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## France's AFD to help SJVN set up solar projects

Shashank Mattoo  
shashank.mattoo@livemint.com  
NEW DELHI



AFD India director Lise Breuil.

Public sector hydropower generator SJVN Ltd is discussing a collaboration with France's official development agency AFD to set up solar projects in India.

AFD will also assist SJVN, which is looking to expand its presence on solar energy, with its experience and is discussing providing support on developing solar power as well as ensuring sustainability through the recycling of solar panels, Lise Breuil, AFD's India director, told *Mint*.

SJVN began its foray into solar power in 2017, and has completed three projects with a total installed capacity of 81.3MW.

A query emailed to SJVN remained unanswered till press time.

AFD's initiatives in India have placed a strong emphasis on renewable energy, with a particular accent on energy efficiency, hydroelectricity and solar power. In addition to collaborating with the Indian Renewable Energy Development Agency (IREDA), it has given financial and technical support to private sector solar, wind, biomass and hydropower projects.

"The first funding awarded to IREDA in 2010 (EUR 10 million credit line) resulted in the implementation of eleven projects, ranging from biomass to small-scale hydroelectricity, wind farms, and solar photovoltaic projects," AFD says on

its official website.

"This success has led AFD and IREDA to renew and extend the scope of their cooperation. In 2013, AFD allocated to IREDA a new credit line of EUR 100 million, with a focus on the development of solar power plants," it says.

Breuil said that solar energy would be a major priority. AFD and the Solar Energy Corporation of India inked a letter of intent in 2021 to create a floating solar power system in Jharkhand.

**SJVN began its foray into solar power in 2017, and has completed three projects with 81.3MW total installed capacity**

SJVN, a joint venture between the central government and the government of Himachal Pradesh, has built projects in Himachal Pradesh, Uttarakhand and neighbouring countries like Nepal and Bhutan. With Nepal, SJVN was also involved in a project to build cross-border power transmission, which was declared commercial in 2016.

The company has also formed joint ventures with state-run Indian Oil Corp. and ONGC to work on renewable energy projects. It has also developed projects in the wind and thermal power sectors.

# Children, interrupted: How this NDMC school is readying its students for life in the real world

Vibha.Sharma  
@timesgroup.com

**New Delhi:** Sunny Sharma, 22, who lives in Sagarpur in southwest Delhi travels to Aanchal Special School on Kautilya Marg in Chanakyapuri, sometimes commuting alone. He is a talented young man and actively engages himself in art and craft work. If people don't consider that an achievement, they should know that Sharma has intellectual disability and hearing impairment. "He is so talented that we decided to introduce him to the vocational course when he was just 16 instead of the usual 18 years," said a special educator at the school. "He effortlessly makes hundreds of paper bags in a day and guides others too."

Children studying in Aanchal School have intellectual and functional disabilities, so explaining even basic things like tying shoelaces and eating food on their own is quite a task, according to the special educators. It needs regular practice for days and it is always possible that the youngsters will forget what they have learnt soon after.

Fully managed by the education department of New Delhi Municipal Council, the 35-year-old school not only teaches those with moderate IQs the language skills they require in everyday life, but also trains them in vocations after they turn 18 years and till 25 years to help them integrate in the society.

"Among our success stories are Mani Shankar, who now works with ONGC. Another is Bhuvnesh, who is a dancer and earns for his family. We have two girls who are married and doing well in their personal lives," said school principal Navita Narang.

Shubham Gaur, 20, a resident of Paharganj daily, was busy stitching cloth bags at the school and happily answered TOI's questions. Special educator Tuleshwar Sharma said, "After completing Class VIII from a private school, Shubham joined our school during the pandemic Covid and enrolled in the vocational classes. He is bright and participated in the Special Olympics quiz competition. He might struggle with academics, but his other skills will surely help him find employment."



Photos: Anindya Chattopadhyay

The 12 special educators and three vocational trainers help the 100 or so students, giving them personalised attention and nurturing their skills. "Most of our students have language difficulties and face problems expressing themselves. So, we emphasise on interaction with peers while imparting basic education and functional academics to make them independent," said Navita Narang. These include handling money, keeping clothes neat and clean and personal hygiene. NDMC chairman Amit Yadav reiterated, "A number of students have difficulties in expressing themselves. The teachers help them improve

their communication skills to make them self-confident. The vocational skills imparted to them make the children self-reliant. NDMC provides support and guidance to these mostly poor students as part of its mandate to ensure quality education for children with special needs."

Recreational activities are given equal weightage to ensure holistic development. The school organises indoor and outdoor activities every day. "Six students have participated in the Special Olympics held in Australia, US, etc. They won second place in the bocce ball competition in Australia in 2012," said Sharma.

Admissions are open throughout the year. "Students come even from distant areas such as Dwarka Mor and Sagarpur," an NDMC official said. "To assist them, the school

## TIMES Special

provides free transport and mid-day meals too."

B Uma, a social worker associated with the school for decades, explained that children with intellectual and functional disabilities grow physically with age but exhibit delayed growth in cognitive abilities and skills. "Most students arriving here have been referred

to us by government or private hospitals. We carry out an assessment and put the child in the appropriate class, assigning them activities based on their capabilities," said Uma. "Assessment sessions help us to determine behavioural issues such as rebellious, hyperactive or antisocial nature, violent tendencies, repetitive behaviour, etc., and in consultation with the other teachers and parents, we set goals for each child."

Aanchal also gets a speech therapist to give each student at least three sessions per week. "If we catch the associated problems early, then ushering in reforms becomes easier through

therapy," revealed Manish Kumar, a speech therapist.

Once a student reaches the age of 18 years, the school assesses the youngster and decides a vocational course in carpentry, paper craft, art and painting and sewing, among others, which will continue till he or she is 25 years old. "Attempts are also made to rehabilitate them," said an NDMC official. "There are success stories of students managing to get jobs at grocery stores, garment shops and doing well in their personal lives."

One can visit the school on weekdays between 9am and 3pm for admission and other enquiries.



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**Russian oil discounts for India set to rise due to global slump**

Discounts on Russian oil purchased by Indian refiners are likely to increase going ahead with a fall in global demand and India looking at further diversifying its supplies. People in the know said that discounts may reach \$10-12 per barrel soon. >P2

## Russian oil discounts for India set to rise

Rituraj Baruah &  
Vaageesh Thirumalai

NEW DELHI

**D**iscounts on Russian oil purchased by Indian refiners are likely to increase going ahead with a fall in global demand and India looking at further diversifying its supplies.

People in the know of the developments said that currently the discounts are in the range of \$4-6 per barrel and may reach \$10-12 per barrel soon.

"A dip in global demand has forced exporting countries to sweeten their offers and with a fall in oil prices Russia also would try to cater more to India, which has been a major procurer of its supplies in the past two years," said an industry stakeholder requesting anonymity.

Further, a recent dip in import from Russia is expected to boost discounts on supplies from the country. Data from Platts (part of S&P Global Commodity Insights) showed that Russian crude exports to India hit the lowest level of 2023 in November at 1.3 million barrels.

Pulkit Agarwal, head of India content, S&P Global Commodity Insights said the price of



Russia has emerged as the largest supplier of oil to India since its invasion of Ukraine in February 2022. BLOOMBERG

delivered Russian Urals crude at Indian ports as assessed by Platts remains at a discount level of below \$5/barrel to Dated Brent.

Prashant Vashisht, senior vice president and co-group head—corporate Ratings, ICRA said: "The discount on Russian crude currently is around \$5-6 per barrel. In September, India saved around \$429 million in total with purchase of 5.8 million tonnes of Russian crude."

Russia has emerged as the largest supplier of oil to India

**Currently, the discounts are in the range of \$4-6 per barrel and may reach \$10-12 per barrel soon**

since its invasion of Ukraine in February 2022 amid western sanctions on Russia. Data from the commerce ministry showed that supplies from Russia comprised 33.4% of the total oil imports by India in September. In November, the share declined to 30.9%, showed the Platts data.

The global slowdown has also made other major suppliers like West Asian countries sweeten their offers.

Reuters recently reported that Saudi Arabia has cut the price of the Arablight crude to be supplied to Asian countries

in January for the first time in seven months, with a 50 cent a barrel reduction to \$3.50. Iraq also has been offering competitive discounts to India in the past one year.

Debashish Mishra, chief growth officer, Deloitte South Asia, said: "Oil prices have moderated of late primarily due to global demand slowdown, lesser than anticipated fall in temperatures during the winters in northern hemisphere, US not replenishing its strategic reserve at the rate that market was expecting and a lack of unwillingness among several Opec- members for a further supply cut has resulted in this negative bias in oil prices." He added that low demand may further push suppliers to offer better discounts.

A recent S&P Global Commodity Insights report noted that after years of turbulence, global markets are still striving to find sustainable balance between energy supply and demand. Queries mailed to the petroleum and natural gas ministry, Indian Oil Corporation Ltd, Hindustan Petroleum Corporation Ltd, Bharat Petroleum Corporation Ltd remained unanswered till press time.

*rituraj.baruah@live-mint.com*

## Call for fuel price cut gets shriller as global crude dips below \$80/bbl

**Our Bureau**  
New Delhi

The demand to slash retail prices of petrol and diesel has gained momentum as international crude oil prices dipped below \$80 per barrel last week, stabilising in the \$76-77 range. The clamour for a cut in prices has become stronger given the impressive performance of oil marketing companies (OMCs) from April to September 2023 and with retail inflation in November 2023 staying within the RBI's comfort zone.

A senior government official said a price cut could take place by January 2024.

"There was discussion on fuel price revision during the Budget (vote on account) consultation process of Ministries, but at that point, oil prices were volatile at round \$81-82 per barrel. Now, they have fallen to below \$80, which is within the OMCs' comfort level. The price cut could be more for petrol as the margin gain is higher, and can be utilised to partially compensate for losses on diesel," the official said.

It is not immediately clear whether there will be a cut in excise duty like in November 2021 and May 2022, or the



government will resume the daily fuel price revision exercise, which has been suspended since April 6, 2022.

### 'MARKET STILL VOLATILE'

"There is a case for price cut considering inflation is down, global prices are in the \$76-77 range and OMCs are in a more comfortable position financially than in H1 FY23. However, there is considerable volatility in the market due to uncertainty over global demand. If prices sustain even at \$80 into the new year, it will further support the price cut narrative," the official explained.

Marketing margins of OMCs would be impacted if Brent sustains at \$85 per barrel, the source said.

Trade sources said that OPEC+ will aim to keep prices in the \$80 per barrel range, which is the fiscal breakeven price for Saudi Ar-

abia, the No 1 exporter.

According to a JM Financial report, at spot Brent price and actual product cracks, OMCs' gross auto-fuel marketing margin has risen to ₹6.4 per litre (vs historical margin of ₹3.5 a litre) and gross auto-fuel integrated margin has gone up to ₹15.2 per litre (vs historical margin of ₹11.4).

Similarly, Prabhudas Liladher expects OMCs — Indian Oil Corporation, Bharat Petroleum Corporation and Hindustan Petroleum Corporation — to witness a strong Q3 FY24 on the back of improvement in gross marketing margins (GMMs) on petrol and diesel.

OMCs' GMMs on petrol and diesel in Q2 FY24 stood at ₹7.6 per litre and ₹1 a litre, respectively. Gross margins on diesel, which were negative in August-October 2023, turned positive in November.

"GMM on petrol stands at ₹8.2 a litre in Q3 till date, while there is a gross marketing loss of ₹0.6 a litre on diesel. In the week ended November 28, GMMs on petrol and diesel stood at ₹9.7 a litre and ₹4.7, respectively. However, sustainability of higher-than-normalised GMMs is questionable in light of the upcoming elections," the brokerage added.

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# Indraprastha Gas: Strategic expansion

Rising demand, regulatory tailwinds, declining gas costs and diversification will drive performance.

The city gas distribution company's consolidated EBITDA and PAT surpassed Reuters-Refinitiv estimates by 2% and 15.3%, respectively, in the September 2023 quarter. The performance was supported by lower gas sourcing costs and higher other income. IGL is the exclusive distributor of CNG and PNG in Delhi, with CNG constituting around 75% of its total sales volume. It has a robust infrastructure, including a widespread pipeline network and CNG stations, and enjoys strong parentage from GAIL and BPCL. Despite concerns due to the Delhi government's approval of the EV policy, most analysts remain confident about the growth prospects of IGL due to multiple reasons.

First, the company is a key beneficiary of the growing preference for natural gas, as it is one of the cleanest energy sources available in India, which helps reduce carbon emissions. The government is planning to develop gas-based economy in the country and is aiming to raise the share of natural gas in the energy mix to 15% by 2030. Transport, residential and energy sectors are India's key drivers of natural gas demand.

The implementation of recommendations of the Kirit Parikh committee on gas pricing is bringing stability to the input costs, whereas PNGRB is expanding the CGD network across the country by allotting geographical areas through a bidding process. It also allows entities to set up and operate LNG stations to promote the usage of LNG in long-haul transportation.

Second, the company will benefit from the higher exposure to the CNG segment. The segment volumes are expected to jump due to the increased price gap between CNG and alternate fuels, and rising CNG vehicle registrations. Moreover,

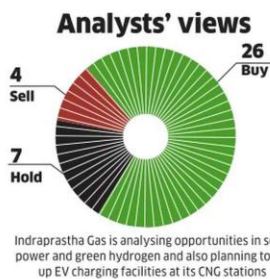
the decline in gas costs will provide scope to IGL for a CNG price cut, which will help improve volumes in the future. Also, the strong portfolio of new geographical areas (GAs) will ensure volume growth visibility in the domestic PNG segment. An HDFC Securities report expects IGL's volume growth CAGR at 12% over 2023-24 and 2025-26.

Third, the company is diversifying in new growth areas and exploring organic and inorganic growth opportunities to stay competitive. It is analysing opportunities in solar power and

green hydrogen generation, and also planning to set up EV charging facilities at its various CNG stations. The company is actively exploring the conversion of long-haul buses of various State Transport Undertakings to CNG.

It is also setting up its own compressed biogas plants under the GOBARdhan scheme and Waste to Energy initiatives of the government. Further, it has set up a joint venture to manufacture meters as a step towards backward integration. Analysts compiled by Reuters-Refinitiv estimate EBITDA and PAT CAGR of 13.4% and 9.5%, respectively, over 2022-23 and 2025-26.

**Selection methodology:** We pick the stock that has shown the maximum increase in 'consensus analyst rating' during the past month. The consensus rating is arrived at by averaging all analyst recommendations after attributing weights to each of them (5 for strong buy, 4 for buy, 3 for hold, 2 for sell and 1 for strong sell). An improvement in consensus analyst rating indicates that the analysts are getting bullish on the stock. Only stocks with at least 10 analysts covering them are considered. You can see similar consensus analyst rating changes during the past week in ETW 50 table. —Sameer Bhardwaj



## Fundamentals

	ACTUAL		CONSENSUS ESTIMATE	
	2021-22	2022-23	2023-24	2024-25
Revenue (₹ cr)	7,709.96	14,145.85	14,445.94	15,342.76
EBITDA (₹ cr)	1,886.19	2,042.79	2,464.59	2,741.50
Net profit (₹ cr)	1,503.38	1,640.97	1,860.27	2,062.14
EPS (₹)	21.48	23.44	26.91	29.22

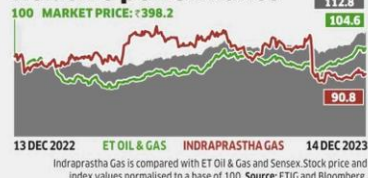
## Valuations

	PBV	PE	DIVIDEND YIELD (%)
Indraprastha Gas	3.51	15.43	3.26
Gujarat Gas	4.33	24.25	1.51
Mahanagar Gas	2.81	10.11	1.36
Adani Total Gas	39.32	202.56	0.02
Oil & Natural Gas Corp.	0.88	5.72	5.74

## Brokerage calls

RECO DATE	RESEARCH HOUSE	ADVICE	TARGET PRICE (₹)
24 Nov 2023	HDFC Research	Buy	500
21 Nov 2023	Prabhudas Lilladher	Hold	406
16 Nov 2023	ICICI Securities	Buy	458
15 Nov 2023	Centrum Broking	Buy	447
3 Nov 2023	Anand Rathi	Buy	528

## Relative performance





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### Hardeep Singh Puri reaches Kuwait to condole demise of Emir

Petroleum Minister Hardeep Singh Puri reached Kuwait on Sunday as Prime Minister Narendra Modi's special envoy to pay condolences on the demise of Emir Sheikh Nawaf Al-Ahmad Al-Jaber Al-Sabah, Ministry of External Affairs said. Puri will also deliver personal letters of condolences from President Droupadi Murmu and Prime Minister Modi to Sheikh Meshal Al-Ahmad Al-Jaber Al-Sabah, the new Emir of Kuwait, the ministry said. "India stands united in mourning with the leadership and the people of Kuwait," the MEA said **PTI**



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# Transforming India's REC market



**ROHIT BAJAJ**

Executive director (business development, strategy and regulatory affairs), Indian Energy Exchange

Recent reforms aimed at making Renewable Energy Certificates more fungible and optimising price discovery are sure to give a boost

India, on the path to becoming a \$5 trillion economy, is facing a soaring demand for electricity fueled by robust domestic demand, industrialisation, and urbanisation. To meet this surging demand and align with its commitment to achieve net-zero carbon emissions by 2070 and source 50% of its annual power from non-fossil fuels, significant decarbonisation efforts are underway. Presently, about 180 GW, constituting 42% of the country's total installed power capacity, is derived from renewable energy sources. Further, to promote renewable energy sources, the Central and State Electricity Regulators have mandated the Obligated Consumers (distribution companies, open access consumers, and captive consumers) to fulfill a fixed percentage of their overall procurement through green energy sources, in the form of Renewable Purchase Obligations (RPOs).

However, regional disparities in renewable energy potential exist, with states like Rajasthan and Tamil Nadu having vast potential while that for others like Delhi being limited. These disparities result in a lack of ability to fulfil such mandated compliances. Addressing this disparity is crucial to ensuring equal contributions from all stakeholders towards India's renewable energy goals.

To address these challenges, the

Central Electricity Regulatory Commission (CERC) introduced Renewable Energy Certificates (RECs) in 2010, which is a robust and transparent ecosystem for trading green energy certificates. These market-based instruments facilitate trading between obligated entities and renewable energy generators through power exchanges. The REC market is aiming to bolster renewable capacity by creating a nationwide marketplace that supports producers in realising their green energy investments and obligated entities in fulfilling their obligations.

Initially, RECs were divided into two categories: solar and non-solar, based on the renewable source used for electricity generation. They were traded at the floor and forbearance prices on power exchanges wherein the prices were revised from time to time and most of the time the REC certificates were traded at the floor price due to surplus inventory.

New CERC regulations, effective from December 5, 2022, have eliminated the concept of a floor price. Following these changes, REC prices experienced a 62% fall from ₹1,000 per REC to ₹380 per REC.

Now, with the CERC Order dated

October 8, 2023, the categorisation of REC: solar and non-solar based on the renewable source has been done away with. Consequently, REC categorisation no longer exists, making it simpler for obligated entities to fulfil their obligations with RECs regardless of their respective SERCs' alignment.

The REC market has transformed with floor and forbearance price removal. The new regulations favour a market-driven approach with enhanced inventory and transparency. Despite trading also being allowed in Bilateral Mode, the market is witnessing major trades happening on power exchanges only. In July and August 2023, power exchanges saw

7.25 lakh and 3.33 lakh RECs trades, respectively, while bilateral trades were in the range of 10-15% of total REC trades.

Power exchanges have now initiated fortnightly trades, instead of monthly trades, thereby providing more sessions to obligated entities to fulfill their obligations. Further, exchanges provide closed auction as price discovery mechanism wherein uniform price is discovered and applied to all participants. With its efficient and competitive price discovery process and transparency, power

exchanges maintain their status as the most preferred platform for REC trading.

The ministry of power and regulatory authorities are enhancing efforts to ensure compliance with obligations by enforcing stricter penalties. In addition to the existing penalties outlined by regulatory authorities, the ministry of power, in accordance with Section 26(3) of the Energy Conservation Act, has introduced significant penalties, which may reach up to double the cost of each metric tonne of oil equivalent as applicable.

With the introduction of these path-breaking reforms, there will be a substantial increase in liquidity which will boost price discovery, aligning with India's renewable energy and decarbonisation goals. Uniformity of prices and transparency in price discovery presents an opportune moment for obligated consumers, including state distribution companies, open-access and captive buyers, to actively participate in the trading platform and meet their RPOs at a much cheaper price. This proactive approach not only aids in environmental sustainability but also safeguards against potential penalties associated with non-compliance. Further, it is a great opportunity for voluntary consumers to procure green certificates at a lower price and achieve their decarbonisation and net-zero emissions targets.

**The new regulations favour a market-driven approach with enhanced inventory and transparency**

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# COP28: OF PLEDGES AND COMPROMISES

As expected, the Conference of Parties in Dubai kicked the real hard decisions down the road.



COP28 President Sultan Ahmed Al Jaber attends the plenary, after a draft of a negotiation deal was released at the United Nations Climate Change Conference (COP28) in Dubai, United Arab Emirates, on 13 December.

P. Anitha  
feedback@vemin.com  
NEW DELHI

After skirting the issue in the Paris Agreement, as well as the subsequent Glasgow and Sharm el-Sheikh summits, the Conference of Parties in Dubai (COP28) finally belatedly called for a phaseout of fossil fuels, and "calls upon" Parties to "transition away from them in their energy systems. Fossil fuels—coal, oil and gas—supply over 80% of the world's energy, and account for over 75% of global GHGs today.

For a group used to tiptoeing towards any objective, the declaration seemed like a leap. In reality, however, it was a compromise—under pressure from oil and gas-producing countries, the document did not call for a phaseout of fossil fuels, despite half of the Parties supporting such a move.

The COP, which is hosted by the United Nations Framework Convention on Climate Change (UNFCCC), is the only multilateral exercise on this scale aimed at addressing climate change. The first COP was held in Berlin in 1995. The conference is held every year, unless agreed otherwise, and sees close to 200 Parties with wide-ranging ambitions attempt to navigate climate crises through a consensus. Typically, COPs tend to be about small, slow steps. COP28, hosted in fossil fuel nerve-centre Dubai and led by the CEO of the UAE's state-owned oil company, was no different in the final analysis. But it could still spark some policy shifts.

The Dubai conference closed with resolutions on global warming, adaptive measures, and addressing the consequences of climate change. The big positives were the consensus on moving away from fossil fuels, establishing a global framework to help communities and countries adapt to climate change impacts, and building a corpus to deal with losses and damages suffered by the vulnerable in the wake of climate-change-induced extreme weather events. But the hard decisions needed to decisively tackle climate change were kicked down the road.

We take a look at the key highlights of the Dubai COP, and their implications.

**What does the 'Global Stocktake' entail in terms of commitments to limit global warming to 1.5 degrees Celsius from pre-industrial levels?**

COP28 opened amid a multitude of reports being released, including the Inter-

governmental Panel on Climate Change Synthesis Report. Global warming, the report noted, was already 1.1 degrees Celsius above pre-industrial levels and the pace and scale of efforts to deal with climate change were falling woefully short. On 86 days this year, temperatures had breached the 1.5 degrees Celsius limit, the United Nations Environment Programme Emissions Gap Report 2023 highlighted, and called for "unprecedented action".

Ahead of the conference, about 60 developed countries and the European Union had called for the phaseout of unabated fossil fuels; their emissions are released directly into the atmosphere without reducing carbon dioxide or other GHGs, a demand echoed by Small Island Developing States (SIDS), a group of countries particularly vulnerable to climate change impacts. SIDS wanted developed countries, which contribute 80% of the world's carbon emissions, to raise their ambition.

However, after making good progress on the opening day, when it put into operation a Loss and Damage (L&D) Fund agreed on at the previous conference, COP28 slipped into a sea of discontent and anger. The clamour for a fossil fuel phaseout gathered momentum in the first week of negotiations and the preliminary draft of the Global Stocktake text offered multiple fossil fuel phaseout options. The Global Stocktake, as the name suggests, is mandated by the Paris Agreement to track the progress made by that pact's 195 signatory countries in tackling climate change.

Meanwhile, news outlets reported on a leaked letter from the Opec (The Organisation of the Petroleum Exporting Countries) secretary general to member countries, including host UAE, urging them to reject any text targeting fossil fuels rather than emissions.

Heightened action and decisions at COPs are traditionally reserved for the last leg. The Parties eventually regrouped to whip out a consensus text on the Global Stocktake after a fortnight of hard negotiations.

Adapt (Global Stocktake text underscored what was meant to be the penultimate day of COP28. It came in for sharp criticism from multiple quarters as it dropped the phrase "phaseout" and replaced it with "reducing both consumption and production of fossil fuels." Negotiations around the "average of complete phaseout" needed former US Vice President Al Gore, while John Silles, minister of natural resources, Republic of Marshall Islands, said his country was not in Dubai to sign a death warrant.

Negotiations hunkered together for another day and night, well past the scheduled clo-

sure, to emerge with a text that did not restate "phaseout" but instead settled for a more open-ended and consensual verb. The final Global Stocktake text—now called the UAE Consensus—calls for "transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science." It also called for "accelerating efforts towards the phase-down of unabated coal power". However, it did away with limiting permission for new, unabated coal power generation mentioned in the earlier text. Fossil fuels and gas find no specific mention.

**What targets do the Global Stocktake set to reduce GHG emissions and accelerate energy transition?**

The COP28 New Delhi Declaration calling for tripling renewable energy capacity globally by 2030 was endorsed in the Global Stocktake text. It also aimed to double "the global average annual rate of energy efficiency improvements." Reducing emissions of GHGs other than non-carbon dioxide, including methane, by 2030 finds a mention but without citing targets.

**What is the structure and scope of the new L&D Fund?**

An exclusive L&D Fund was formed in the dying hours at COP27 in Sharm el-Sheikh in SIDS, Africa and other developing countries insisted upon a dedicated corpus to developing countries reeling under climate change-induced extreme weather and slow onset events. Though the fund was formed, decisions on its structure, scope and character were left for Dubai. A transitional committee constituted to shape the fund made recommendations after multiple meetings over the past year.

The L&D Fund, which is to be operated under the finance mechanism of the UNFCCC, will be put into operation by the World Bank and hosted by it for an interim period of four years. As a new channel of multilateral finance, it will assist developing countries in responding to both economic and non-economic loss and damage associated with adverse effects of climate change. It will financially help combat challenges posed by rising sea levels, displacement, relocation, migration, insufficient climate information and data, and the need for climate-resilient reconstruction and recovery. Financing will be in the form of "grants and highly concessional loans" with a minimum percentage allocation for least developed countries and SIDS.

Financial contribution to the fund is voluntary, with developed countries taking the lead. However, the scale of L&D Fund is unspecified in the text though the estimated financial requirement to deal with loss and damage is pegged at about \$400 billion a year. A handful of countries have

made contributions to it in Dubai, raising \$792 million so far, with both the UAE and Germany committing \$100 million each, and the US pledging a paltry \$7.5 million.

**In terms of targets and implementation, what does the Global Goal on Adaptation Framework offer, especially for developing countries?**

Cascading climate change impacts make it imperative for countries to put practices and processes in place to minimize damage and make communities resilient. Adaptation is a significant aspect of climate negotiations, covering a wide spectrum from local to national measures. Its criticality as a long-term response to climate change led to the establishment of the Global Goal on Adaptation (GGA) under the Paris Agreement. At the Glasgow COP26, a two-year work programme for the GGA was undertaken, which concluded in Dubai with the adoption of a framework. Keys to effective adaptation measures range from finance and technology to building capacities. For climate-vulnerable and developing countries, including India, finance for adaptation is a concern.

The final text of the Global Goal on Adaptation was delivered on the last day of COP28, indicating the nature of negotiations. After much back and forth, the eventual framework text merely notes with concern the widening gap in adaptation finance, while reiterating that developed

countries need to at least double by 2025—from 2019 levels—their adaptation finance provision towards developing countries. The text sets unqualified targets for 2030 to reduce climate-induced water scarcity, make food and agricultural production climate-resilient, build resilience against climate change induced health impacts, reduce climate impacts on ecosystems and biodiversity, and increase resilience of infrastructure and human settlements, among other measures. The GGA also sets 2030 targets for all Parties to conduct up-to-date impact, risk and vulnerability assessments and implement national adaptation plans.

The Global Stocktake outcomes and the GGA framework must be factored in by countries in their new collective quantified goal (NCQG)—a new set of climate finance goals. However, it specifies little in terms of the means of implementation of these targets, including the finance and building capacities critical to many developing countries.

"In some cases, they have specified responsibilities and timelines without specifying the means of implementation. For instance, countries have to set up multi-hazard early warning systems by 2027 or systems for monitoring, evaluation and learning for national adaptation efforts," observed Ulla Kellner, executive director, Climate, World Resources Institute India. That is particularly tough in vast, data-scarce countries without finance and technical know-how, she added.

**Why does climate finance continue to be a bone of contention for developing countries?**

The established negotiating axis at COPs largely divides countries into two camps: developed and developing. The parleys are guided by the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC), which recognizes unequal economic development between countries and places the onus on industrial emitters to step up and act faster.

Developing countries are particularly vulnerable to climate change despite having little role in creating it. The flow of finance from developed countries to developing ones to help them curb GHG emissions and build systems to adapt to climate change impacts has been thin in negotiations for long.

The UAE Consensus notes that current levels of climate finance are insufficient to respond to worsening climate change impacts and paces the adaptation finance

needs of developing countries at \$215-\$377 billion annually until 2030 and \$1.3 trillion a year for investments in clean energy till that year. The Global Stocktake underscores the significance of public funds for adaptation needs.

Developing countries are still ranked by the unmet promise of \$100 billion a year for climate action that was to be paid to them from 2020 to 2025 by developed nations. Consequently, a certain lack of trust underlines the approach of developing countries at negotiations.

An OECD report released before COP28 noted that contributions from the developed world fell short by \$10 billion in 2021. Even while concerned with the widening adaptation finance gap, the UAE Consensus merely expresses "deep regret" at the inability of developed countries to mobilize the amount in 2021.

"Finance is a recurring disappointment," said Kellner but hoped that with the new collective quantified goal deliberations gathering momentum, the Baku COP29 (2024 Azerbaijan) may hold more promise. "There should not only be efforts to make up for past gaps but a much higher goal should be negotiated for the next round. Year after year we continue to operate in good faith, but eventually lack of finance limits timely climate action. It is not merely a symbolic gap but has consequences on the ground," she added.

**What will India be taking away from COP28?**

Compared to the previous COPs—in Glasgow, it played a key role in pushing for a cool phase-down rather than a phaseout, in Sharm el-Sheikh it called for the phase-down of all fossil fuels—India appears to have a low profile in Dubai.

The UAE Consensus, however, narrows down on fossil fuels and picks on "unabated coal power". Despite its mammoth push for renewable energy (RE) coupled with the Global Stocktake requirement of tripling capacities by 2030, coal—still a 50%—continues to be the mainstay of India's energy mix.

"While the future is definitely RE and India is headed in the right direction, the question is what to fall back on in the short term, when RE is intermittent," said Kellner. The Global Stocktake recognizes the transitional role of fossil fuels such as oil and coal and gas. "India needs to keep callig attention to energy security," she said. For methane emission reduction, she noted, waste management and curbing food loss are critical.

## MINI SHORT STORY

### WHAT

The Conference of Parties, a multilateral meeting generally held every year, features close to 200 Parties with wide-ranging ambitions attempting to tackle climate change and its impacts through a consensus.

### AND

Typically, COPs tend to be about small, slow steps. COP28, hosted in fossil fuel nerve-centre Dubai and led by the CEO of the UAE's state-owned oil company, was no different, but may spark policy shifts.

### BUT

The big positives of COP28 were the consensus on moving away from fossil fuels, a framework to help countries adapt to climate change, and building a corpus to deal with the impact of extreme weather.

## Thermax's clean energy biz to drive growth

Dipti Sharma

dipti.sharma@livemint.com

**T**hermax Ltd's shares closed 4% up on Friday. During an analyst meet on Thursday, the firm underscored its dedication to participate in the energy transition.

The electrical equipment manufacturer is expected to gain from investments in clean energy, decarbonization and increased focus on improving air and water quality. Its emphasis on products and projects, such as bio-CNG, low-voltage electric boilers, thermal heating, ventilation, and air conditioning (HVAC) systems, coal gasification plants and hydrogen looks encouraging. Thermax has established dif-

ferentiation in its products, either by being the sole provider or facing limited competition in the specific offerings, said Motilal Oswal Financial Services analysts. The company is the only player in flexi-fuel boilers, thermal HVAC, and has limited competition in bio-CNG, cooling solution, coal gasification and chemicals, they said.

Further, the management's commentary on profitability was upbeat. Thermax is grappling with margin issues due to low-margin flue gas desulphurisation orders, its China business being shut and Indonesia business fac-

**Thermax has stated its intention to steer clear of orders with a weak margin profile**

ing headwinds with Chinese firms giving stiff competition. In the September quarter (Q2FY24) operating margin rose by 210 basis points to 8.9% and the management had guided that half of

the margin expansion is sustainable and the rest includes one-time tailwinds. It has stated its intention to steer clear of the orders with weak margin profile. It anticipates an improvement in

margin, driven by the orders in key segments such as chemicals and industrial products that have better margins.

"Project and turnkey businesses in the industrial infra-

segment, often involve orders with relatively low margins. Thermax is hoping to secure profitable orders, which is a positive development," Amit Anwani, analyst at Prabhudas Lilladher, said. In Q2FY24, industrial products and infra segments dominated the order book, with the latter being the second biggest contributor.

Motilal Oswal projects a 21% compound annual growth in profit after tax over FY23-26 supported by higher sales and better margins. So far in 2023, Thermax's shares have surged 43% thanks to the strong order backlog and intake, amid positive momentum in the capital goods sector. That said, the stock trades at 43 times estimated FY25 earnings, which looks pricey.

## Adani group has spent \$2.5 b so far on green H2 value chain

**Janaki Krishnan**  
Mumbai

Adani New Industries Ltd (ANIL), a wholly owned subsidiary of flagship Adani Enterprises, has spent \$2.5 billion so far in developing a backward integrated value chain for its green hydrogen project and is on track to implement the first phase of the project with an annual capacity of one million tonnes by FY27, sources said.

The aim is to increase the capacity to three million tonnes in the next 10 years with an investment of \$50 billion. This, of course, depends on market conditions and the success of the initial phase. The green hydrogen plant is coming up at Mundra in Gujarat.

The backward integration includes developing a fully integrated value chain across solar, wind, electrolyzers, and allied equipment for the generation of green hydrogen and its associated sustainable derivatives.

Solar energy can be used



The aim is to increase the capacity to three million tonnes in the next 10 years with an investment of \$50 billion

to produce hydrogen either by electrolysis of water with the use of solar-generated electricity or through solar water splitting.

### GREEN HYDROGEN

Green hydrogen is one of the major thrust areas for the group and it is spending massively on the production of supply chain products for the generation of green hydrogen such as solar-poly-silicon, ingots, wafer, cell and module, and wind turbine generators. Downstream derivatives product include green ammonia, green methanol, and sustainable aviation fuels.

The backward integration of the solar value chain, that

is from polysilicon to modules, is being developed as part of the electronic manufacturing cluster at Mundra.

JVs have been formed to produce ethylene vinyl acetate, back sheets, aluminium frames, and glass. ANIL has also developed a 5.2 MW wind turbine generator.

In September, Adani Enterprises had announced the formation of an equal joint venture with Kowa Holdings Asia Pte to sell and market green ammonia, green hydrogen and its derivatives in Japan, Taiwan, and Hawaii.

Funds will be raised by tapping the domestic bond markets as well as through bank loans and other lines of credit.

Recently, Group Chief Financial Officer Jugesinder Singh that the group plans a massive \$84 billion of investments in infrastructure projects over the next decade. He also indicated that the group plans to approach the domestic bond markets more in the future. Bulk of the group's bond issuances so far have been in the US.

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## **NPCIL's 2nd 700 MW unit at Kakrapar begins fission process**

**AGENCIES**  
CHENNAI, 17 DECEMBER

India's atomic power plant operator, the Nuclear Power Corporation of India Ltd (NPCIL) said its second 700 MW unit at Kakrapar Atomic Power Project (KAPP) in Gujarat attained criticality—start of controlled fission chain reaction—at 1.17 a.m. on Sunday.

This will be the fourth atomic power unit for the NPCIL at Kakrapar.

The NPCIL has three operational nuclear power plants at Kakrapar—two 220 MW units and one 700 MW unit.

The first 700 MW unit began commercial operations on August 30, 2023 and the two units at Kakrapar are part of the NPCIL's indigenously designed and built 16 pressurised heavy water reactors (PHWR) being set up in the country.

"The criticality was achieved after meeting all the stipulations of the Atomic Energy Regulatory Board (AERB), which had issued clearance after a rigorous review of safety of the plant systems," the operator said.