References

Introduction

Key findings
Adamas Intelligence (2020), Rare earth magnet market outlook to 2030, Adamas Intelligence, Ontario, Canada.

Marx, J. et al. (2018), Comparative Life Cycle Assessment of NdFeB Permanent Magnet Production from Different Rare Earth Deposits, ACS Sustainable Chemistry and Engineering, 6(5), 5858–5867, https://doi.org/10.1021/acssuschemeng.7b04165
Chapter 1: The state of play

Adamas Intelligence (2020), Rare earth magnet market outlook to 2030, Adamas Intelligence, Ontario, Canada.


The Role of Critical Minerals in Clean Energy Transitions

for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition


Chapter 2: Mineral requirements for clean energy transitions

Adamas Intelligence (2021a), EV Battery Capacity and Battery Metals Tracker, Adamas Intelligence, Ontario, Canada.

Adamas Intelligence (2021b), EV Motor Materials Monthly, Adamas Intelligence, Ontario, Canada.


Campbell, P. (2021), GM aims to end petrol and diesel sales by 2035, Financial Times, https://www.ft.com/content/ea49d8cc-0e40-4dcd-ab60-0decc7146f5a

Cui, H., Hall, D. and Lutsey, N. (2020), Update on the global transition to electric vehicles through 2019, International Council on...

Ding, Y. et al. (2019), Automotive Li-Ion Batteries: Current Status and Future Perspectives, Electrochemical Energy Reviews, 2(1), 1-28, https://doi.org/10.1007/s41918-018-0022-z

EC JRC (Joint Research Center), (2011), Critical Metals in Strategic Energy Technologies, https://doi.org/10.2790/35716


The Role of Critical Minerals in Clean Energy Transitions

IEA (2021), *Global EV Outlook 2021*,
https://www.iea.org/reports/global-ev-outlook-2021

IEA (2020a), *Energy Storage*, Tracking Clean Energy Progress,
https://www.iea.org/reports/energy-storage

IEA (2020b), *Global EV Outlook 2020*,
https://www.iea.org/reports/global-ev-outlook-2020

IEA (2020c), *World Energy Outlook 2020*,
https://www.iea.org/reports/world-energy-outlook-2020

IRENA (International Renewable Energy Agency) (2019),
*Renewable Power Generation Costs in 2018*,

IRENA (2016), *End of Life Management Solar PV Panels*,

https://www.dnv.com/feature/tesla-battery-day-energy-transition.html

ITRPV (2020), Results 2019 including maturity report 2020,
http://itrpv.vdma.org/documents/27094228/29066965/Readiness0ITRPV02020/2a8588fd-3ac2-d21d-2f83-b8f96be03e51


https://doi.org/10.1038/nenergy.2016.141

Kane, M. (2021), SVOLT’s Cobalt-free NMx Cell Are Now Available For Order, *InsideEVs*,

Kiemel, S. et al. (2021), Critical materials for water electrolysers at the example of the energy transition in Germany, *International Journal of Energy Research*, January, 1–22,
https://doi.org/10.1002/er.6487

Kim, H. S. et al. (2012), Lead iodide perovskite sensitized all-solid-state submicron thin film mesoscopic solar cell with efficiency exceeding 9%, *Scientific Reports*, 2(1), 1–7,
https://doi.org/10.1038/srep00591

https://doi.org/10.3390/en10070860


Nunez, C. (2020), Researchers eye manganese as key to safer, cheaper lithium-ion batteries, Argonne National Laboratory, https://www.anl.gov/article/researchers-eye-manganese-as-key-to-safer-cheaper-lithium-ion-batteries

Pavel, C. C. et al. (2017), Role of substitution in mitigating the supply pressure of rare earths in electric road transport applications, Sustainable Materials and Technologies, 12, 62–72, https://doi.org/10.1016/j.susmat.2017.01.003


Smolinka, T. et al. (2018), Industrialisierung der Wasser elektrolyse in Deutschland: Chancen und Herausforderungen für nachhaltigen Wasserstoff für Verkehr, Strom und Wärme (Industrialization of water electrolysis in Germany: opportunities and challenges for sustainable hydrogen for transport, electricity and heat), https://www.now-gmbh.de/content/service/3-publikationen/1-nip-


Varzi, A. et al. (2016), Challenges and prospects of the role of solid electrolytes in the revitalization of lithium metal batteries, *Journal of


Chapter 3: Reliable supply of minerals

Adamas Intelligence (2020), Rare earth magnet market outlook to 2030, Adamas Intelligence, Ontario, Canada.

Africa Oil & Power (2021), DRC announces extension on export ban moratorium for key minerals, https://www.africaoilandpower.com/2020/08/27/drc-announces-extension-on-export-ban-moratorium-for-key-minerals/


BHP (2011), BHP Billiton Site Tour Presentation, BHP, Melbourne, Australia.


BloombergNEF (2020b), Critical Minerals Primer: Rare Earths.

BloombergNEF (2019), Lithium-Ion Battery Recycling _ 2 Million Tons by 2030.


Grant (2019), *Lithium (Extraction Technology) in 2025*, https://static1.squarespace.com/static/5c9aa323c46f6d499a2ac1c5/t/5e4548755e51623210e6da82/1581598838742/Lithium+%28Extraction+Technology%29+in+2025.pdf


The Role of Critical Minerals in Clean Energy Transitions


Northvolt (2019), Revolt: The technologies paving the way for Li-ion battery recycling, https://northvolt.com/stories/RevoltTechnologies


Peelman, S. et al. (2016), Hydrometallurgical Extraction of Rare Earth Elements from Low Grade Mine Tailings, *Rare Metal Technology 2016*, Springer, Cham, https://doi.org/10.1007/978-3-319-48135-7_2

Reuters (2021a), China rare earths extend surge on worries over Myanmar supply, inspection threat,
The Role of Critical Minerals in Clean Energy Transitions

https://www.reuters.com/article/us-china-rare-earths-myanmar-idUSKBN2BI1HR


Chapter 4: Sustainable and responsible development of minerals


BBC (2019), Brazil’s dam disaster: Looking for bodies, looking for answers, https://www.bbc.co.uk/news/resources/idt-sh/brazil_dam_disaster


IBAMA (Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis / Brazilian Institute of the Environment and


IGF (2018c), *Chile: Horizontal Linkages*, International Institute for Sustainable Development,

IGF (2018d), *Women in Artisanal and Small-Scale Mining: Challenges and Opportunities for Greater Participation*, International Institute for Sustainable Development,


IGF (2018c), *Chile: Horizontal Linkages*, International Institute for Sustainable Development,


IGF (2018d), *Women in Artisanal and Small-Scale Mining: Challenges and Opportunities for Greater Participation*, International Institute for Sustainable Development,


Jucá, B. (2019), Responsável por fiscalizar barragens, anm já admitiu falta de verba para vistorias 'in loco' (Responsible for dams' inspections, anm has already admitted lack of funds for 'in loco' verifications), https://brasil.elpais.com/brasil/2019/02/07/politica/1549559820_961591.html


Lebdioui, A. et al. (2020), Local-foreign technology interface, resource-based development and industrial policy: how Chile and Malaysia are escaping the middle-income trap, Journal of Technology Transfer, https://doi.org/10.1007/s10961-020-09808-3


The Role of Critical Minerals in Clean Energy Transitions


Marx, J. et al. (2018), Comparative life cycle assessment of NdFeB permanent magnet production from different rare earth deposits, *ACS Sustainable Chemistry and Engineering*, 6(5), 5858–5867, [https://doi.org/10.1021/acssuschemeng.7b04165](https://doi.org/10.1021/acssuschemeng.7b04165)


Annexes

raglan-mine-renewable-electricity-smart-grid-pilot-demonstration/16662


OECD (2019a), Mining and Green Growth in the EECCA Region, https://doi.org/10.1787/1926a45a-en


Reuters (2019a), BHP switches to green power for chilean copper starting 2021, https://www.reuters.com/article/us-bhp-chile-renewables-idUSKBN1X0019

Reuters (2019b), Brazil bans upstream mining dams after deadly vale disaster, https://www.reuters.com/article/us-vale-sa-disaster-idUSKCN1Q718C


Roskill (2021), Cobalt, sustainability: DRC launches monopoly over cobalt ASM to improve ESG credentials,
The Role of Critical Minerals in Clean Energy Transitions


Sahla et al. (2021), How can Anticorruption Actors use EITI Disclosures?, Natural Resource Governance Institute, https://resourcegovernance.org/sites/default/files/documents/how_can_anticorruption_actors_use_eiti_disclosures.pdf


Sonter, L. J. et al. (2014), Processes of land use change in mining regions, Journal of Cleaner Production, 84(1), 494–501, https://doi.org/10.1016/j.jclepro.2014.03.084


Tost, M. et al. (2018), Metal mining’s environmental pressures: A review and updated estimates on CO2 emissions, water use, and land requirements, Sustainability (Switzerland), 10(8), https://doi.org/10.3390/su10082881


