Paris Misaligned Joint Summary

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CLIMATE POLICY INITIATIVE

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

JOINT SUMMARY

Leaders will soon commemorate five years of the signing of the Paris Climate Agreement for global climate action, wherein nations agreed to keep temperature rise well below 2°C and pursue even more effort to limit it to 1.5°C. Article 2.1c of the Agreement calls for "finance flows [to be made] consistent with a pathway towards low greenhouse gas [GHG] emissions and climate-resilient development," which would require all financial actors (financial institutions, corporations and governments) to align their practices, investments, and portfolios with climate goals, mitigate all risks related to climate change, and seize opportunities for growth through climate-smart investment. Complying with the Paris Agreement and net-zero emissions targets means adjusting decision frameworks to account for climate change risks, including physical, transition, and liability risks. Much of this effort will need to be within power, transport, and other sectors with high-emissions intensities driven by the existing asset fleet. We also need to understand how activities across individual institutions and diverse sectors of the economy 'add up' to achieve necessary levels of sector, country, regional, and global decarbonization.

Since 2010, Climate Policy Initiative has been a leader in tracking sustainable investment annually in its Global Landscape of Climate Finance. Now, CPI builds on this work to provide first-of-its-kind insight into high-emissions finance and investment[1] alignment in a series of three papers:

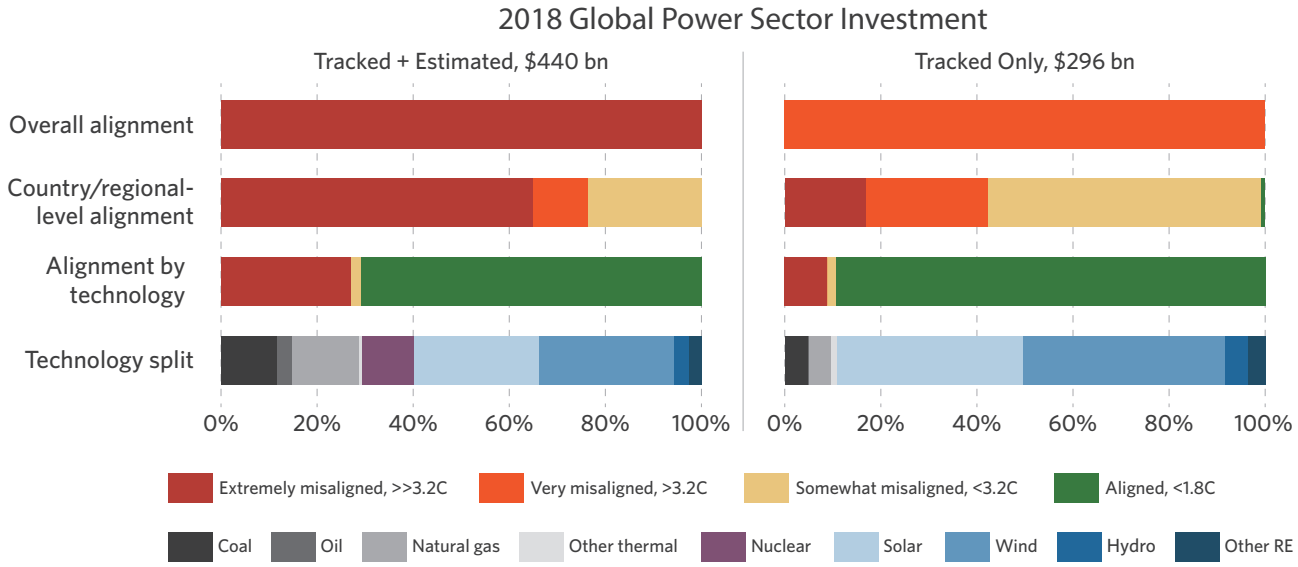
1. **Improving Tracking of High-GHG Finance in the Power Sector** investigates methods and available data for tracking high GHG emissions finance at the project level. It brings together the best of these to present, for the first-time, granular information on financing sources, instruments, destinations, and technology uses for high-emissions power plant projects for the years 2017/18.
2. **A Proposed Method for Measuring Paris Alignment of New Investment** outlines a science-based methodology for understanding how new investment tracks to IEA energy scenarios and emissions budgets. This methodology attempts to arm policymakers and investors with a new methodology for understanding whether new investment is contributing sufficiently to 2030 targets under the Paris Agreement, within specific sectoral/geographical contexts.
3. **Paris Misaligned: An Assessment of Global Power Sector Investment** presents the results from applying this methodology to best available data for the global power generation and U.S. transport sectors for the year 2018; discusses the implications of these results for the power sector; and outlines possible solutions to be undertaken by public and private financial actors, as well as regulators and service providers.

1 In line with CPI's Global Landscape of Climate Finance, this paper defines "investment" as primary financial commitments into productive assets at the project level – excluding secondary transactions that involve money changing hands but no physical impact, and also research and development spending assumed to be recovered through the sale of resulting products. Financial commitments provided by certain instruments such as guarantees, insurance, government revenue support schemes and fiscal incentives, or "intermediate output" investments in manufacturing or equipment sales, are not counted due to data limitations and the potential for double-counting.

We stress the importance of the new methodology itself. If integrated into investor and public institutions' decision-making processes, where it could draw on much more granular data, our approach would allow those actors to understand and improve the alignment of their investment practices with Paris goals. While this operational value is subject to further discussion and testing of the methodology, these papers offer several broad findings from a first test of our approach:

1. **Globally, 29% of new power investment in 2018, or approximately USD 129 billion, was invested in fossil fuel power, resulting in 109 GW of new fossil generating capacity[2] and putting the world on a temperature trajectory of over 3.2°C – more than double the level targeted in the Paris Agreement.** Despite strong investment in renewable energy, continued fossil fuel investments across multiple geographies and existing fossil fuel plants that lock in high-emissions capacity are driving misalignment with Paris goals. To meet Paris-aligned targets in 2030 and stay within implied carbon intensity budgets across regions[3], all new finance for power should fund development of zero-carbon generation and decommissioning of fossil fuel plants should take place at an accelerated pace. However, zero-carbon global power sector investment currently falls well short of this target, at 71% of the total.

Figure JS1: New power sector investment by technology and related alignment, and resulting contribution to temperature pathways at the country-level and at the global level – 2018, global investments (% of investment, USD bn investment)

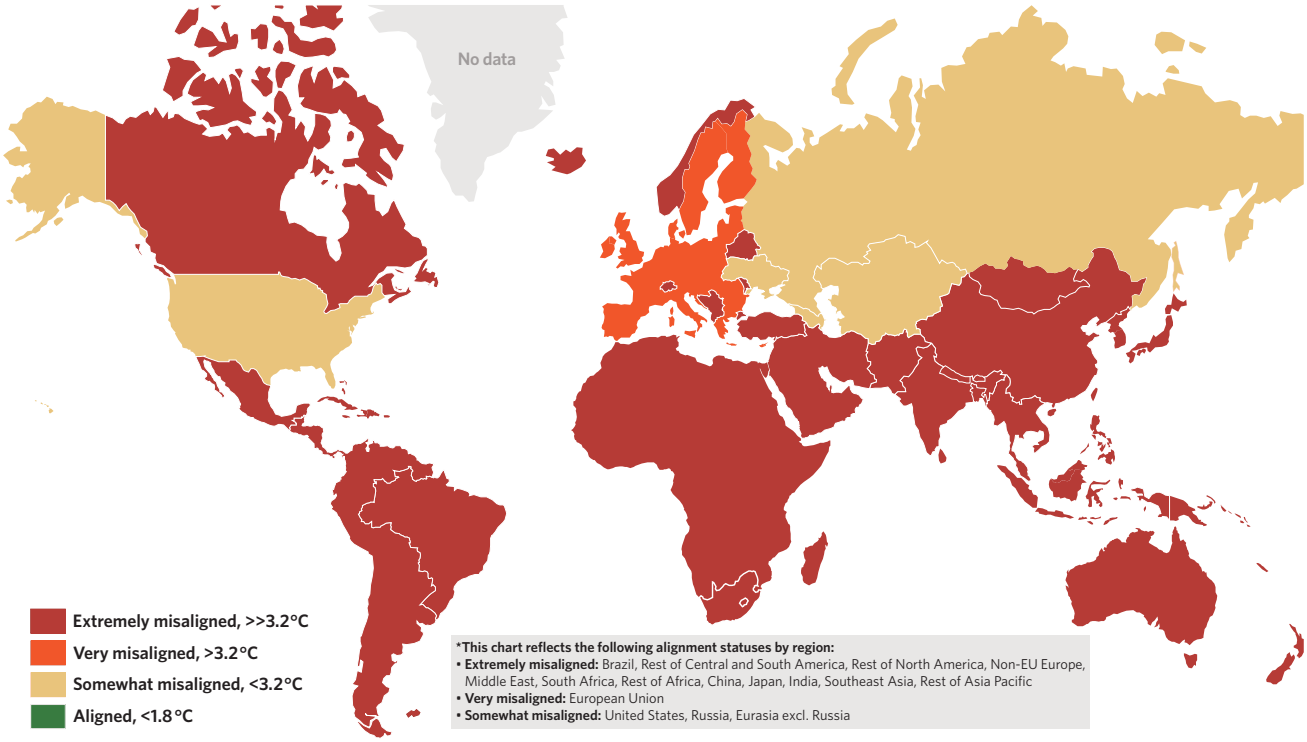


The figures introduce alignment of global investment flows for 1) Left half: investment data from high-quality asset-level datasets for which transaction specific data is available (tracked only); 2) Right half: tracked investment plus estimated investment. For each of the two figures we describe, from left to right: **Technology split:** *the mix of technologies supported by new investments;* **Alignment by technology:** *alignment of technologies with different temperature pathways;* **Country/region level alignment:** *alignment of investments broken out by country/region with corresponding country-specific, or region-specific temperature pathway;* **Overall alignment:** *alignment with global temperature pathways; and* **Total 2018 investment:** *total power sector investment in USD bn in 2018.*

2 **However, CPI was only able to obtain asset-level transaction data for USD 32 billion of this amount, less than a quarter of the value of the total.** This asset-level tracking gap highlights the difficulty of linking corporate balance sheet financing to specific high-emissions power projects.
3 Paris-aligned and Paris-misaligned Carbon intensity targets were developed by CPI based on scenarios from the International Energy Agency (IEA) *World Energy Outlook 2019*. Available at: https://www.iea.org/reports/world-energy-outlook-2019

2. **No major country or region is currently decarbonizing its power sector at the required pace to meet Paris goals, with fossil fuel finance driving misalignment across a wide range of markets in 2018.** While renewable capacity is growing rapidly in almost all geographies, new investment in fossil fuel generation that will remain operational for years to come continues to hold back progress toward Paris-aligned pathways. As a result, finance to most regions was extremely misaligned in 2018, and average emissions rates were higher than even the targets for the IEA's least aggressive Current Policies Scenario, which represents a pathway to well over 3.2°C of warming. Trends have been particularly worrying in China, India, Japan, and South Africa as despite their emissions-intensive existing assets, these major economies are still investing in high-emissions power, locking in further emissions increases even as sharp decreases are required to achieve Paris alignment.

Figure JS2: Degree of alignment and implied temperature pathways of new power investment in major countries and regions (USD, 2018)



Note: *investment trends are aligned where financial flows cannot be mapped to particular countries, leaving only flows to renewable generation at the regional level.*

3. **No major investor category is fully aligned with CPI's calculated Paris-aligned emissions intensity targets for power-sector finance.** Institutional investors, with 43% of direct investments aligned with regional targets, and multilateral development banks, at 28%, are marginally more on track with their investment portfolios relative to other investor types, none of which exceed 20% when assessing alignment of finance aggregated by region.

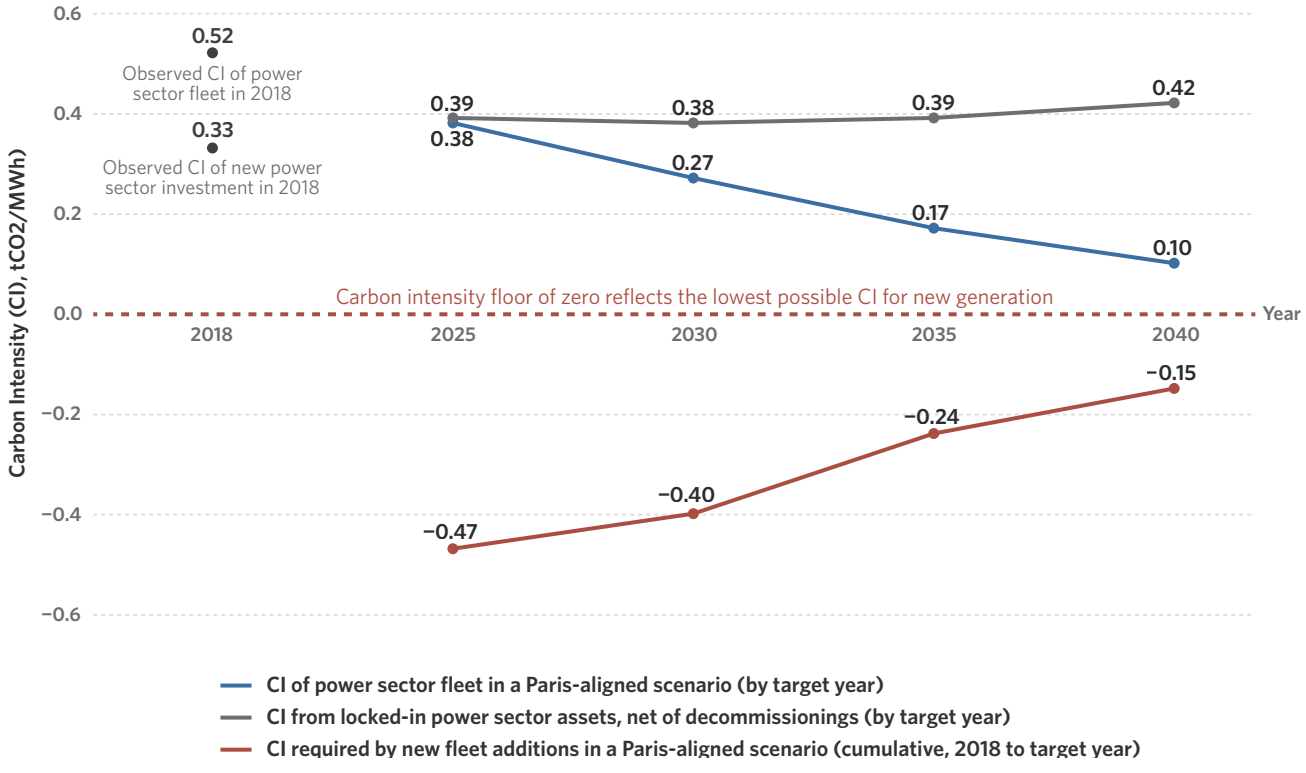
4. **Investment flows from commercial finance institutions were found to be "Very misaligned;" commercial FIs were the leading sources of tracked fossil fuel power investment at USD 13 billion.** Commercial banks, along with export credit agencies and state-owned banks, invested heavily in fossil fuel power plants, at USD 13 billion, USD

9 billion, and USD 5 billion per year respectively in 2017/18. Overall, public and private institutions provided similar amounts of tracked project finance for fossil fuel power, at USD 22 billion and USD 19 billion per year respectively.

DISCUSSION OF FINDINGS

The primary barrier to making power investment compatible with Paris-aligned 2030 emissions pathways arises from the locked-in emissions of existing fossil fuel generation. Even if all new generating capacity were to be zero-carbon, additional power sector emissions cuts are necessary, including activities to prevent or capture emissions from existing high-carbon assets, including accelerated decommissioning of coal, oil, and natural gas generation as well as investment in carbon capture, energy efficiency, and carbon storage technologies.

Figure JS3: Global carbon intensities (CI) of 2018 power finance vs. future year alignment targets



Note: *carbon intensity (CI) is here defined as the ratio of total power sector emissions to total electricity output. Here we compare CI observed in 2018 new power sector investment (estimated and tracked), with* ***Black line:*** *evolution of CI of the power generation fleet required to be in line with Paris goals;* ***Grey line:*** *estimated CI from 2018 fleet, as power plants retire over the time;* ***Red line:*** *CI required on average by new investments between now and future year alignment targets.*

This challenge is further complicated by the difficulty of tracing primary investment to source institutions or countries. Investments for which information on the type of investor is not available – which we estimate and categorize as "unknown" in the paper – are expected to largely comprise transactions taking place on corporate balance sheets rather than at project level. This applies to both private and state-owned enterprises, highlighting the need for increased disclosure and regulation of these financing arrangements. Under current investment disclosure rules, which incentivize firms to "hide" dirty activities by financing them through balance sheet borrowing, asset-level transaction data were available

for just 23% of the high-emissions power finance tracked in 2018. In the absence of more comprehensive transaction-level datasets detailing the types and identities of firms financing high-carbon activities and assets, full assessment of the alignment status of both broad types of financial actors (e.g. corporates, national Development Finance Institutions) and specific firms or institutions is almost impossible.

RECOMMENDATIONS

The past decade, and in particular the past three years, have brought significant growth in sustainable finance, especially in the power sector as renewable energy deployment has exploded. However, the ratio of dirty to clean power investment remains far too high. Even in 2018, when investment in zero-carbon energy grew to represent 60% of total power finance, new fossil fuel investment raised the overall carbon intensity of new generation to levels incompatible with a Paris-aligned decarbonization scenario.

While continuing to invest in zero-carbon generation is important, the primary challenge in attaining Paris alignment in the power sector remains emissions from fossil fuel generation. We have identified solutions to both of these challenges, which broadly target the following goals:

1. Halt new carbon-intensive investments
2. Accelerate retirement of fossil-fuel plants
3. Continue to scale up low-carbon investments including in renewable energy, energy efficiency, grid infrastructure, carbon capture and storage, as well carbon offsets

In Table JS1, we outline recommendations by actor category and emphasize that public and private actors should act in cross-collaboration to deliver the Paris Agreement.

Table JS1: Recommendations to drive Paris Alignment for Investment into the Power Sector by Actor Category

Public sector	**Introduce the right incentives in the power sector**. Governments should end "positive incentives" for carbon intensive activities by eliminating fossil fuel subsidies and introduce "negative incentives" for carbon-intensive activities, using carbon pricing to internalize the social costs of emissions. **Facilitate accelerated decommissioning of high-emissions generation**. The public sector should support financing mechanisms that can facilitate and accelerate the exit of capital from fossil fuel assets (e.g. by refinancing them to fund clean investments) while providing safeguards to workers displaced. Public-private collaboration can help bring in the requisite investments for the substitutes needed. **Promote the use of precautionary principles in the assessment of new fossil fuel investment**. Climate risks are increasingly being considered by financial institutions, but uncertainties in precisely measuring them is delaying response. To phase out investment in fossil fuel assets, financial regulators and governments should promote the use of standards and bans to reduce stranded asset risks borne by commercial financial institutions, or introduce regulatory instruments to make emissions intensive loans more burdensome for lenders. **Leverage development finance institutions' (DFIs) political and financial strength to support the Paris Agreement:** DFIs play a critical role in bridging public and private finance to maximize the benefit to recipient countries. As such, DFIs should utilize their status as concessional finance providers to foster the adoption of Paris-aligned policies and practices in governments and financial institutions. In parallel, national governments can also enable DFIs to fulfill their potential as drivers of the low-carbon finance transition by passing legislation or otherwise modifying DFIs' governance frameworks to increase institutional risk appetite and investment volume. This includes revising capital adequacy requirements to enable increased institutional leverage and modifying internal practices to scale up finance for climate projects using higher-risk blended and concessional vehicles.

Private sector	**Focus on impacts in the real economy**. Climate commitments and investments should be assessed for their contribution to the real-world environmental and societal context within which they operate. Meaningful, holistic climate solution commitments must influence the real economy though effective stewardship and ownership activities **Capitalize on investment opportunities in the low-carbon economy.** Large-scale private investment is required to decarbonize the power sector, presenting an opportunity to seize a market poised for significant growth as legacy fossil generation retires, renewable energy technology costs decline and firms rush to fill global demand for carbon-free electricity. **Expand, strengthen, and harmonize Task Force on Climate-related Financial Disclosures (TCFD) climate risk reporting.** Private coalitions and initiatives by financiers - with the support of regulators and the leadership public sector institutions – should push for expanded adoption of climate risk disclosures practices by financial actors and ensure that their investment teams and asset managers properly assess climate risks.
Service providers	**Harmonize data collection and reporting methods**. To establish realistic expectations and ensure the effectiveness of the financial sector's decarbonization efforts, there is a need to harmonize the collection and presentation of information available to investors converging towards established technologies metrics and methodologies e.g. regarding benchmarks, scenarios, pricing of climate risks. **Expand the availability of transaction-level data on high-carbon finance, particularly for corporate balance sheet investments**. More granular alignment insights on Paris alignment trends require more transparency regarding firms' financing commitments for fossil fuel power and other high-emission intensive investments. Further, fossil-fuel data should be expanded to cover offset efforts occurring within the power sector (or negative emissions), in line with the principles of "Net-Zero," but this should only be conditional to a stricter definition of "offsets" - which limits their application to activities that prioritize direct reduction of own emissions – allowing for cross-sectoral trading of offsets in rare occasions and only within a fully integrated and transparent market. **Incorporate high emissions asset risks and alignment status in credit rating**. Credit rating using traditional methods is becoming obsolete and future credit risks of investments can no longer be based solely on past credit risk. Given the amount of high ratio of high emissions finance flows which puts lenders at risk, credit rating agencies must act swiftly to develop and sharpen their focus on carbon thresholds and climate risks. **Enhancing cross-organization coordination in investment decision-making**. Tools that support investment decision making through scenario approaches should ensure that information on the impact of a single investment is not siloed away from other financing decisions occurring in parallel in the organization, or even beyond the organization, throughout the entire sector of reference. Service providers should enable cross-organizational coordination in investment decision making, with the development of open datasets where the pipelines of projects – particularly high carbon projects – are compared with the carbon budgets they contribute to collectively deplete.

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