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PRESS RELEASE

GLOBAL ENERGY, INDUSTRY AND FINANCIAL LEADERS OUTLINE NEXT DECADE PRIORITIES FOR A NET-ZERO-CARBON ECONOMY

*A YEAR BEFORE COP26, NEW REPORT FROM ENERGY TRANSITIONS
COMMISSION HIGHLIGHTS ACTIONS REQUIRED BY 2030 TO ACHIEVE
ZERO-CARBON ECONOMY BY MID-CENTURY*

UNDER STRICT EMBARGO UNTIL
0700 BST 16 SEPTEMBER

LONDON, 16 September 2020 - A coalition of 45 leaders from global energy producers, energy-intensive industries, financial institutions and environmental advocates – including ArcelorMittal, Bank of America, BP, Development Research Center of the State Council of China, EBRD, HSBC, Iberdrola, Ørsted, Shell, Sinopec Capital, Tata Group, Volvo Group and the World Resources Institute among others – argues in this report that the world can and must achieve net zero greenhouse gas emissions by mid-century, and that in the long term “zero must mean zero”, with no permanent rather than transitional reliance on negative emissions to balance continued large-scale emissions from the energy system and industry. It also lays out steps needed in the next decade to achieve that objective.

In its new report ***Making Mission Possible – Delivering A Net-Zero Economy***, the Energy Transitions Commission (ETC) shows that clean electrification must be the primary route to decarbonisation: it highlights that dramatic falls in cost of renewable energy make this easily affordable and argues that all growth in electricity supply should now come from zero-carbon sources with no need to build any new coal-fired power capacity to support economic growth and rising living standards.

The report demonstrates that it is technically and economically possible to have a carbon-free economy by around mid-century at a total cost of less than 0.5% of global GDP by taking three overarching steps:

- **Using less energy** while improving living standards in developing economies, by achieving dramatic improvements in energy efficiency and shifting to a circular economy;
- **Scaling up clean energy provision** by building massive generation capacities of cheap clean power, at a pace five to six times higher than today, as well as expanding other zero-carbon energy sources such as hydrogen;
- **Using clean energy across all sectors of the economy** by electrifying many applications in buildings, transport and industry, and deploying new technologies and processes using hydrogen, sustainable biomass or carbon capture in sectors that cannot be electrified, like heavy industry or long-distance shipping and aviation.

The signatories acknowledge that this report is published in “an unprecedented context”. They argue that the COVID-19 pandemic has demonstrated the unpreparedness of the global economy to systemic risks and that the massive public spending now being dedicated to stimulating economic recovery constitutes a unique opportunity to invest in a more resilient economy.

The ETC estimates that additional investments required to achieve those goals will be in the order of US\$1 trillion to US\$2 trillion per year, equivalent to 1% to 1.5% of global GDP. This represents only a small increase of global investments which currently amount to about a quarter of global GDP, and would contribute to global economic growth.

“There is no doubt that it is technically and economically possible to reach the zero-carbon economy which we need by 2050; and zero must mean zero, not a plan which relies on the permanent and large-scale use of “offsets” to balance continued GHG emissions. But action in the next decade is crucial – otherwise it will be too late.”, ETC Co-Chair Adair Turner said.

Fellow ETC Co-Chair Ajay Mathur added, *“In India as in many countries, climate change is already impacting people and disrupting the economy. Governments from developed and developing countries will find in this blueprint practical recommendations on how to enhance their national strategies and ramp-up their commitments as part of the Paris agreement.”*

The report outlines **3 critical priorities for the 2020s** and practical actions that nations and non-state parties can commit to in the run up to the COP26 United Nations Framework Convention on Climate Change in November 2021 to put mid-century objectives within reach.

1. **Speed up the deployment of proven zero-carbon solutions** – governments, investors and corporates need to work hand-in-hand to build up massive capacities of zero-carbon power generation to enable the clean electrification of the economy.
2. **Create the right policy and investment environment** – by removing fossil fuel subsidies, increasing carbon prices and combining them with border carbon adjustments in the absence of an internationally-agreed carbon price, putting in place regulations – like fuel mandates or lifecycle emissions standards for manufactured products – that create additional incentives for decarbonisation where price signals are insufficient, and working with financial institutions to channel investment not only to green activities but also to energy-intensive industries making their transition.
3. **Bring the next wave of zero-carbon technologies for harder-to-abate sectors to market** – so they can be deployed in the 2030s and 2040s, by focusing public and private R&D on - critical technologies (like hydrogen, sustainable fuels or carbon capture), creating demand for new green products and services (through “green buyers’ clubs, public procurement, and product regulations), and financing the first commercial-scale pilots through smart use of de-risking public funds alongside private capital.

The ETC’s blueprint is intended to allow all developed economies to reach net-zero emissions by 2050 at the latest, including China which has the resources and technology leadership to become a rich developed zero-carbon economy by 2050. All developing

nations would be able to reach net-zero emissions by 2060 at the latest, but require development finance to de-risk and attract private green investment.

The report integrates findings from ETC's landmark 2018 Mission Possible report and subsequent region-specific studies with updated analysis to reflect the latest trends in the readiness and cost of key emission-reducing technologies.

To read the full report, visit the ETC website www.energy-transitions.org

ETC COMMISSIONERS:

Mr. Marco Alvera, Chief Executive Officer – SNAM

Mr. Thomas Thune Anderson, Chairman of the Board – Ørsted

Mr. Brian Aranha, Executive Vice-President: Head of strategy, CTO, R&D, CCM, Global Automotive, Communications and Corporate Responsibility - ArcelorMittal

Lord Gregory Barker, Executive Chairman – EN+

Mr. Pierre-André de Chalendar, Chairman and Chief Executive Officer – Saint Gobain

Ms. Marisa Drew, Chief Sustainability Officer & Global Head Sustainability Strategy, Advisory and Finance – Credit Suisse

Mr. Dominic Emery, Chief of Staff – BP

Mr. Stephen Fitzpatrick, Founder – Ovo Energy

Mr. Will Gardiner, Chief Executive Officer – DRAX

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Ms. Zoe Knight, Managing Director and Group Head of the HSBC Centre of Sustainable Finance – HSBC

Mr. Jules Kortenhorst, Chief Executive Officer – Rocky Mountain Institute

Mr. Mark Laabs, Managing Director – Modern Energy

Mr. Richard Lancaster, Chief Executive Officer – CLP

Mr. Li Zheng, Executive Vice President – Institute of Climate Change and Sustainable Development, Tsinghua University

Mr. Martin Lindqvist, Chief Executive Officer – SSAB

Mr. Auke Lont, Chief Executive Officer and President – Statnett

Mr. Johan Lundén, SVP Head of Project and Product Strategy Office – Volvo Group

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Mr. Ian Simm, Founder and Chief Executive Officer – Impax

Mr. Mahendra Singhi, Managing Director and Chief Executive Officer – Dalmia Cement (Bharat) Limited

Dr. Andrew Steer, President and Chief Executive Officer - World Resources Institute

Lord Nicholas Stern, IG Patel Professor of Economics and Government - Grantham Institute - LSE

Dr. Günther Thallinger, Member of the Board of Management – Allianz

Mr. Simon Thompson, Chairman – Rio Tinto

Dr. Robert Trezona, Head of Cleantech – IP Group

Mr. Jean-Pascal Tricoire, Chairman and Chief Executive Officer – Schneider Electric

Ms. Laurence Tubiana, Chief Executive Officer - European Climate Foundation

Lord Adair Turner, Co-Chair – Energy Transitions Commission

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Senator Timothy E. Wirth, President Emeritus – United Nations Foundation

Mr. Zhang Lei, Chief Executive Officer – Envision Group

Dr. Zhao Changwen, Director General Industrial Economy – Development Research Center of the State Council

Ms. Cathy Zoi, President – EVgo

About the Energy Transitions Commission

The Energy Transitions Commission (ETC) is a global coalition of leaders from across the energy landscape committed to achieving net-zero emissions by mid-century, in line with the Paris climate objective of limiting global warming to well below 2°C and ideally to 1.5°C. Our commissioners come from a range of organisations – energy producers, energy-intensive industries, technology providers, finance players and environmental NGOs – which operate across developed and developing countries and play different roles in the energy transition. This diversity of viewpoints informs our work: our analyses are developed with a systems perspective through extensive exchanges with experts and practitioners.

The Making Mission Possible report was developed by the Commissioners with the support of the ETC Secretariat, provided by SYSTEMIQ. It brings together and builds on past ETC publications, developed in close consultation with hundreds of experts from companies, industry initiatives, international organisations, non-governmental organisations and academia.

The report draws upon analyses carried out by Climate Policy Initiative, Copenhagen Economics, Material Economics, McKinsey & Company, Rocky Mountain Institute, The Energy and Resources Institute, University Maritime Advisory Services, Vivid Economics and SYSTEMIQ for and in partnership with the ETC, as well as a broader literature review. We reference in particular analyses from the International Energy Agency and BloombergNEF.

This report constitutes a collective view of the Energy Transitions Commission. Members of the ETC endorse the general thrust of the arguments made in this report but should not be taken as agreeing with every finding or recommendation. The institutions with which the Commissioners are affiliated have not been asked to formally endorse the report.

For further information please visit the ETC website at www.energy-transitions.org

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Commissioner Quotes

Dominic Emery, Chief of Staff - BP

- This new report from the ETC shows that the shift to a net zero economy by 2050 is both technologically possible and economically vital as societies look to build back better from the pandemic. Reimagining the energy system for a zero carbon future is central to almost every aspect of this shift, which is why at bp we are transforming our business, aiming to increase renewable energy generating capacity 20-fold by 2030 and reduce oil and gas production by 40% over the next decade. Corporate action matched by policy leadership will be key, if society is to drive transition at the pace required by the science.

Richard Lancaster, Chief Executive Officer – CLP

- The continuing advancement of clean energy technologies is essential for accelerating the energy transition and decarbonisation of the electricity sector. We need to make more solutions commercially scalable and speed up the electrification of buildings, transport and industry. This new report from the ETC clearly shows the technical and financial viability of energy transition, and the important role that electric utilities play to enable this change.

Marisa Drew, Chief Sustainability Officer & Global Head Sustainability Strategy, Advisory and Finance - Credit Suisse

- The 'Making Mission Possible' report clearly presents that accelerating investment in clean energy is critical to accomplishing the objective of a decarbonised economy by 2050 and the unequivocal attractiveness of the investment case. Furthermore, it confirms vital the role of investors in achieving the speed, scale and ultimate success of the energy transition.

Mahindra Singhi, Managing Director and Chief Executive Officer - Dalmia Cement

- Transitioning to a Net-Zero Carbon economy would make for a better and happier world. The corporate vision at Dalmia Bharat, which is "to be a leader in building materials and evoke pride in all stakeholders through customer-centricity, innovation, sustainability and our values" and the business philosophy, which is "Clean and Green is Profitable and Sustainable", are the mainstays of being the lowest carbon footprint cement group and our first-of-its-kind commitment in the heavy industry sector to become a carbon negative cement group by 2040. Use of 100% fossil free electricity

(RE 100); Use of alternative fuels and sustainable biomass; Carbon Capture and Utilisation (CCU); Energy Efficiency (EP 100) and development of Novel Cements are the key levers of our carbon negative roadmap. We are confident that a Possible to Abate cement sector would be able to play a positive role in bringing down carbon emissions.

Lord Gregory Barker, Executive Chairman - EN+

- Amid the growing consensus on the need to reboot the post-COVID economy with a huge boost to green investment and sustainable infrastructure, this new ETC report makes clear that even heavy industries which have previously been thought too difficult to “turn green” can make the switch to a low carbon future if they commit to greater innovation and investment. It is time for all parts of the economy to step up to the climate challenge and turn the recovery from COVID into a pivot for positive change, however the aluminium industry must decarbonise much further and faster and the En+ Group is determined to lead the way.

Laurence Tubiana, Chief Executive Officer - European Climate Foundation

- This is the latest proof that the cost of tackling the climate crisis will be trivial, especially when compared with the enormous cost of the impacts of the climate catastrophe we otherwise face. As we emerge from the pandemic, we must build an economy that is future-proofed for the challenges on the horizon. Leaders of business and government can no longer exaggerate the costs as an excuse for delaying action. They must now cease any further investment in fossil fuels and embrace the challenge of rapidly ramping up wind and solar, which are becoming cheaper and more abundant by the day.

Lord Nicholas Stern, IG Patel Professor of Economics and Government - Grantham Institute, LSE

- The lessons of this important ETC report are clear. To manage the most serious risks of climate change, we must achieve a net-zero economy by mid-century. To achieve this outcome, it is crucial that we act decisively and strongly in the next decade. The report shows us how to do that and further, that the economy we can build can be much more efficient, healthy, and attractive than our current structures. Now is the time for governments, investors, and corporates to work together to build a sustainable and resilient economy.

John Holland-Kaye, Chief Executive Officer – Heathrow

- In tackling the climate crisis, carbon is our shared enemy. At a time that we are feeling the impact of constraints to our mobility it is encouraging that we are working together to make decarbonising aviation a reality. We urgently support the development of sustainable aviation fuels – it will enable our industry to take action now to achieve Net Zero. Now is the time to turn ideas into action and preserve the benefits of aviation in a world without carbon so that future generations can enjoy what we have now.

Zoe Knight, Managing Director and Group Head of the HSBC Centre of Sustainable Finance – HSBC

- Transition finance has a vital role to play in identifying key opportunities and managing risks, as we make the shift to a zero-carbon economy by 2050. High carbon sectors face specific investment challenges as they attempt to transform their business models in line with Paris agreement targets. Making Mission Possible provides clear direction and credible analysis to support decision making in the finance sector.

Carlos Sallé, Senior Vice President of Energy Policies and Climate Change

- The transformation of the energy sector and the whole economy towards a climate neutral model is not only necessary but also an opportunity to have better places to live and create prosperous and healthy communities with sustainable jobs. Renewable energies and electrification will be the key levers for this deep change. We need to accelerate climate action by setting carbon neutral objectives by mid-century and making bold progress already by 2030. The economical and health benefits compared with business as usual scenarios will be enormous.

Professor LI Zheng, Executive Vice President - Institute of Climate Change and Sustainable Development, Tsinghua University, Secretary-General of the Global Alliance of Universities on Climate

- Thought-out plan for realistic scenarios of the global net-zero economy. The report is provided under an ambitious goal: to arrive at a net-zero economy by limiting global warming to below 2°C by mid-century. Yet, it accounts for all challenges facing society today. It is coupled with a comprehensive action plan for both developing and developed nations in transitioning away from fossil fuels. The report also provides lots of encouragement for China to fully utilize its advantages in the path to net-zero emission.

Ian Simm, Founder and Chief Executive Officer - IMPAX Investment

- As this report makes clear, it is possible to achieve a net zero economy in the developed world by 2050, but it will require significant and targeted investment into clean energy. Making Mission Possible highlights how the investment community will benefit from a successful energy transition, but in order to do so, we need to move at speed and at scale

Robert Trezona, Head of Cleantech - IP Group

- Massive scale-up and deployment of clean energy technologies are central planks to the roadmap to net zero laid out in Making Mission Possible; this will create huge opportunities for cleantech investors to create both value and positive impact on the environment

Mark Laabs, Managing Director - Modern Energy

- Modern Energy believes the energy transition is increasingly a challenge of execution, and this excellent ETC report reinforces concrete steps we can take to achieve a net-zero economy by 2050. At Modern, we are excited to invest in distributed energy and

grid reliability businesses that can drive the transition forward by delivering on opportunities that the ETC has highlighted

Thomas Thune Anderson, Chairman of the Board - Ørsted

- Renewable energy is fundamental to delivering a net-zero economy by 2050. The ETC report provides a blueprint for a green economy and calls for global leaders to take action in the next decade. And everyone needs to act to help create a world that runs entirely on green energy.

Stephen Fitzpatrick, Founder - Ovo Energy

- The transition to a zero carbon society offers an enormous opportunity to revitalise the global economy, improve air quality and raise living standards. Making Mission Possible provides a clear and practical blueprint for the delivery of a clean energy future, not least through the implementation of renewable electricity generation worldwide and the wholesale electrification of transportation and heating; all underpinned by an intelligent digital energy infrastructure.

Jules Kortenhorst, Chief Executive Officer - RMI

- The new Making Mission Possible report from the Energy Transitions Commission provides a comprehensive analysis of how to reach net-zero emissions by mid-century across all sectors of the economy," said Jules Kortenhorst, CEO of Rocky Mountain Institute. "This focus on the real economy, including business leaders and investors, is an essential component of achieving our global climate goals. We anticipate that setting aggressive market-driven carbon reduction targets will further drive the ambition of other important stakeholders such as policy makers ahead of the critical COP26 meeting next year.

Pierre-Andre de Chalendelar, Chairman and Chief Executive Officer - Saint Gobain

- I welcome the release of the ETC Making Mission Possible Report. It highlights that energy efficiency, in particular in buildings, is core to energy transition. Today, too many buildings such as homes, schools, hospitals, for example, around the world are still highly inefficient. Besides helping to reduce greenhouse gas emissions, such a large-scale retrofit would provide health and well-being, numerous jobs and stronger social cohesion

Chad Holliday, Chairman – Shell

- Making Mission Possible speaks to the opportunities ahead of us all to help enable responsible economic recovery, sustainable development and actions on climate change to achieve the goals of the Paris Agreement. It highlights the importance of working together as broad coalitions of businesses, governments and other parties to unlock viable decarbonisation pathways for energy supply in tandem with key energy use sectors. Shell aims to support society's journey towards a net-zero emissions future and act as a catalyst for positive change as it seeks to be a net-zero emissions energy business by 2050 or sooner, in step with society.

Johan Lundén, SVP Head of Project and Product Strategy Office – Volvo Group

- The ETC report recognises that clean electricity is fundamental to achieving a net zero economy by 2050. Volvo Group is committed together with other industry partners to play an active role in 'Making Mission Possible'. It is technically possible to transform the global economy and immediate action is required to accelerate the pace of change.

Quotes from our supporters

Christiana Figueres, Founding Partner – Global Optimism and Convenor – Mission 2020

- The world is at a critical crossroads for climate: we have 10 years to halve carbon emissions. In the lead up to COP26, the Making Mission Possible report is a source of optimism. It demonstrates that it is technically and economically possible for global energy systems to reach net-zero emissions by mid-century, and it provides a clear blueprint for policymakers and business leaders on what needs to happen before 2030. Our mission is to deliver on the Paris agreement. Now is the time to make our mission possible.

Nigel Topping, High Level Champion for Climate Action COP26 – COP26

- The ETC continues to be the benchmark for CEOs and policymakers looking to back up their Race to Zero commitments. If you didn't read the original Mission Possible report then you must read Making Mission Possible unless you are actually planning to fall behind your peers!