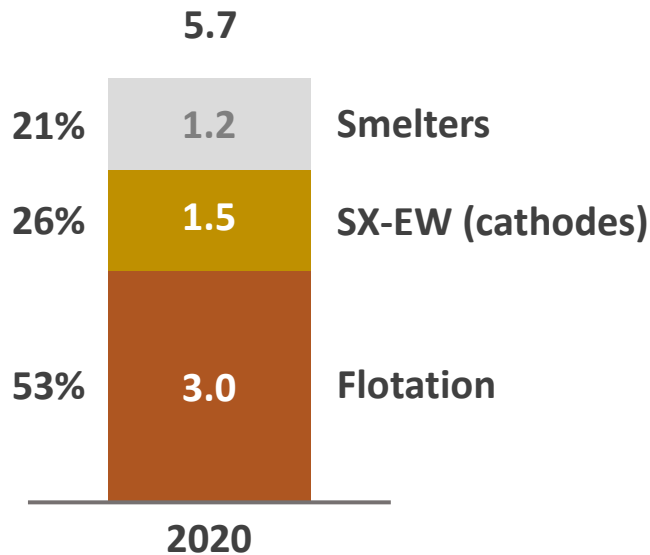


Copper production from copper oxide deposits in Chile

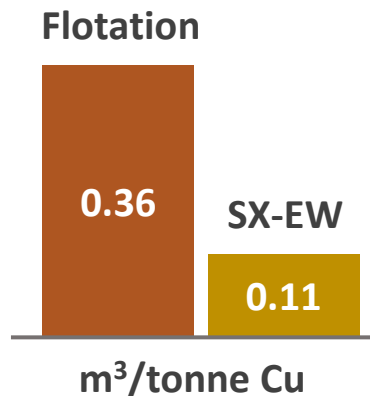
Copper production in Chile (Mt)



- Copper production from oxides in Chile has been in a steady decline for the last 20 years.
- More copper is discovered at depths as copper oxide reserves closer to the surface are depleted.
- Copper oxide discoveries will become rare in the future and by 2029 copper production from this sources in Chile is expected to fall from 26% to 11.6%.
- Currently in Chile there are 34 SX-EW plants operating, but only 20 produce more than 10 kt Cu per year.
- Only 10 new projects contemplate production from copper oxides.

Benefits of production from copper oxide

Water use for copper production in Chile



- Copper production from oxides in Chile **uses 3 times less water** than conventional flotation.
- The SX-EW process allows for copper cathode production **without the smelting process**
- **The environmental footprint of SX-EW plants is much smaller than conventional flotation**
- Transportation of the finished product (cathodes) is easier and poses much lower environmental risk than concentrates
- In Chile the SX-EW plants consume only 13% of energy consumed by the mining industry (fuel and electricity)
- **Tailing Storage Facilities are not required**

Two tales of SX-EW plants in Chile

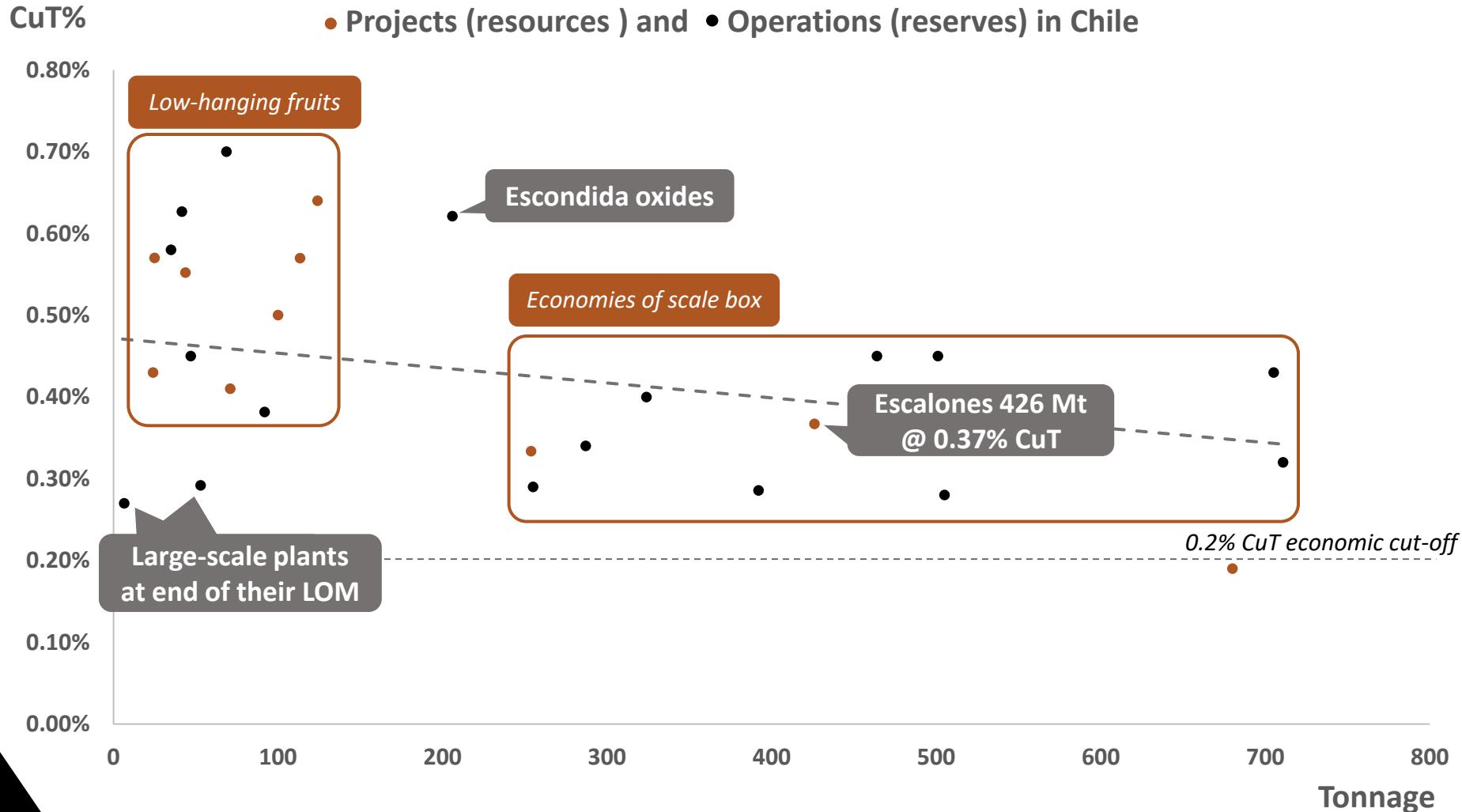
High-tonnage, low-grade

- Large scale SX-EW plants in Chile **operate on copper porphyry mega-deposits**
- **High tonnage (250 Mt+)** allows for long life of mine and **low operating costs**
- Major mining companies operate such plants in Chile: **CODELCO, BHP, Anglo American and Antofagasta Minerals**
- The **biggest SX-EW plant** in Chile (Escondida Oxides) **produces over 280 kt** of copper cathodes per year
- **Escalones has potential to join this group**

Low-tonnage, high-grade

- Low-tonnage deposits **require high copper grades** to become economic
- They rely on **clusters of small high-grade deposits**
- Easy and **cheap to find and develop**, but operating costs are high and margins Slim
- **Susceptible to copper price fluctuations**
- **Short life of mines**
- Often requires **third-party material purchases** to fill design capacities

Copper oxide operations and projects in Chile



Escalones stands out among new copper oxide projects in Chile

