GEARING TOWARDS POSITIVE CLIMATE ACTION

by

ETTI KHANNA

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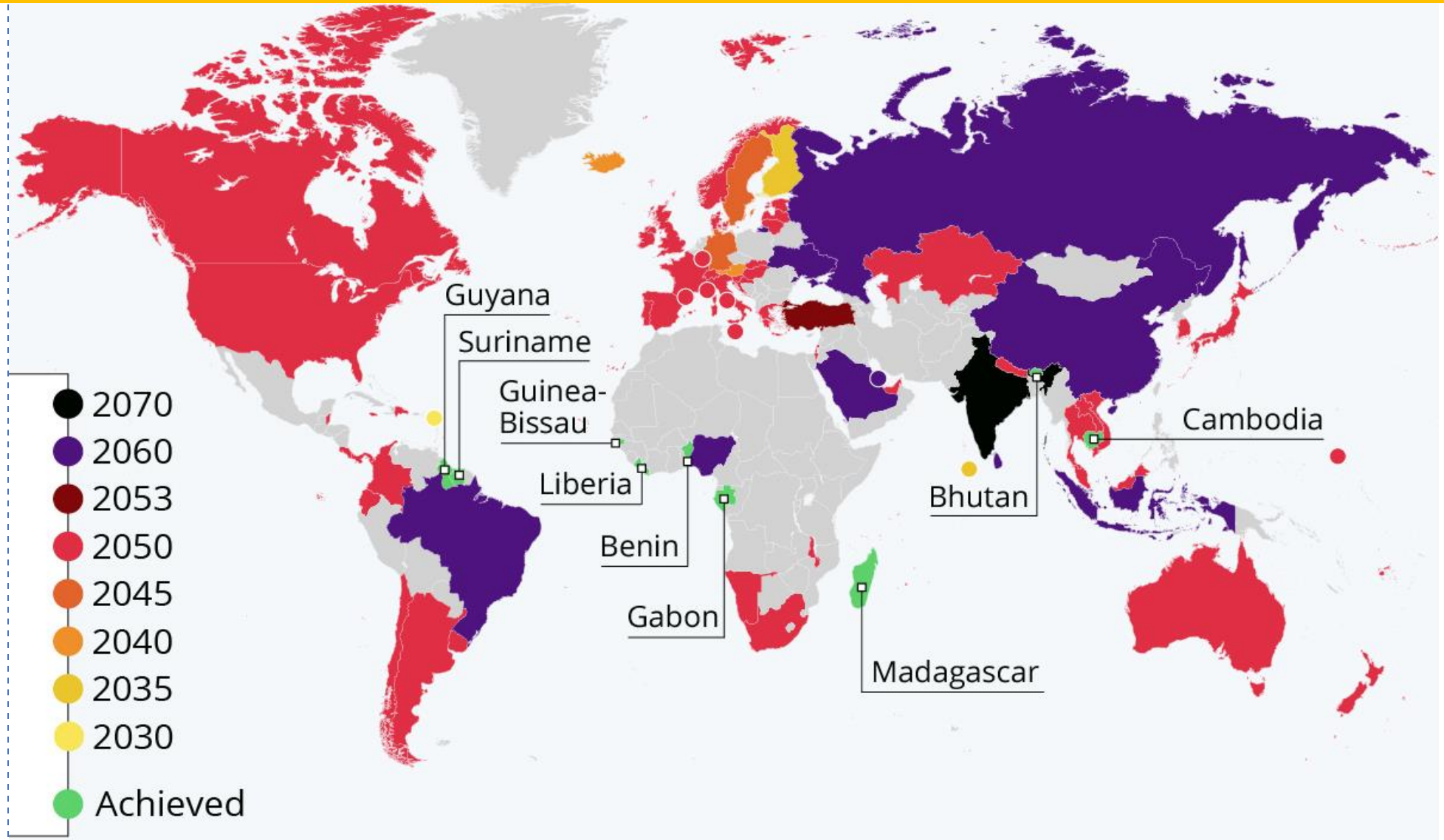
low carbon solutions pvt ltd

Are We There Yet?

Climate Change- Road to Net Zero



Countries with pledges for carbon neutrality targets

Road to Net Zero: Statutory Requirement/ Voluntary Action

1 **SUBSIDIZING/ INCENTIVISING GREEN PROJECTS**

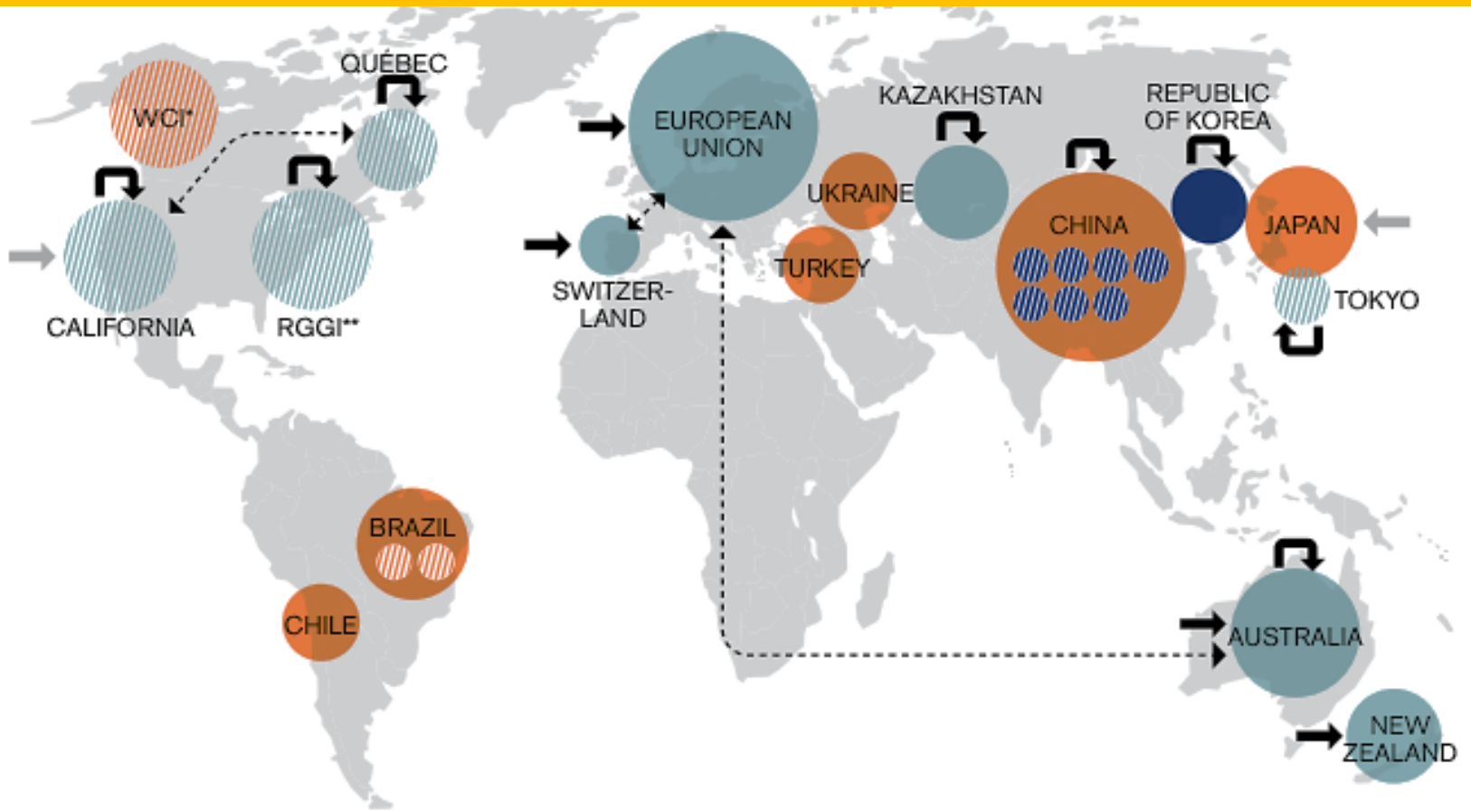
2 **CARBON TRADING**

CARBON TAX & OTHER MANDATES
- ~ Penalty
- ~Subsidy Removal
- ~RE Use Mandate

3

4 **VOLUNTARY CREDITS**
- ~ Gold Standard
- ~ Verra
- ~ GCC

Existing Emissions Trading Systems



Status of implementation

- Implemented (in force with established rules)
- Implementation scheduled (mandate agreed, start date communicated, rules in preparation)
- Under consideration*** (government gave public signal towards the development of an ETS)

- National
- Sub-national or regional

Offsetting

- CDM and JI credits
- Bilateral offsets
- Domestic offsets

Linking

- Planned link

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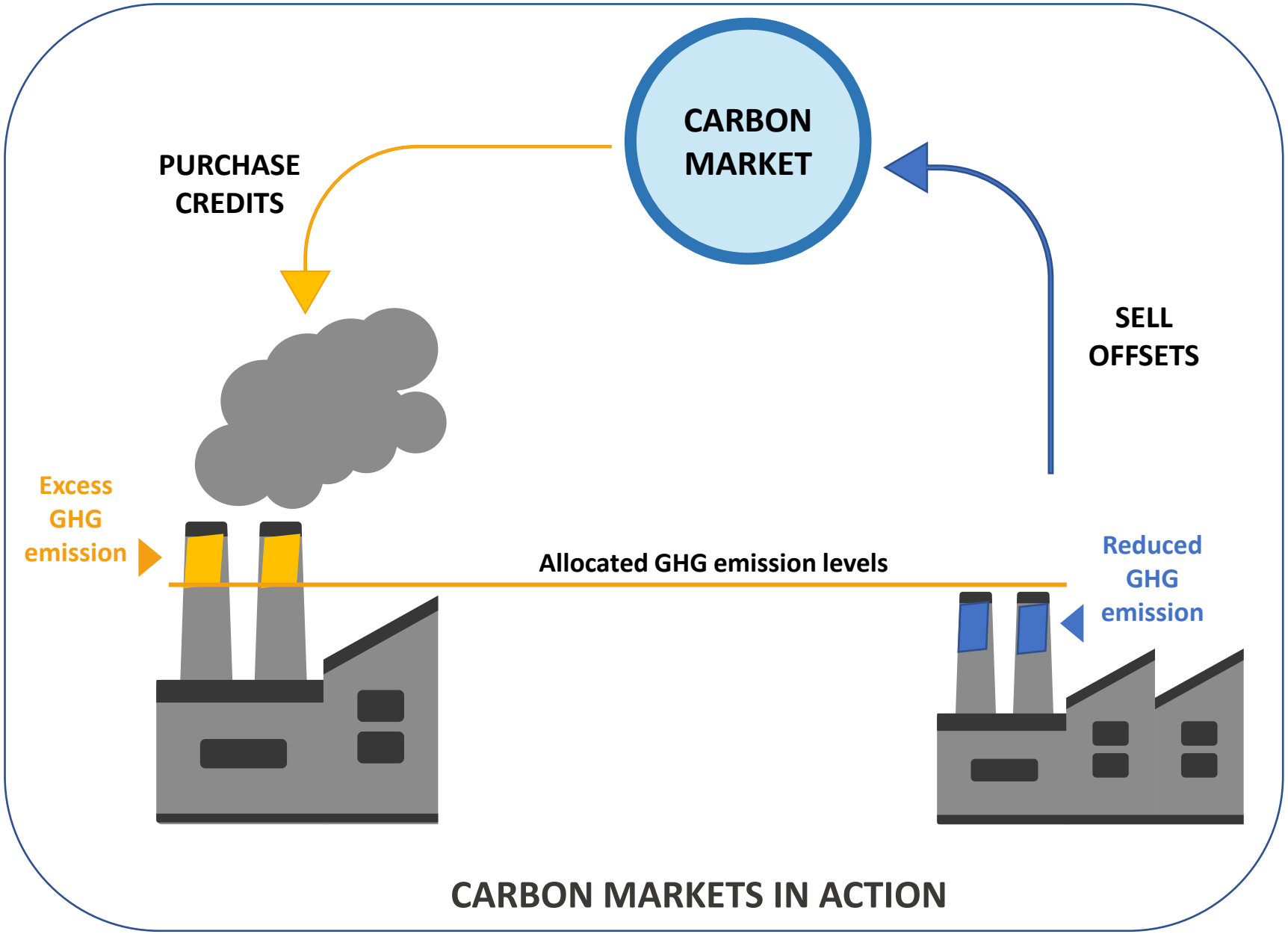
Carbon Trading Markets

- Industries are biggest producer of GHG that lead to global warming. Decision-makers are often perplexed to choose between growth or sustainability.
- Only concrete way to get the world to focus on these problems - attach financial incentive to it.
- Thus, ***Carbon Trading***



SIGNALS

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India's FIVE PLEDGES

01

4 By 2030, India will reduce the carbon intensity of its economy by 45% (from a previous target of 35%)

PM MAKES FIVE PLEDGES

1. India will increase its non-fossil energy capacity to 500GW by 2030
2. India will meet 50%of its energy requirements from renewable energy by 2030
3. India will reduce the total projected carbon emissions by one billion tonnes from now to 2030
4. By 2030, India will reduce the carbon intensity of its economy by 45% (from a previous target of 35%)
5. By 2070, India will achieve the target of net zero

Source: The Hindustan Times

SIGNAL

02

‘India has to do a lot more to meet its net-zero emission target as fossil fuel subsidies are nine times higher than those for clean energy, despite a 72 per cent fall in the former since 2014, says a study by the think tanks International Institute for Sustainable Development (IISD) and the Council on Energy, Environment and Water (CEEW), released on 31 May - June 2, 2022

https://www.iisd.org/articles/iisd-news/fossil-fuel-subsidy-9-times-higher-clean-energy-says-study-indias-net-zero-goal

COP 27 UPDATE: “In this text we have been given reassurances that there is no room for backsliding,” said Stiell. “It gives the key political signals that indicate the phasedown of all fossil fuels is happening.”

https://unfccc.int/news/cop27-reaches-breakthrough-agreement-on-new-loss-and-damage-fund-for-vulnerable-countries

SIGNAL

03

India aims to

replace 30GW of thermal power generation capacity with renewable energy by 2026, in a move aimed at reducing emissions from coal-fired power plants.

Delhi has directed 81 thermal power plants to reduce coal-fired generation and offset the decline with solar power.

The exercise is expected to cut coal usage for power generation by 34.7mn t/yr and reduce carbon emissions by over 60mn t/yr, according to India's power ministry.

The decision is part of the country's broader plans to achieve 500GW of renewable power capacity by 2030, although India is lagging in terms of meeting renewable energy targets. India's renewable energy capacity is currently at 111.4GW, far from its target of 175GW by this year and well below the target of 500GW by 2030.

https://www.argusmedia.com/en/news/2337920-india-to-replace-30gw-of-thermal-power-with-renewables

SIGNAL

04

Creating a sustainable world

India’s installed renewable energy capacity has increased 396% in the last 8.5 years and stands at more than 159.95 Giga Watts (including large Hydro)

which is about 40% of the country’s total capacity (as on 31st March 2022).

The installed solar energy capacity has increased by 19.3 times in the last 8 years, and stands at 56.6 GW as of 1st June 2022.

India has achieved its NDC target with total non-fossil based installed energy capacity of 159.95 GW which is 41.4% of the total installed electricity capacity.
https://www.investindia.gov.in/sector/renewable-energy

NTPC is taking various steps to make its energy portfolio greener by adding significant capacities of Renewable Energy(RE) Sources. By 2032, the company plans to have 60GW capacity through RE sources constituting nearly 45% of its overall power generation capacity.
https://www.ntpc.co.in/en/power-generation/renewable-energy

05

Budget 2022: Mandating Biomass Pellets in Thermal Plants

Stubble burning is a major concern for India's National Capital Region, every winter. With the onset of winters, farm fires become common in states such as Punjab, Haryana and Uttar Pradesh. Burning of crops leads to a decline in the air quality and raises the pollution levels in neighboring areas such as Delhi. In a bid to bring some respite to this growing concern, on February 1, 2022 the Finance Minster Nirmala Sitharaman during her budget speech announced that it has been mandated that thermal plants use biomass pellets as 5-7 per cent of their fuel mix. NTPC places order for 9.3 lakh tonne biomass pellets for co-firing State-owned power giant NTPC has placed an order of 9,30,000 tonnes of biomass pellets for co-firing in power plants that will help improve air quality, said the power ministry.

https://www.business-standard.com/article/companies/ntpc-places-order-for-9-3-lakh-tonne-biomass-pellets-for-co-firing-121103100388_1.html

SIGNAL

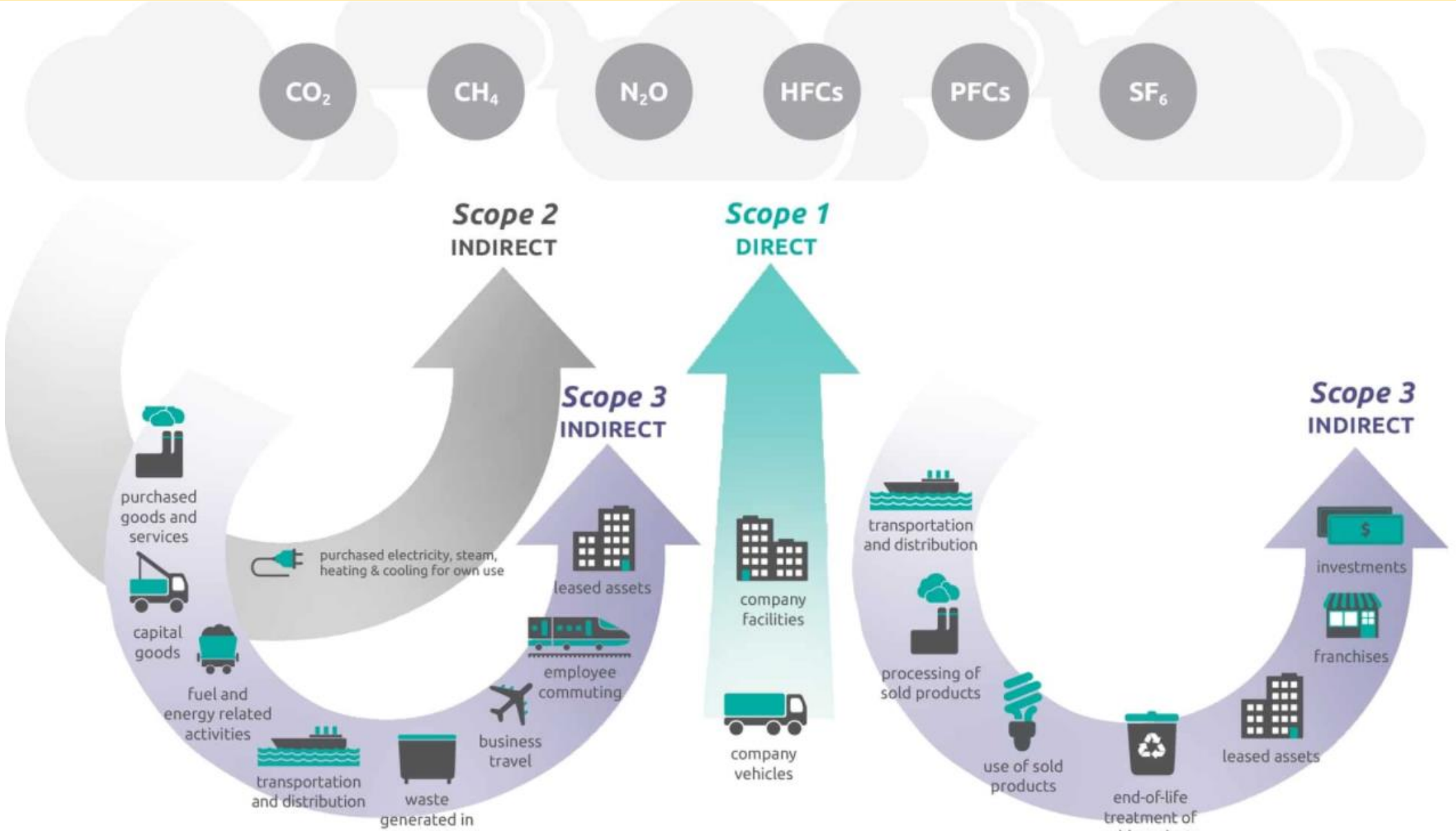
06 Indian Energy Exchange Ltd (IEX) forms subsidiary company to explore business opportunities in carbon market

NEED OF THE HOUR: PROACTIVE APPROACH - START PREPARATION

WHAT CAN YOU DO?

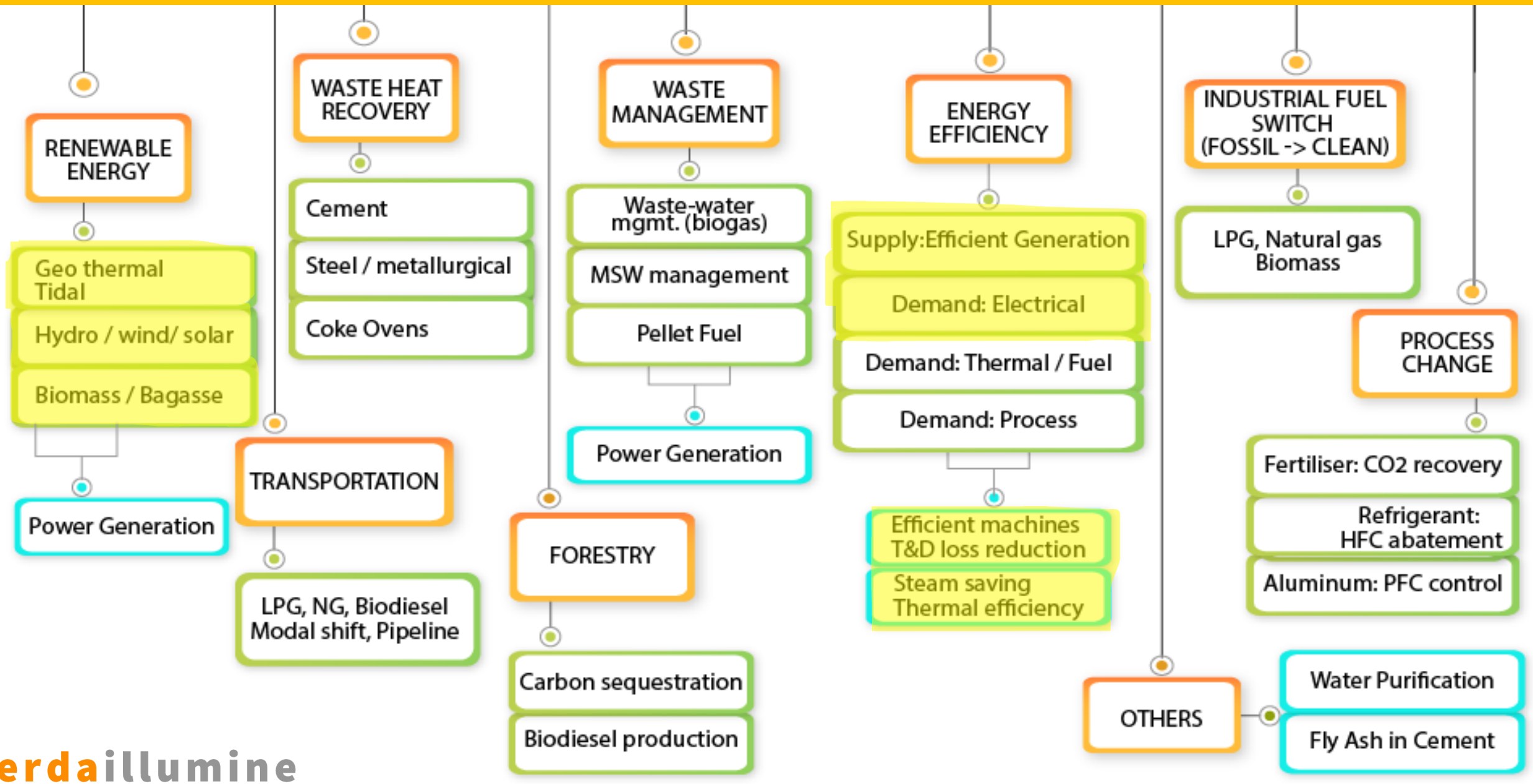
- Measure OUR baseline GHG footprint
- Set reduction targets
- Implement strategies to identify interventions that meet these targets most cost effectively
- Take action to reduce risks, improve performance, and compensate unavoidable impacts
- Communicate their activities to employees, investors and customers

Measure and Set Targets: GHG protocol scopes



Source: [WRI/WBCSD Corporate Value Chain (Scope 3) Accounting and Reporting Standard (PDF)]

Implement Strategies: Typical GHG Abatement Projects



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RE-INVESTMENT

Coal Replacement: Utilisation of Biomass Pellet for Decarbonisation

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COMMUNITY BASED PROJECTS

Gold Standard

STANDARD + SOLUTIONS | INNOVATIONS | TAKE ACTION | RESOURCES | ABOUT US

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https://https://www.goldstandard.org/resources/impact-registry

READY FOR ETS IN INDIA?

EU ETS : WORLD'S FIRST and LARGEST INTERNATIONAL EMISSIONS TRADING SYSTEM

Set up in 2005, the EU ETS is now in its **fourth phase (2021-2030)**

Approximately 11500 emission entities involved in the system, covering 27 members of the EU

KEY FEATURES OF PHASE 1 (2005-2007) :

- Covered only **CO_2** emissions from **power generators** and **energy-intensive industries**
- **Almost all** allowances were given to businesses **for free**
- The penalty for non-compliance was **€40** per tonne

In the absence of reliable emissions data, phase 1 caps were set based on estimates. As a result, the total amount of **allowances issued exceeded emissions** and, with supply significantly exceeding demand, in 2007 the price of allowances fell to zero (phase 1 allowances could not be banked for use in phase 2).

EU ETS : PHASE 2 (2008-2012)

- **Lower cap** on allowances (some 6.5% lower compared to 2005)
- **3 new countries** joined – Iceland, Liechtenstein and Norway
- **Nitrous oxide** emissions from the production of nitric acid included by a number of countries
- The proportion of **free allocation** fell slightly to around **90%**
- Several countries held auctions
- The penalty for non-compliance was increased to **€100** per tonne
- Businesses were allowed to buy **international credits** totalling around 1.4 billion tonnes of CO_2-equivalent
- Union registry replaced national registries and the European Union Transaction Log (EUTL) replaced the Community Independent Transaction Log (CITL)

The **cap on allowances was reduced** in phase 2, based on actual emissions. **However, the 2008 economic crisis led to emissions reductions that were greater than expected. This led to a large surplus of allowances and credits**, which weighed heavily on the carbon price throughout phase 2.

EU ETS : PHASE 3 (2013-2020)

The reform of the ETS framework for phase 3 (2013-2020) changed the system considerably compared to phases 1 and 2.

- **a single, EU-wide cap** on emissions in place of the previous system of national caps
- **auctioning** as the default method for allocating allowances (instead of free allocation)
- **harmonized allocation** rules applying to the allowances still given away for free
- **more sectors** and gases included
- **300 million allowances set aside** in the **New Entrants Reserve** to fund the deployment of innovative, renewable energy technologies and carbon capture and storage through the NER 300 programme

SUMMARY

In the three phases, most of the limits

for thermal power units in the first two phases were allocated free of charge

However, starting from the third issue of 2013,

all unallocated limits of the thermal power unit will be auctioned.

In the third phase, **thermal power units use a baseline method to determine the allocation quota**. These benchmarks are set within the average emissions level of the thermal power unit of the 10% highest efficiency unit.

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EU ETS : PHASE 4

PHASE 4 (2020-2030)

However, since the latest reforms for the programme's fourth phase were agreed upon, permit prices have risen.
The clearing price at the auction of 23 February 2018 stood at 9.68 euros; in August 2018, trading prices for EUAs rose to 18.50 euros per tonne.

As of 2020 when a more ambitious EU climate target for 2030 became tangible and new climate policy initiatives were anounced under the European Green Deal, EUA prices started to rise even more and reached an average of 25 euros per tonne in 2020. In May 2021, prices soared to over 50 euros per tonne CO2.

Who we are

ETTI KHANNA

Founder Director

- Alumni of Ernst & Young
- 21+ years expertise as a Climate Change and Sustainability Specialist
- 8+ years experience in manufacturing Biomass Pellets
- Provides critical insight for market strategy, strategic company growth and investment management

GAGANDEEP ARYA

Founder Director

- Alumni of Ernst & Young
- 14+ years expertise as a Climate Change Consultant
- 8+ years experience in manufacturing Biomass Pellets in both BUILD & OPERATE verticals
- He liaises with the various stakeholders, drives the strategic company growth and is responsible for the overall performance of the business

UAL
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RAMKRISHNA FORGINGS LIMITED

AGL

K RAHEJA
CORP

HELIOZ
FUTURE ECONOMY

THANKYOU

Contact Us

Gagandeep Arya
M: +91 98367 60999

Etti Khanna
M: +91 98300 45667

Erda Illumine Low Carbon Solutions
Email: admin@erdaillumine.com
Website: www.erdaillumine.com

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