Rare Earth Elements' Supply - How Government's Targeted Approach & Tax Incentives Can Help?

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Back then, in our school curriculums, in order to secure good marks, it was considered sufficient to cram the first few elements of the Periodic Table, like hydrogen, oxygen, iron, copper, zinc, sulphur etc. The tough sounding and difficult-to-learn elements, carrying atomic numbers beyond 50, could be conveniently ignored. Such elements, like in our education system, had been met, with the same neglect and ignorance, even in the Government's road-map of policy decisions, in the major time span of post-independence era. But not anymore.

'Rare Earth Elements' (REEs), the expression, which today, has become a kind of buzz word, in every geo-political and economic circle, is a group of 17 such long-neglected elements, carrying atomic numbers 21, 39, and 57 to 71, in the periodic table. The technical names of some of the prominent REEs are: Lanthanum, Samarium, Gadolinium, Terbium, Dysprosium, Lutetium, Scandium, Yttrium and Neodymium.

Rare earth elements are not actually rare literally, and their raw ores can be found in abundance in the Earth's crust. But these are found in very small concentrations in raw ores. Extensive processes of mining, grinding, extraction, and purification are needed to refine the raw ores to extract rare earth elements, with the desired high purity standards, suitable for commercial and industrial applications. Refining of these elements involves longer gestation periods, and entails heavy capital investment costs, and also poses serious environmental hazards.

REEs in our Daily Lives:

Paradoxically, even after being ignored for almost 5 decades, in our government's policy making decisions, these REEs have silently made their way into our daily lives, courtesy, their cheaper imports from China. Be it our smart phones, computers, laptops, cars, lights, digital cameras, electronic vehicles, wind shields, turbines, brakes, batteries and speakers, their presence is omnipresent.

In modern industrial and commercial production lines, REEs are present everywhere, from a needle to a missile. Their characteristic features of having high density, conductivity, melting point, thermal conductance, and permanent magnetic strength, make them indispensable for automotives, electronics, electronic vehicles (EVs), defence, semi-conductors, renewables, aerospace and other industrial and commercial applications.

Current Supply Chain Disruptions caused by Geo-Political Scenario:

In the USA induced recent global tariff war, China is weaponizing its dominance over 62% of the total rare earth mineral reserves and 91% of its refining capacity, in securing favourable foreign trade terms. China's monopoly over RRE's didn't happen overnight.

Since last 4 decades, China had consciously and strategically, prioritised it's focus in developing and subsidising the mining, exploration and refining capacities of REEs.

In contrast, India, despite having the third largest reserves of 6.9 million tonnes of REEs, is producing only 2900 tonnes, constituting just 1% of the global output. Though, the incorporation of Indian Rare Earth Limited (IREL), way back in 1950, marked the beginning of the Indian Government's efforts in the indigenous mining, processing and refining of REEs, but still, it never took off in real practical terms.

Surprisingly, an isolated rare earth magnet piece, used in an automotive industry, may cost only ₹ 500/-, but the unavailabity of this seemingly insignificant piece, can halt the entire production line. A very recent example is that of Maruti Suzuki India being compelled to reduce its production of e-Vitara cars, in the wake of recent China induced supply chain restrictions, amid global tariff war situation.

A Quick-fix Solution: Naturally, a quick-fix solution to the current supply-chain shortage of REEs, caused by China induced export restrictions, can only be achieved through a formidable and intelligent diplomacy route, and for which, our hon'ble foreign minister S. Jayashankar and our NSA Ajit Doval, are best known for. Parallelly, alternative import destinations like Australia, Vietnam, Japan, South Korea, Malaysia and Brazil can be explored and worked out, to reduce future dependency on China.

Permanent Solution: However, to get a permanent solution in the long run, acknowledging the indispensable strategic importance of REEs in the Indian manufacturing sector, increasing efforts are being made by the Indian government to reduce dependence on Chinese imports and to develop self-sufficiency in the scalable domestic mining, refining and processing capabilities of REEs and to encourage the participation of private players.

Royalty on Mining & Excavation of REEs

Royalty rate on minerals is an important financial consideration for the bidders in auction of blocks for mining and exploration purpose. Until 2023, no royalty rate was specified in respect of rare earth elements in the governing 'Mines and Minerals (Development and Regulation) Act, 1957 ('MMDR Act'). In the absence of any specified royalty rate, the by default non specified royalty rate of 12% of average selling price, was applicable, which was very higher, in comparison to the mining royalty rates in other countries like China, having the REEs mineral reserves. The Union Cabinet chaired by the hon'ble Prime Minister Narendra Modi approved amendment of the 'MMDR Act', and specified the nominal and competitive royalty rate of 1% of average sale price, in respect of mining and exploration of REEs. This royalty rate specification has enabled the Central Government to auction blocks for REEs for the first time in the country.

National Critical Mineral Mission: Indian government has also launched National Critical Mineral Mission (NCMM) in April, 2025. Under the NCMM, Geological Survey of India (GSI) has been assigned to carry out 1,200 exploration projects from FY25 to FY31. To reduce India's import dependency in REEs, the Atomic Minerals Directorate for Exploration and Research (AMD) is carrying out exploration to augment resources along the coastal, inland and riverine placer sands of the country.

Production Linked Incentives: The Ministry of Heavy Industries is also working on a proposal to partly subsidise the cost of production gap between the rare earth magnets made in India and the corresponding cheaper imports from China. Production linked incentive (PLI) Scheme is also being considered, to boost domestic manufacturing of rare earth elements and magnets.

Going forward, the dependence on import of rare earth magnets from China, made up of a rare earth element, 'samarium', can be reduced by mining, exploring and refining a better substitute- 'neodymium', another RRE, which incidentally is present in abundance in India. Neodymium can be extracted from Monazite rocks, found in the Coastal regions of

Andhra Pradesh, Kerala, Karnataka & Tamil Nadu in the south and Gujarat in the west.

Overcoming Environmental Hazards: The environmental hazards including the serious pollution problem, inherent, in the extraction of neodymium or any other RRE, can be minimised and tackled by entering into mutually beneficial strategic collaborations with countries like USA, Japan and Israel. These countries can benefit from the abundant availability of RRE mineral reserves in our country and we can benefit from using their modern and advanced environment friendly techniques of extraction of such REEs.

For example, India can benefit from the recent research studies of the Harvard and Purdue University in USA, in developing innovative clean methods using only mildly acidic solutions to separate out the rare earth metals from the earth, and similar low-cost approaches extracting rare earth elements from the recycling of waste coal ash.

The already existing collaboration with Japan based Toyotsu Rare Earths (India) and IREL (India) Limited currently only being used for exports of various critical rare earth oxides or carbonates like Lanthanum Oxide, Cerium Oxide, Praseodymium Oxide and Neodymium Oxide, to Japan, can be pivoted, to enable indigenous environment friendly production of such REEs, in India, using the Japanese technology.

Tax Incentives: In addition to the production linked incentives, tax incentives can also go a long way in augmenting and accelerating the domestic production, mining and exploration of REEs.

REEs to be made an exception to recent SC verdict holding Royalty paid on Mining of Natural Minerals is Not a Tax

The 9 Member Constitution Bench of the hon'ble Supreme Court (SC) of India in the case of 'Mineral Area Development Authority v. Steel Authority of India', Civil Appeal Nos. 4056-4064 of 1999, decided on 14-08-2024, in a majority of 8:1, has held that royalty paid by mining operators to the Government is not a tax and that States have the power to levy cesses on mining and mineral-use activities.

Through this verdict, the earlier judgement of the 7 Member bench of the hon'ble Supreme Court, in the case of 'India Cement Ltd. v. State of T.N., (1990) 1 SCC 12, had been overruled. In the said judgement it had been held that the State legislatures had no legislative competence to impose cess on royalty under Entries 23 and 50 of List II, as royalty itself was a tax and no further tax, on such tax could be levied.

Thus, the State Governments have now been held by the hon'ble Supreme Court as entitled to charge any additional Cess or any other tax levy, in addition to the royalty payment being made by the private players, engaged in mining and exploration of natural minerals, and that too, retrospectively from the year 2005.

In case of mining and exploration of REEs, the State Governments of the regions, having rich reserves of REEs like Andhra Pradesh, Kerala, Karnataka, Tamil Nadu, Gujarat and Rajasthan, should consider national interest above their individual interests of revenue considerations, and should declare non levy of any additional cess or tax, over and above the specified levy of royalty @ 1% of the average selling price of such REEs.

GST Incentives

The question whether GST is applicable on the royalty payments being made by the mining companies to the Government, for mining and excavation of natural minerals is a litigative one. The GST Authorities have always considered such royalty payments as consideration paid by private mining parties towards the taxable services by the Government under Reverse Charge basis.

In the pre-GST regime, the Central Board of Indirect Taxes and Customs (CBIC) in

Notification Nos. 22/2016- ST, 24/2016-ST and Circular No. 192/02/2016-ST had clarified that royalties and other charges collected by the government are considered 'taxable services.'

In the post GST regime also, the revenue authorities insist on the applicability of GST on such royalty payments @ 18% under the Reverse Charge Mechanism (RCM). As per GST authorities, in accordance with Entry No. 5 of Notification No. 13/2017-Central Tax (Rate) dated 28.06.2017, on services supplied by the Central Government, State Government, Union Territory or local authority to a business entity, GST shall be paid by business entity as a service recipient under reverse charge.

However, the mining parties had always objected to such stand of the GST authorities, and have contended that GST can't be levied on the statutory payments of royalty which are in the nature of tax payments. In contending this, such mining companies used to rely upon the earlier judgement of the 7-member bench of the hon'ble SC in the case of India Cement Ltd (supra), holding that such royalty payments are not fees but statutory tax payments.

But now, with this earlier SC judgement getting overturned by the 9 Member Constitution Bench of the hon'ble Supreme Court of India in the case of 'Mineral Area Development Authority v. Steel Authority of India' (supra), wherein hon'ble SC has reversed the earlier verdict and has held that such royalty payments are not in the nature of tax payments, the mining parties may no longer plead their justification for non-applicability of GST on their royalty payments.

Therefore, as a natural corollary, relying upon the above SC judgement, the GST authorities will again press upon the service of levy of GST on royalty payments being made by the private mining parties to the Government, @ 18% on reverse charge basis, on the mining and excavation of natural minerals.

Blockage of Input Tax Credit due to Inverted Rate Duty Structure

The propagators of applicability of GST on royalty payments towards mining and exploration of natural minerals contend that such mining parties are in any case eligible for the input tax credit. However, it is not the case. As discussed above, the GST on royalty payments being made by the private mining parties to the Government, on the mining and excavation of natural minerals is applicable @ 18% on reverse charge basis. Whereas the applicable GST rate on output supply of such extracted natural minerals is only 5%. This results in blockage of substantial input tax credit refund due to the inverted rate duty structure, in respect of mining and excavation businesses.

GST Incentives on RREs:

In order to encourage the existing big mining companies in both the public sector as well as private sector like Hindalco, Vedanta and Tata, in engaging in mining and exploration of the REEs, in order to boost domestic production of rare earth metals and magnets, it is the need of the hour that the input GST on royalty payments towards mining and exploration of natural minerals, pressed upon by the GST authorities @ 18% on reverse charge basis should be fixed @ 5%. This will enable such mining businesses to avail full offset against the output GST liability @5% on supply of such REEs.

Income Tax Incentives:

The existing income tax provisions more specifically section 35E of the Income Tax Act, provides for a deduction of only one tenth of the expenditure incurred on such mining and exploration in a particular year and the remaining expenditure is required to be carried forward to subsequent 9 years for the purpose of claiming the same. In the case of mining and exploration of REEs, an enhanced deduction, say, up to one fifth or even better, one half of the total expenditure, should be considered, to be allowed in section 35E, in one particular year.

Concluding Remarks: Inspite of the sincere efforts being made by the Indian Government in recent past, there is a still a very long way to go, to compensate for the policy vacuum, in respect of REEs, in the past 5 decades. It is high time for us, to go back to these neglected rare earth elements in the periodic table, and give them their due respect and attention. The pressing rare earth elements' supply chain disruption can be addressed only by the Government's targeted approach and tax incentives.