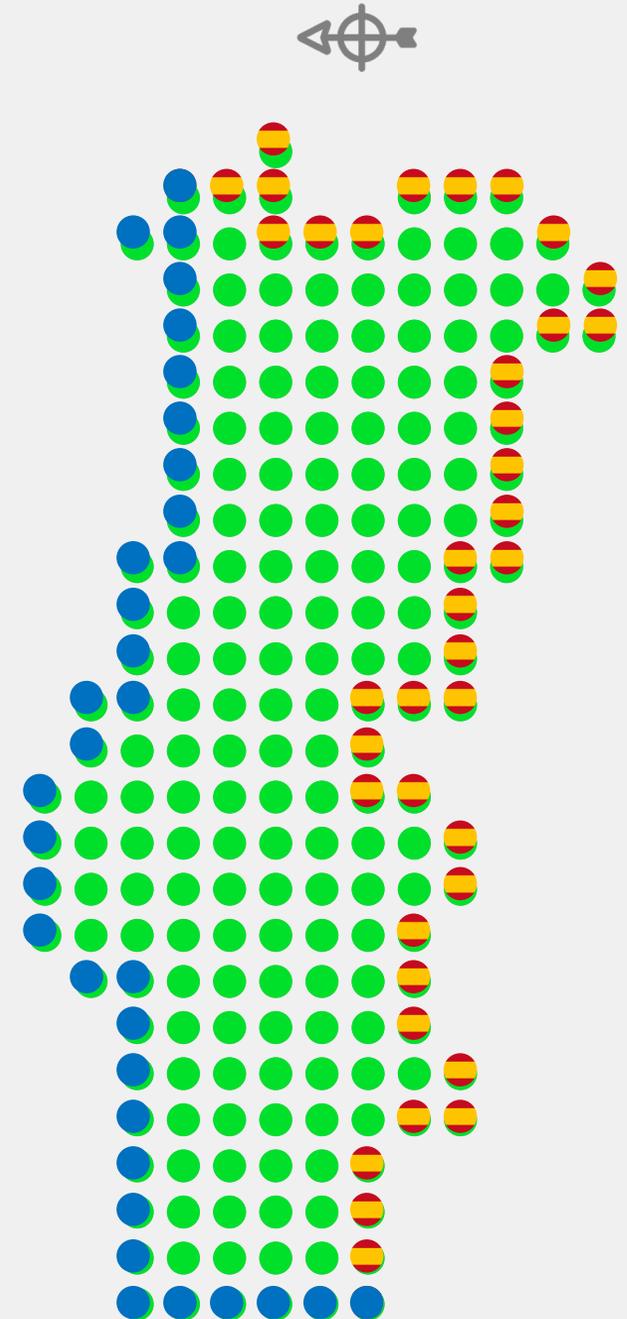




Portugal Profile

Key Facts

- Westernmost country in continental Europe
- Land area: 92,212 km² ($\approx 18\%$ the size of Spain)
- Only shares a territorial border with Spain
- 943 km coastline along the Atlantic



Portugal Profile

Fun Facts

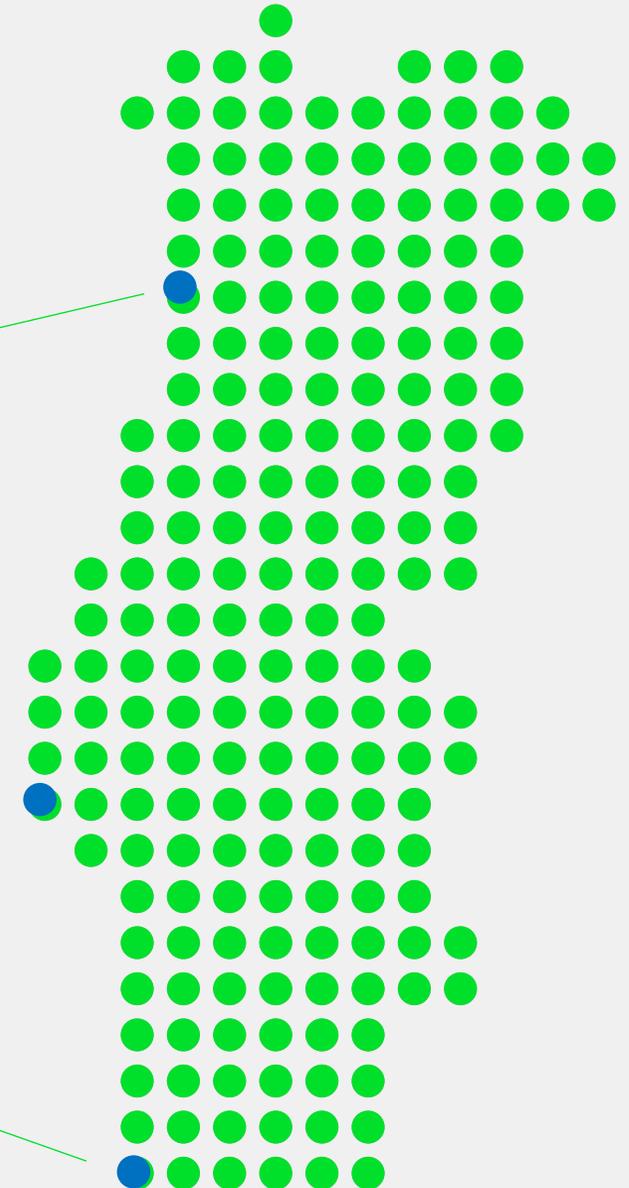
- Porto



- Lisbon



- Algarve



THE BIG IBERIAN BLACKOUT

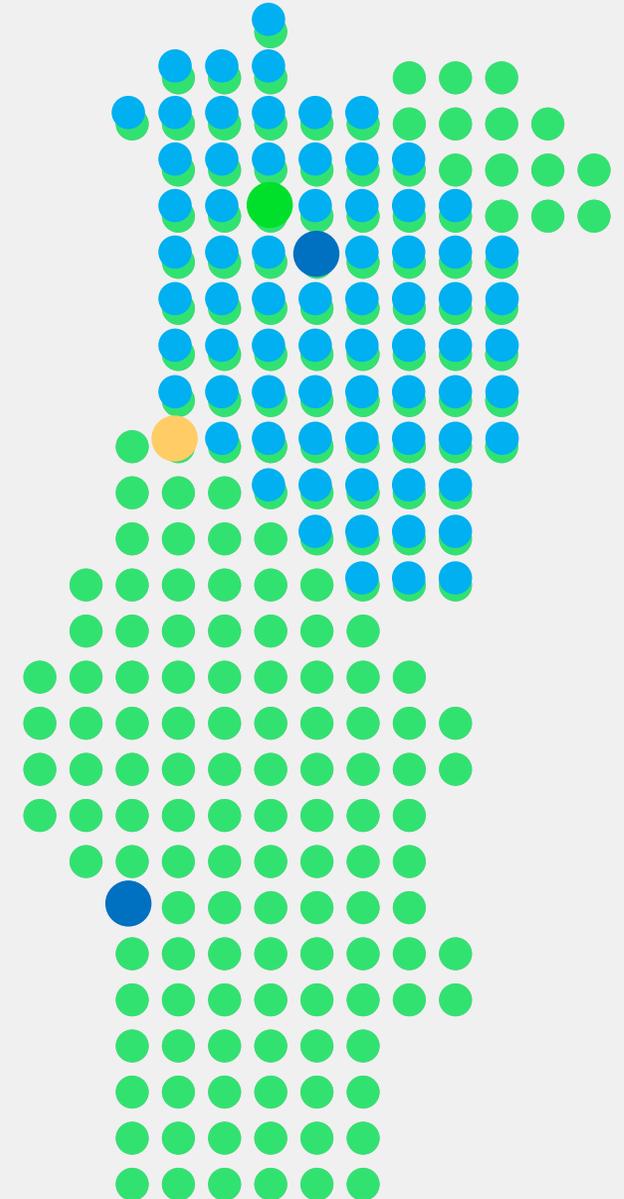
28 of April 2025



Portugal Profile

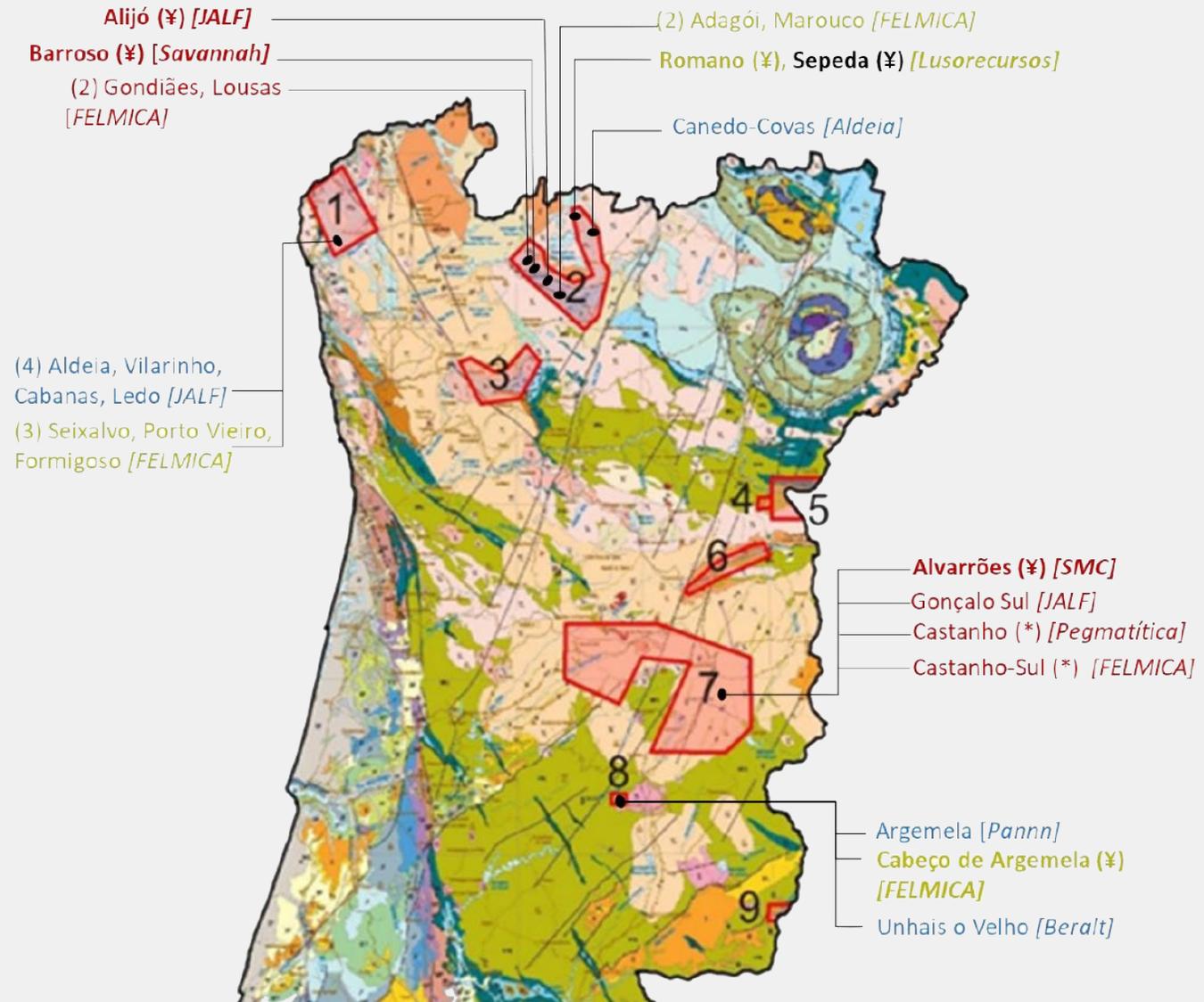
Key Battery Sector Facts

- One of the highest shares of renewable electricity in Europe, often exceeding 60% renewable generation.
- 9th Largest Lithium Spodumene reserves Globally
- Home to major cell production investments, including CALB's gigafactory.
- Significant investments in lithium refining and battery recycling.



Portuguese Lithium Reserves – Strategic Highlights

- Portugal holds the 9th largest lithium Spodumene reserves globally
- Reserves are primarily located in hard rock pegmatites (spodumene-rich)
- Portugal's reserves are estimated at ~60,000 tons of lithium content
- Seen as critical to European autonomy in battery raw materials, aligned with EU Critical Raw Materials Act
- Several projects aim to link mining to refining and cell production



CRMA strategic projects in Portugal

4

EU-designated Strategic Projects under the CRMA



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Barroso Lithium Project
Hard-rock lithium mine
(spodumene).



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Romano Lithium Project
Hard-rock lithium petalite
deposit.



Lifthium

LIFTHIUM – Lift One
Lithium refinery

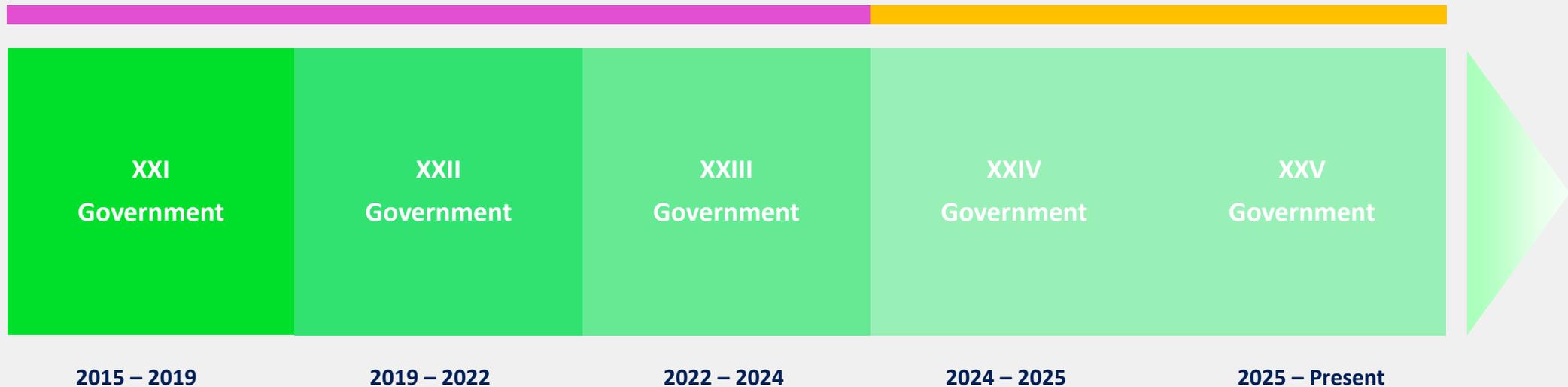


SOMINCOR
Sociedade Mineira de Neves-Corvo, S.A.
a subsidiary of **lundin mining**

Neves-Corvo
Copper and zinc mine
expansion

Political environment

- Lithium mining projects in Portugal have received consistent institutional support over the years, regardless of government cycles or political orientations.



Portugal framework

Public acceptance

Covas do Barroso – Savannah Resources

- Total area: 29.58 km²
- Population: 191 inhabitants (2021).
- Population density: ≈ 6.5 inhabitants/km².

- Direct investment of 415 M€
- ≈ 300 direct jobs and $\approx 3,000$ indirect jobs



Documentary

Europe's Lithium Paradox

Released in 2025"

Expert commentary by Peter Tom Jones

Runtime of 1h

Examines Europe's lithium dependency and lack of active mines

Explores whether the EU can establish responsible lithium extraction



Supply chain unlocked by Mining

≈ **2.5%** Portugal GDP



€785 million Investment

2 Refining Projects

- **€492 millions Investment**
- Lithium hydroxide plants

1 Cathode manufacturer

- **€2.9 billion Investment**
- lithium-nickel-manganese oxide (LNMO) cathode material

2 Gigafactories

- **> €2.8 billion Investment**
- Cell and battery production

1 Battery Recycling Facility

- **> €15 millions Investment**
- Black mass
- Hydrometallurgy



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AURORA LITHIUM



Lifthium

CALB



RAW MATERIAL EXTRACTION

REFINERY

BATTERY CELL

60 Cluster associated entities

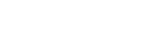
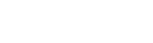
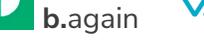
+2 To enter in 2025



RECYCLING

END USE

BATTERY PACK

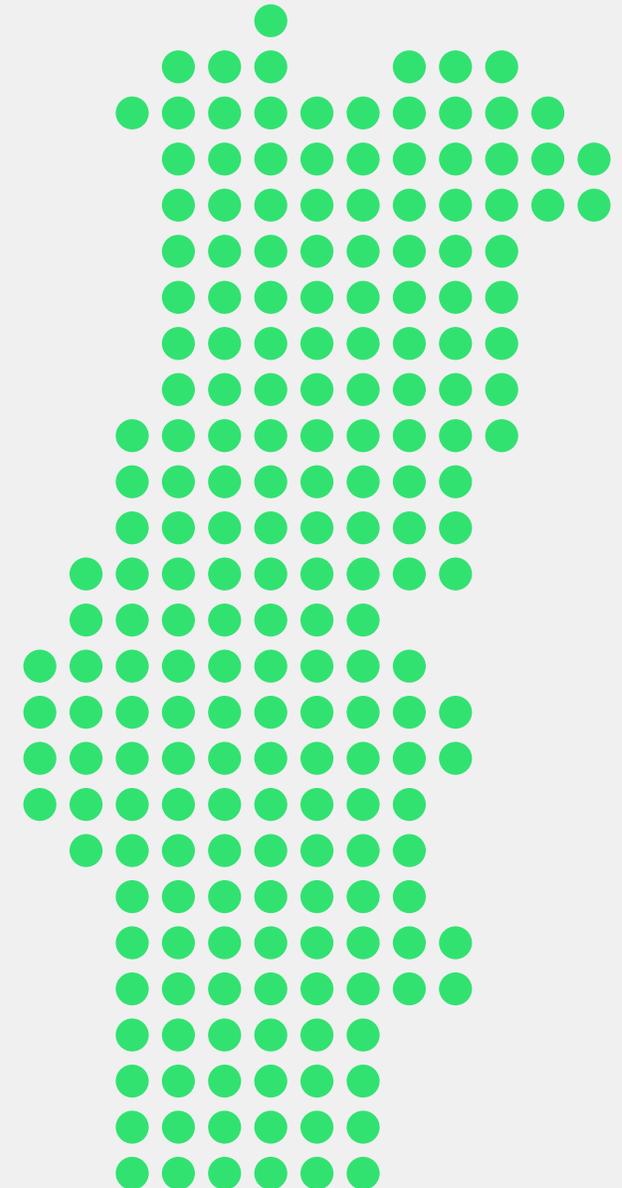


INNOVATION ECOSYSTEM



Battery Cluster

- Non-profit private organization
- Serves as a catalyst for coordinated action in the battery sector, ensuring that Portuguese stakeholders can collectively compete and collaborate
- from raw material extraction, through cell and battery manufacturing, to end-of-life recycling



Key Cluster Initiatives

1



Strategic Innovation Agenda

Identification of new battery technologies

2



Cross-sector collaboration

integrate all links in the value chain, from extraction to recycling

3



Discussion Forums

Lead the working groups on batteries at the national level

4



Startup Program

Focus on disruptive solutions in energy storage.

5



Digital Battery Passport

Transparency and traceability during the life cycle of batteries

6



Projects

promotion of new initiatives and consortia for projects in the area of batteries

Projects



47 Partners



100.760.000,00



Enhancement and positioning of the national battery industry in the global market.



6 Partners



449.097,25

Strengthen the resilience and sustainability of energy systems in the EU and Ukraine, with renewable energy.



6 Partners



2.000.000,00

Help cleantech and industrial SMEs deploy and scale Net0 technologies

IMPULSIONE A INOVAÇÃO ENERGÉTICA POSITIVA QUE QUER VER EM PORTUGAL E NO MUNDO.

A NGS Tech Platform conecta inovadores e líderes no sector das baterias.
Juntos faremos mais e melhor.

NGS⁺

New Generation Storage
Tech Platform



Componentes e
matérias-primas



Baterias



Utilização e
aplicações



Reciclagem



Entidades



New
Generation
Storage



Battery Launchpad Portugal



-  Local access with technical and financial support
-  Highly specialized mentoring in the battery sector
-  Direct connection to the national and European ecosystem
-  Supporting internationalization and growth
-  Opportunity to participate in projects and attract investment



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Lifthium

CALB



RAW MATERIAL EXTRACTION

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Battery Cluster Portugal

RECYCLING

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END USE



INNOVATION ECOSYSTEM



60 Cluster associated entities

+2 To enter in 2025

