The Al-Attiyah Foundation 15 July 2021



### IRENA's World Energy Transitions Outlook Outlines Pathway to 1.5°C

The World Energy Transitions Outlook from the International Renewable Energy Agency (IRENA) outlines a pathway for the world to achieve the Paris Agreement goals, by transforming the global energy landscape. The report presents options to limit global temperature rise to 1.5°C and bring CO2 emissions to net zero by 2050. It offers insights on technology choices, investment needs, policy framework and the socio-economic impacts of achieving a sustainable, resilient and inclusive energy future.

The report investigates two scenarios: The Planned Energy Scenario (PES) is the primary reference case, providing a perspective on energy system developments based on governments' current energy plans and other planned targets and policies, including NDCs under the Paris Agreement.

The 1.5°C Scenario (1.5-S) describes an energy transition pathway aligned with the 1.5°C climate ambition — which is to limit global average temperature increase by the end of the century to 1.5°C, relative to pre-industrial levels. The Outlook presents several prerequisites that underpin the theory of change behind this 1.5°C Scenario.

Over 90% of the solutions shaping a successful outcome in 2050 involve renewable energy through direct supply, electrification, energy efficiency, green hydrogen and bioenergy combined with carbon capture and storage. The Outlook acknowledges that innovative solutions are reshaping the energy system. It highlights that investment in energy transition would have to increase by 30% over planned investment to a total of US\$131 trillion between now and 2050 — a level that is estimated to yield a cumulative payback of at least US\$61 trillion by 2050.

## ву 2050

#### Electricity will be

The main energy carrier, increasing from a 21% share of total final energy consumption in 2018 to over 50% in 2050.

(IRENA)

## ву**2050**

#### The energy intensity

Of the global economy will fall more than 60%.

(IRENA)

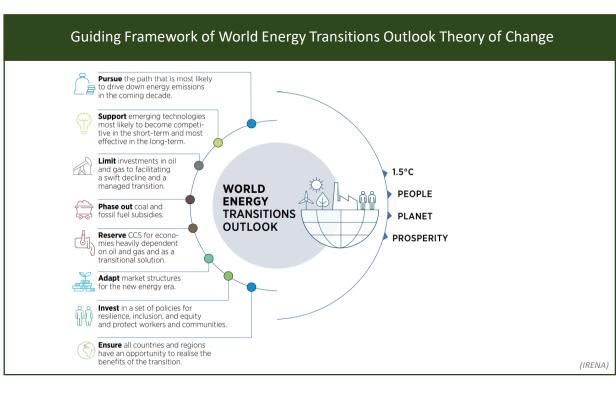
\$24

#### Trillion of planned

Investments will have to be redirected from fossil fuels to energy transition technologies between now and 2050.

(IRENA)





### A Proposal to Scale Up Global Carbon Pricing

The International Monetary Fund (IMF) is leading a proposal on the creation of an international carbon floor price arrangement that complements the Paris Agreement, in preparation for the Climate Change Conference (COP26) to be held in Glasgow this November. The IMF's proposal is contained in a paper that is still under discussion by its board and membership.

The aim of the proposal is to address the gap between the existing carbon pricing levels and those needed to incentivise the achievement of carbon reduction targets, that are consistent with the goals of the Paris Agreement.

The IMF notes that although some countries are moving aggressively on carbon pricing, the ambition to set carbon pricing varies from country to country, such that four-fifths of global emissions remain unpriced. Furthermore, the current global average carbon price is only \$3 per metric ton. The knock-on effect is that some countries and regions with high or rising carbon prices are considering placing charges on the carbon content of imports from places without similar schemes. However, such border carbon adjustments are insufficient instruments, from a global climate perspective, because the carbon embodied in trade flows is typically less than 10% of the countries' total emissions. The report predicts that as nations try to limit the average global temperature increase to 2°C, the average carbon price could rise to \$120 per metric ton by 2030.

The IMF concluded that there is no time to waste in putting in place such a global carbon price arrangement. The world must make sure that we will not look back at 2021 as a year of missed opportunity due to a lack of effective action.





# Largest Emitters Projected Carbon Emissions in 2030,

Based on Current Policies
China 34%

Other G20	21%
Rest of World	15%
USA	14%
India	9%
EU	7%
	(IMF)

4/5
Of global emissions

Remain unpriced, and the

global average emissions price is currently \$3 a ton.

(IMF)



