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Critical Mineral Financing

August 2023

Kumar Manish

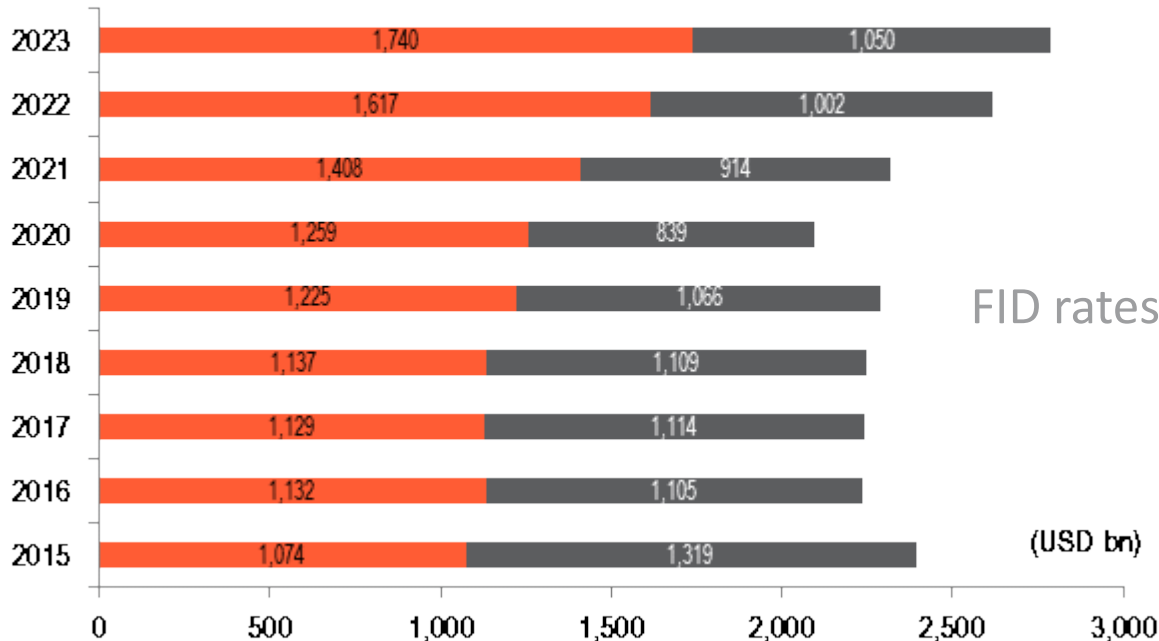
BOB Capital Markets Ltd

kumar.manish@bobcaps.in

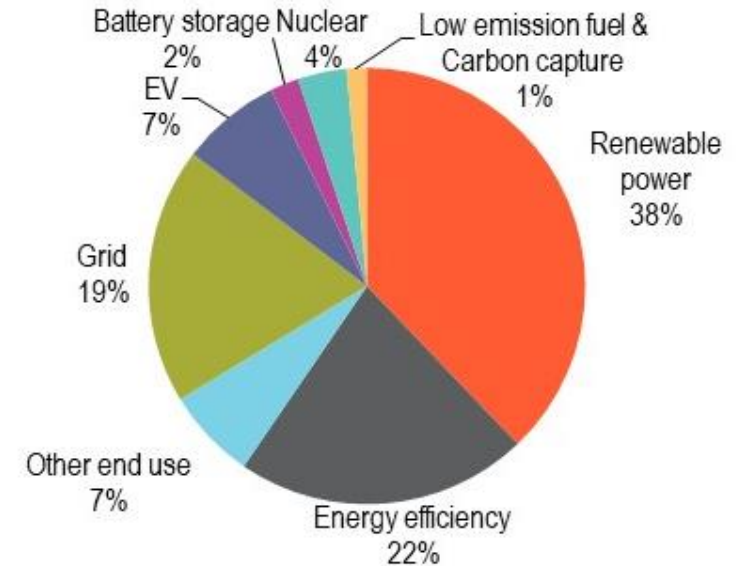


Capital expenditure on energy

■ Clean energy ■ Fossil fuel



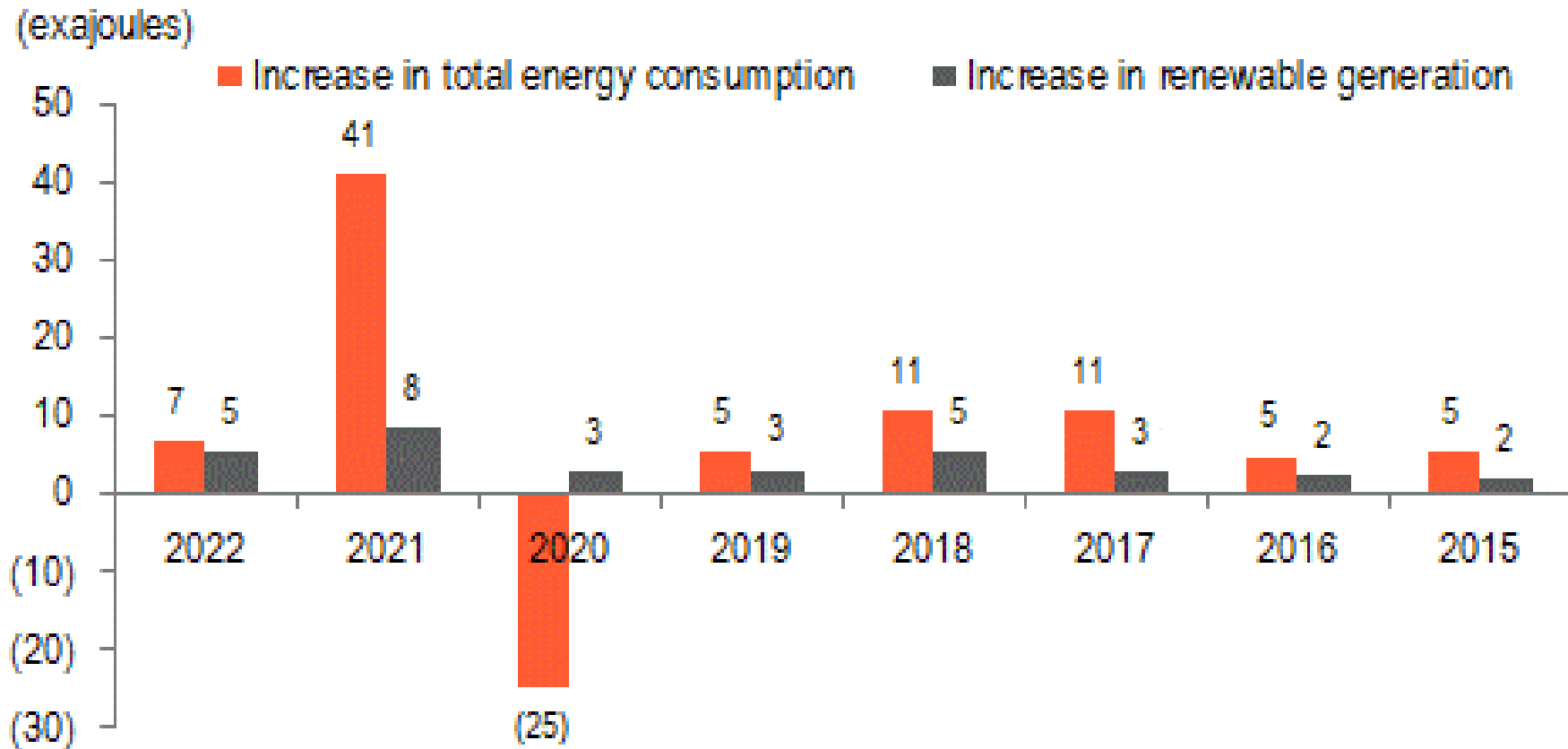
FID rates?



IEA predicts 30% CAGR for EV sales



Contribution of renewable



Source: BOBCAPS, BP Statistical Review

- Identification of critical minerals ✓
- Competitive landscape
 - About 200 policies and regulations across the globe, 100 of these enacted in the past few years
 - Entrenched Chinese companies
 - European Union’s Critical Raw Materials (CRM) Act
 - US Inflation Reduction Act
 - Australia’s Critical Minerals Strategy
 - Canada’s Critical Minerals Strategy
 - UK’s Critical Minerals Strategy
- Entry strategy



Historical context

- Energy & mobility
 - Coal/Steam engine
 - Petroleum/IC engine
 - Renewable/EVs

- Standard Oil Company



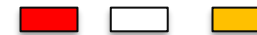
Next steps

- Energy security
 - Strategic vs commercial
 - Scenario
 - Business as usual
 - Battery tech
 - Investment structure
 - » Control vs ownership
 - » Risk money
 - » Covenants
 - » PCG

	Cu	Co	Ni	Li	REEs	Cr	Zn	PGMs	Al
Bioenergy	High						Moderate		Moderate
Concentrated solar	Moderate		Moderate			High	Moderate		High
EVs battery & storage	High	High	High	High	High				High
Grid	High								High
Geothermal			High			High			
Hydrogen			High		Moderate			High	Moderate
Hydro	Moderate					Moderate	Moderate		Moderate
Nuclear	Moderate		Moderate			Moderate			
Solar PV	High								High
Wind	High		Moderate		High	Moderate	High		Moderate

Relative importance - High, Low & Moderate

Source: IEA



critical mineral use (mt)	2020	2030*
Solar PV	0.7	1
Wind	0.6	1
Other low C gen	0.3	0.9
EV & Battery	0.4	3
Total	2.0	5.9

*IEA stated policy scenario

Li Resources	mt
Bolivia	21.0
Argentina	19.0
Chile	9.8
Australia	7.3
India	5.9
China	5.1
Congo	3.0
Canada	2.9
Germany	2.7
Mexico	1.7

Source: US Geological Survey, Ministry of Mines, India



Thank You

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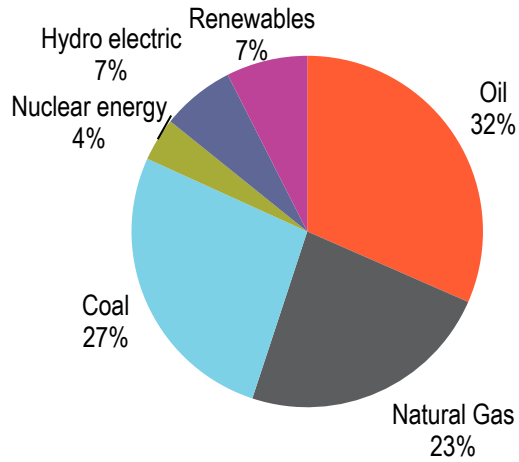
25 August 2023



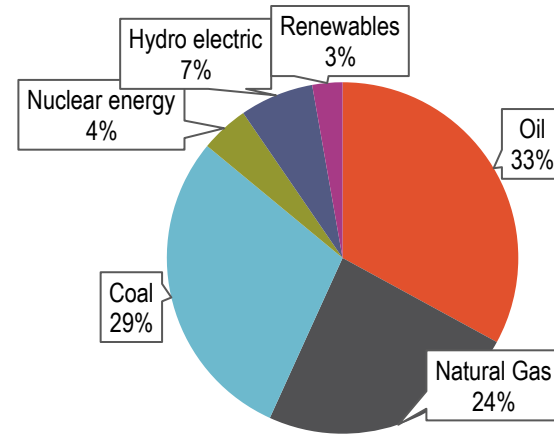
Energy landscape

World

2022



2015



India

