: none"> The US government has published a strategic framework for achieving the large-scale use and production of clean hydrogen. The strategy sets the following targets for domestic clean hydrogen production: 10 million metric tonnes annually by 2030, 20 million metric tonnes annually by 2040, and 50 million metric tonnes annually by 2050. 	100% new zero carbon production facilities from 2060	Announced and supportive. Targets for green hydrogen production which could support the roll-out of new zero carbon industry production facilities in the US.	Strong just transition elements. Both managerial and transformative conceptions of just transition. <ul style="list-style-type: none"> Emphasises need for collaboration and engagement with local and Tribal communities, environmental and justice communities, and labour unions. Introduces policies such as Climate and Economic Justice Screening processes; workforce retraining and apprenticeships; and Community Benefit Planning whereby funding applicants have to commit to community and labour engagement.
				Impact score: 3	Strong



US POLICY ANNOUNCEMENTS/DEVELOPMENTS (4/4)

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition assessment
US 	Clean power 	Interior Department Proposes Rule to Bolster Solar and Wind Development on Public Lands, Continue Progress on Efficient and Responsible Permitting <ul style="list-style-type: none"> The Department of the Interior has proposed an update to renewable energy regulations to encourage solar and wind energy development on public lands. The proposal aims to reduce fees for projects by 80%, streamline application reviews in priority areas, and provide more certainty for the private sector. 	Strong policy to develop 100% clean power by 2040	Announced and supportive. Policy support at the federal level for renewable energy roll-out, supporting a shift towards a 100% clean power electricity grid that is consistent with IPR's FPS forecast.	Weak just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> Public consultation on policy underway for a limited period. No clear assessment of social impacts so far.
				Impact score: 3	Weak

VIETNAM POLICY ANNOUNCEMENTS/DEVELOPMENTS

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition Assessment
Vietnam 	Coal phaseout 	Vietnam to more than double power generation by 2030, reiterating coal phaseout by 2050 <ul style="list-style-type: none"> • Vietnam's Government projects total installed electricity generation capacity of 158 GW by 2030 compared to 69 GW of total capacity in 2020. • A government document restates Vietnam's commitment to phase out all coal-fired power by 2050, projecting 30 GW of coal-fired power capacity operating in 2030. • The projection for offshore wind in the internal document is 6 GW capacity by 2030, from zero currently. 	Phaseout of existing unabated coal by 2060	Announced, acceleration. Government target to phase-out coal-fired power by 2050, indicating an acceleration of ten years compared to the 2021 FPS forecast for Vietnam.	Weak just transition elements. Managerial conception of just transition. <ul style="list-style-type: none"> • Meeting socioeconomic development needs is identified as a key goal of the strategy. • However, there is little detail publicly available assessing impacts on people and communities.
				Impact score: 5	Weak

INTERNATIONAL POLICY ANNOUNCEMENTS/DEVELOPMENTS

Region	Sector	Development	2021 IPR 1.8°C Forecast	Impact on forecast	Just Transition Assessment
International 	Clean power 	North Sea countries set new targets for offshore wind capacity <ul style="list-style-type: none"> • Nine northern European countries have signed the Ostend Declaration which sets targets for offshore wind capacity in the North Sea. • The nine countries aim to collectively achieve offshore wind capacity of at least 120 GW by 2030 and 300 GW by 2050. 	N/A	Announced, acceleration. The announcement includes a target for offshore wind development that is higher than IPR's FPS modelling expectations for the signatory countries, indicating an acceleration in ambition compared to the FPS forecast.	High-level policy announcement – insufficient information to assess.
				Impact score: 4	Not assessed

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TECHNOLOGY DEVELOPMENT TRACKING

IPR tracks technology developments using a similar approach as policy



Technologies are tracked at a high level to provide a signal on where technology is accelerating or decelerating in the real world

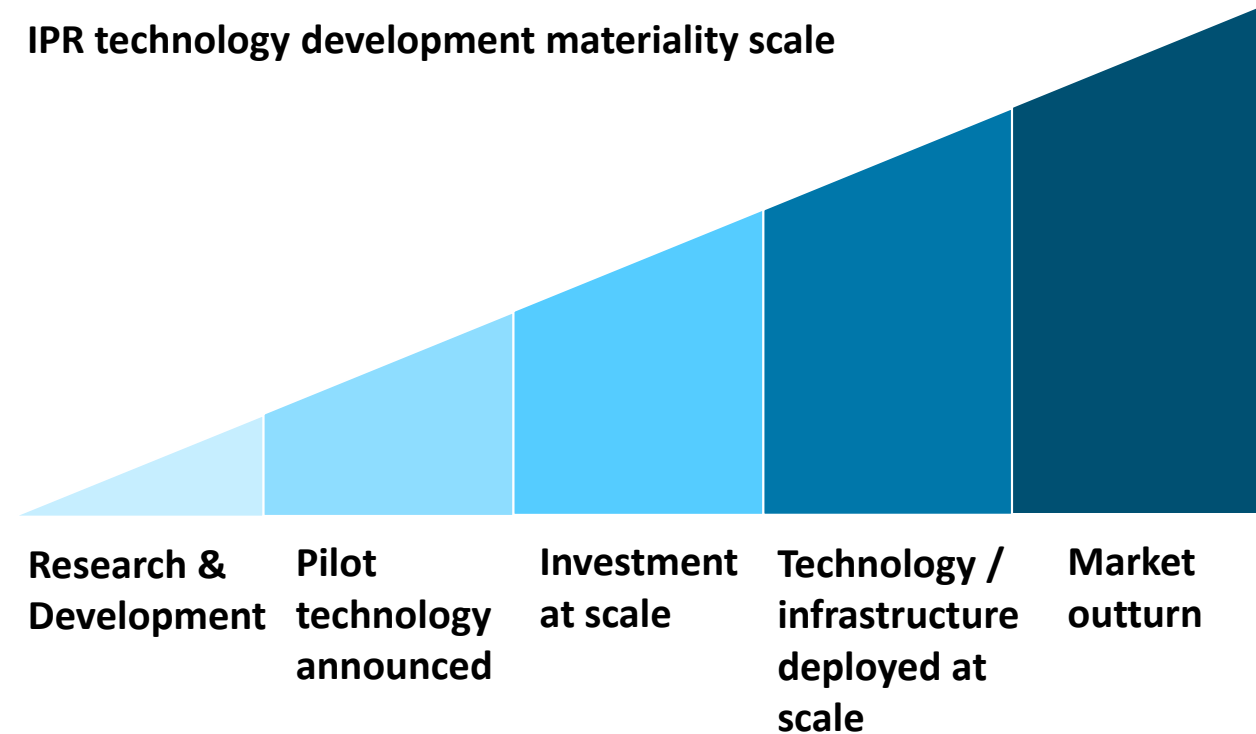


Technologies are assessed against the IPR Policy Forecast based on relevance, materiality and impact.











As more technology developments occur, this process may be refined.

IPR technology development materiality scale



Technology developments: Hydrogen









New hydrogen projects announced in India, South Africa and Canada

Region	Technology	Development	Most relevant 2021 IPR Forecast ¹	Impact on forecast	Impact score
 	Hydrogen	Indraprastha Gas is partnering with the cleantech solution provider ACME Group to set up a green hydrogen supply infrastructure in India. The companies plan to explore setting up hydrogen generation plants, including electrolyzers to blend green hydrogen in existing gas supply pipeline.	Strong policy signal to deliver 100% clean power by 2050	Supportive. Infrastructure to support hydrogen.	3
 	Hydrogen	South Africa, Denmark and the Netherlands have collectively launched SA-H2, a new fund with a mandate to bolster green hydrogen projects in South Africa	Policy to deliver 100% clean power by 2040	Supportive. Large investments in hydrogen to support South Africa's decarbonization.	3
 	Hydrogen	A joint venture between Energy Group RWE and Westfalen Group has been announced with plans to build a network of 70 hydrogen refuelling stations for heavy commercial vehicles in Germany by 2030.	100% ZEV sales from 2040	Supportive. Infrastructure to support heavy duty vehicle.	3
 	Hydrogen	A new green hydrogen facility is set to be built in Hull, with the project scheduled to be completed in 2027. The facility is planned to have 100MW of installed capacity, with the potential to increase this to 200MW via a second phase of development.	Policy to deliver 100% clean power by 2040	Supportive. Continued innovation and deployment of hydrogen technology.	3

1. Developments could relate to more than one policy forecast. Forecast listed is assessed as most relevant

Technology developments: Solar











Solar production increases in Saudi Arabia, while solar innovation grows in the USA

Region	Technology	Development	Most relevant 2021 IPR Forecast ¹	Impact on forecast	Impact score
 USA	 Solar	Start-up SolarAquaGrid is trialling a scheme to install solar panels over canals in California, generating power and decreasing evaporation. If all 6,400 km of the state's canals were fitted, it has the potential to save 283 billion liters of water a year and generate power for 9.4 million homes.	Policy to deliver 100% clean power by 2040	Supportive. Continued innovation/improved efficiencies of solar technology.	3
 Saudi Arabia	 Solar	A deal between Saudi Arabia's Public Investment Fund (PIF) and ACWA Power Co has been made to develop and operate three solar photovoltaic projects, with a combined capacity of 4.55GW. The three new projects are part of PIF's commitment to develop 70% of Saudi Arabia's renewable energy by 2030.	Strong policy signal to deliver 100% clean power by 2050	Supportive. Increase in generation supportive of IPR clean power forecasts.	3
 Saudi Arabia	 Solar	Construction has begun on a 119MW solar project in Saudi Arabia. The plant is expected to be operational by March 2025.	Strong policy signal to deliver 100% clean power by 2050	Supportive. New infrastructure to support solar technology growth.	3
 China	 Solar	China's utility-scale solar capacity reached 228GW in Q1 2023, more than the rest of the world combined, according Global Energy Monitor.	Strong policy signal to deliver 100% clean power by 2050	Acceleration. Significant ramp up in generation supportive of IPR clean power forecasts with targets to be exceeded ahead of time.	4

1. Developments could relate to more than one policy forecast. Forecast listed is assessed as most relevant

Technology developments: Wind








Wind continues to see increased adoption by countries as the technology evolves in size, efficiency, cost and generation

Region	Technology	Development	Most relevant 2021 IPR Forecast ¹	Impact on forecast	Impact score
 Germany	 Wind	Germany's onshore and offshore turbines supplied nearly one third (32.2%) of the electricity produced between January and March, while total electricity production was 7.8 percent lower than in the year before.	Strong policy signal to deliver 100% clean power by 2045	Supportive. Wind share continues to grow.	4
 Germany	 Wind	An 80MW wind-power-to-heat plant is about to become operational in Hamburg. The plant will convert excess electricity generated by wind farms to supply heating and water to approximately 27,000 households.	Strong policy signal to deliver 100% clean power by 2045	Supportive. Continued innovation and deployment of wind technology.	3
 Vietnam	 Wind	A Memorandum of Understanding to deliver one of Vietnam's first offshore wind power assets has been signed by DNV, IE, and PTSC M&C.	Strong policy signal to deliver 100% clean power by 2045	Supportive. New infrastructure to support offshore wind.	3
 China	 Wind	The installation of a large offshore wind turbine with an installed capacity of 16 megawatts has started in southeast China's Fujian Province. When running at rated power, the turbine can generate more than 66 million kilowatt-hours of clean electricity per year, meeting the annual electricity needs of 36,000 households.	Strong policy signal to deliver 100% clean power by 2050	Supportive. Continued innovation and deployment of wind technology.	3
 UK	 Wind	Wind surpassed gas in Britain's electricity generation for the first time in Q1 2023. Emissions from coal and gas fell by 3.4% in 2022, with coal use reduced by 15% from 2021.	Policy to deliver 100% clean power by 2040	Supportive. Ramp up in generation, which is beyond what was expected within IPR clean power forecasts.	3

1. Developments could relate to more than one policy forecast. Forecast listed is assessed as most relevant

Technology developments: Wind and Solar








Increased renewables production and utilisation across Europe, the USA and China

Region	Technology	Development	Most relevant 2021 IPR Forecast ¹	Impact on forecast	Impact score
	 Wind	TenneT has been awarded contracts worth 30bn Euros to build 14 offshore grid connection systems in the German and Dutch North Sea by 2031.	Strong policy signal to deliver 100% clean power by 2045	Supportive. Infrastructure to support offshore grid connections.	
	 Solar  Wind	Solar and wind power generated more power in the US than coal for the first five months of 2023.	Policy to deliver 100% clean power by 2040	Supportive. Increase in generation supportive of IPR clean power forecasts.	

1. Developments could relate to more than one policy forecast. Forecast listed is assessed as most relevant

Technology developments: EVs







New EV technologies are being pursued in Japan while collaboration in EV infrastructure builds in the US

Region	Technology	Development	Most relevant 2021 IPR Forecast ¹	Impact on forecast	Impact score
 Japan	 EVs	Toyota has announced plans to make an all-solid-state battery as part of its ambitious plans for battery electric vehicles by 2027. Charging time will be shortened to 10 minutes or less with the new battery.	100% ZEV sales from 2040	Supportive. Continued innovation/improved efficiencies of battery technology.	3
 USA	 EVs	Tesla will open a portion of its US Supercharger and Destination Charger network to non-Tesla EVs, making at least 7,500 chargers available for all EVs by the end of 2024	100% ZEV sales from 2040	Supportive. Infrastructure to support EV deployment.	3
 Canada	 Hydrogen  EVs	First Hydrogen has secured two sites for green hydrogen and ZEV production in Quebec. First Hydrogen announced plans to produce up to 35MW of green hydrogen using advanced electrolysis technology and distribute the hydrogen within the Montreal-Quebec City corridor for use with First Hydrogen's light commercial vehicles (LCV), as well as supporting other hydrogen-fueled vehicles and applications in the province. The assembly factory will be designed for an annual production of 25,000 vehicles per year when at full capacity.	100% ZEV sales from 2040	Supportive. Innovation in EV deployment.	3

1. Developments could relate to more than one policy forecast. Forecast listed is assessed as most relevant

Technology developments: Cultivated meat

Innovation and advancement of regulatory approvals in cultivated meat continue to grow in the USA, while sales from key industry players have dropped.

Region	Technology	Development	Most relevant 2021 IPR Forecast ¹	Impact on forecast	Impact score
USA 	 Cultivated meat	Startup Omeat is preparing to enter the cultivated meat market, with the startup designing a new method it claims will 'reduce input costs and provide scalability'. If successful, the animal plasma utilised could be used to grow any kind of meat. The company is currently building a pilot plant and expanding its staff to prepare for commercialization.	Nationwide market incentives to encourage farmers to reduce emissions from crop production and livestock from 2025	Supportive. Advancements in lab-grown meat technology will reduce livestock emissions, however these technologies need to be scaled and operationalised before they can have an impact.	3
USA 	 Cultivated meat	Upside Foods and GOOD Meat both received a Grant of Inspection (GOI) from the US Department of Agriculture (USDA) on June 21 to sell cultivated chicken in the US. This is the final step of the pre-market review necessary before companies can begin commercial production and sales.	Nationwide market incentives to encourage farmers to reduce emissions from crop production and livestock from 2025	Supportive. Advancements in lab-grown meat technology will reduce livestock emissions, however these technologies need to be scaled and operationalised before they can have an impact.	3
USA 	 Cultivated meat	Beyond Meat's volume of product sold in Q1 2023 decreased by 7.3%.	Nationwide market incentives to encourage farmers to reduce emissions from crop production and livestock from 2025	Supportive. Advancements in lab-grown meat technology will reduce livestock emissions, however these technologies need to be scaled and operationalised before they can have an impact.	3

1. Developments could relate to more than one policy forecast. Forecast listed is assessed as most relevant

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Appendix

Q1-Q4 2022 CLIMATE ANNOUNCEMENTS REINFORCED THE 1.8°C FORECAST POLICY SCENARIO PATHWAY AND IN SOME INSTANCES SHOWED EVIDENCE OF ACCELERATION

	Greater likelihood of 2.3°C IEA STEPS* scenario			1.8°C IPR FPS				Greater likelihood of 1.5°C IPR RPS scenario				
	Significant deceleration	Large deceleration	Moderate deceleration	Small deceleration	Marginal deceleration	No change to policy forecast	Marginal acceleration	Small acceleration	Moderate acceleration	Large acceleration	Significant acceleration	Total
Score	0	1	2	3	4	5	6	7	8	9	10	
Global					3	21	3					27
US				1	3	32	3					39
China					1	12	4					17
EU						25	3					28
Germany						7	5					12
France						2	3					5
UK					1	13		1				15
Brazil					4	7	1					12
India						7						7
Indonesia						3	1					4
Canada						3	1		1			5
Nigeria						5	1					6
South Africa						3						3
Saudi Arabia						2						2
South Korea						2						2
Japan						4	2					6
Australia						8	4					12
Mexico						2						2
Vietnam						1	1					2
Turkey						0	1					1
COP announcements					1	3						4
Total				1	13	162	33	1	1			211

i. This assessment covers the period from COP 26 (in 2021) to January 2023.

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.



INEVITABLE
POLICY
RESPONSE

