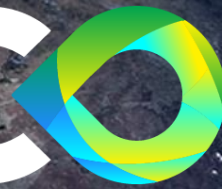


VECCO





MINE & REFINE



**ELECTROLYTE
MANUFACTURING**



**BATTERY
HARDWARE**



**RENEWABLE
ENERGY STORAGE**

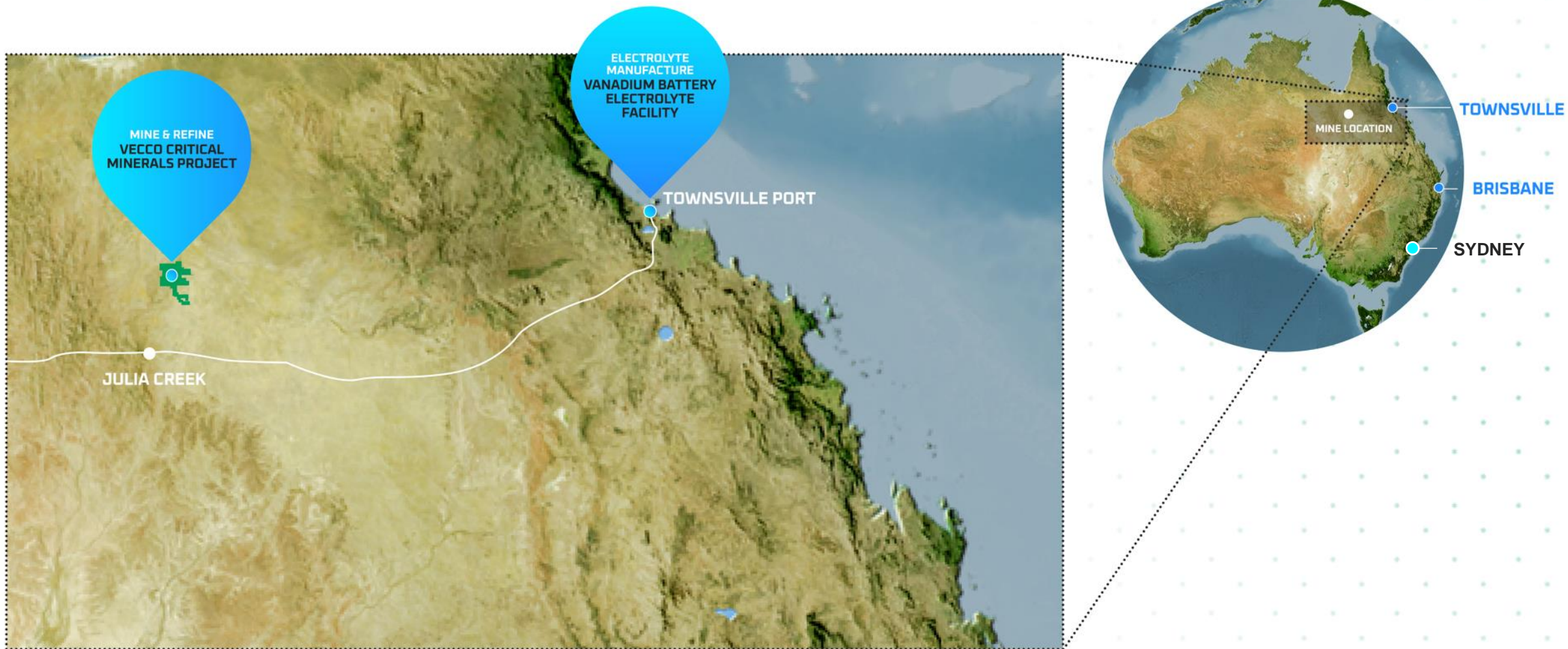


VECCO



CUSTOMER

MINE LOCATION



AUSTRALIAN SUPPLY CHAIN

ENERGEX BATTERY PROJECT

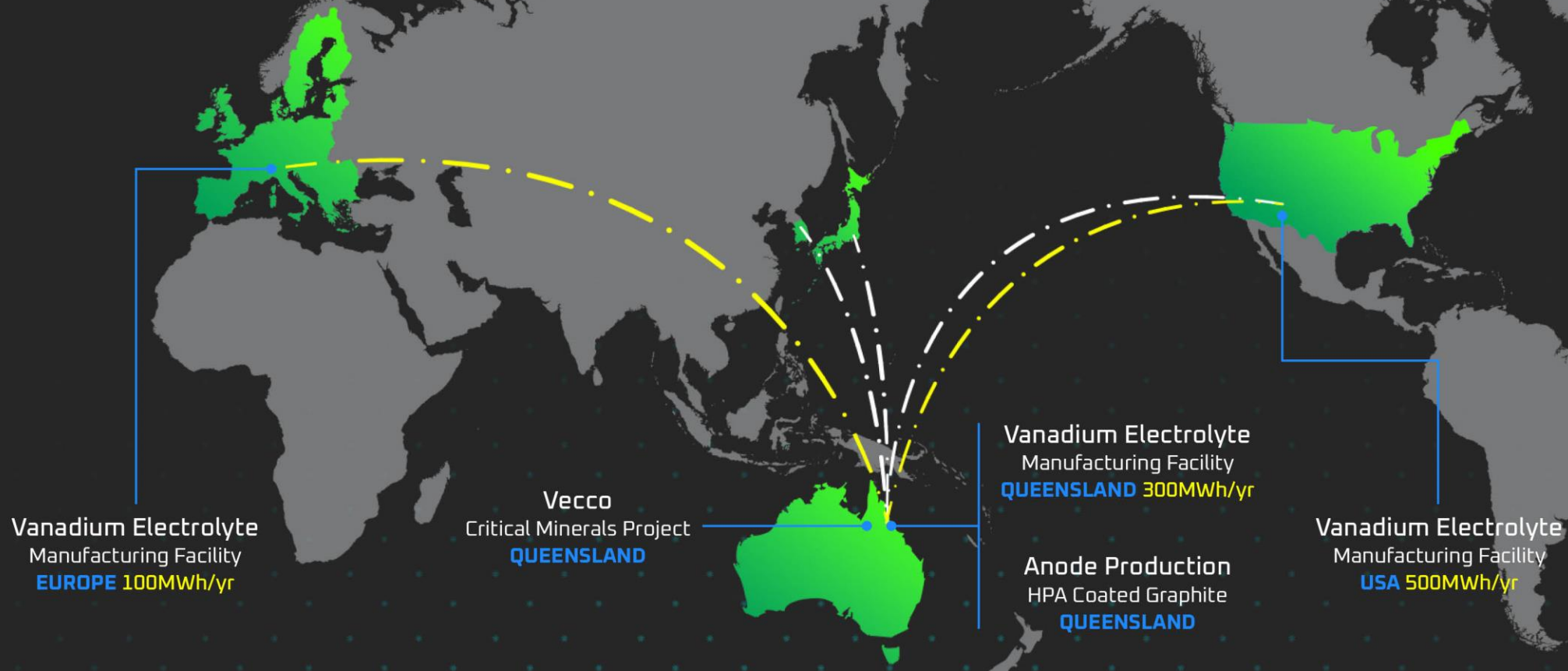
Energy Queensland engaged Vecco in partnership with Sumitomo Electric to supply a vanadium flow battery, with Vecco produced electrolyte.

- ◆ First collaborative project with QLD Government, Sumitomo Electric & Vecco
- ◆ First step in the vanadium battery supply chain for QLD



GLOBAL MANUFACTURING AND OFFTAKE STRATEGY

Vanadium ● — ●
HPA ● — ●



VECCO MANUFACTURING

TOWNSVILLE VANADIUM ELECTROLYTE FACILITY

35 MWh (2ML)
PRODUCTION / ANNUM

Stage 1 proven electrolyte quality
and operational techniques

Locally produced electrolyte
enables local battery projects







VECCO 

COMMERCIAL SCALE VANADIUM TOWNSVILLE (QLD) SITE

\$75M QLD Government
Common User Facility

Townsville

Port

Approx
700km
to mine

VECCO MANUFACTURING

TEXAS VANADIUM ELECTROLYTE FACILITY

100 MWh (6ML)
PRODUCTION / ANNUM

Stage 1 Texas facility to support USA
battery projects

Locally produced electrolyte
enables local battery projects

Stage 1 Operations to commence in 2026
with scale up to 500MWh by 2028



THE SUPPLY CHAIN OPPORTUNITY

Local does matter – it's more than a catch cry

The Customer is the middle of the Supply Chain

Real Opportunity must be win-win (win-win-win-win?)

LOCAL DOES MATTER

CAPABILITY BAKED IN

RECYCLING INDUSTRY
IN COUNTRY SPARES
LOCAL TECHNICAL SKILLS
COST DECOUPLED



PRODUCT SUPPORT
COST – CAPEX, OPEX, LCOS
TRANSFER OF RISK

LOCAL DOES MATTER

SECONDARY BENEFITS ARE THE ICING ON TOP



THE CUSTOMER IS THE MIDDLE

OF THE SUPPLY CHAIN, NOT OUTSIDE IT

THE CUSTOMER IS THE MIDDLE

THE SUPPLY CHAIN

CUSTOMER



CUSTOMER FOCUS?



THE CUSTOMER IS THE MIDDLE

THE REAL CUSTOMER FOCUS?

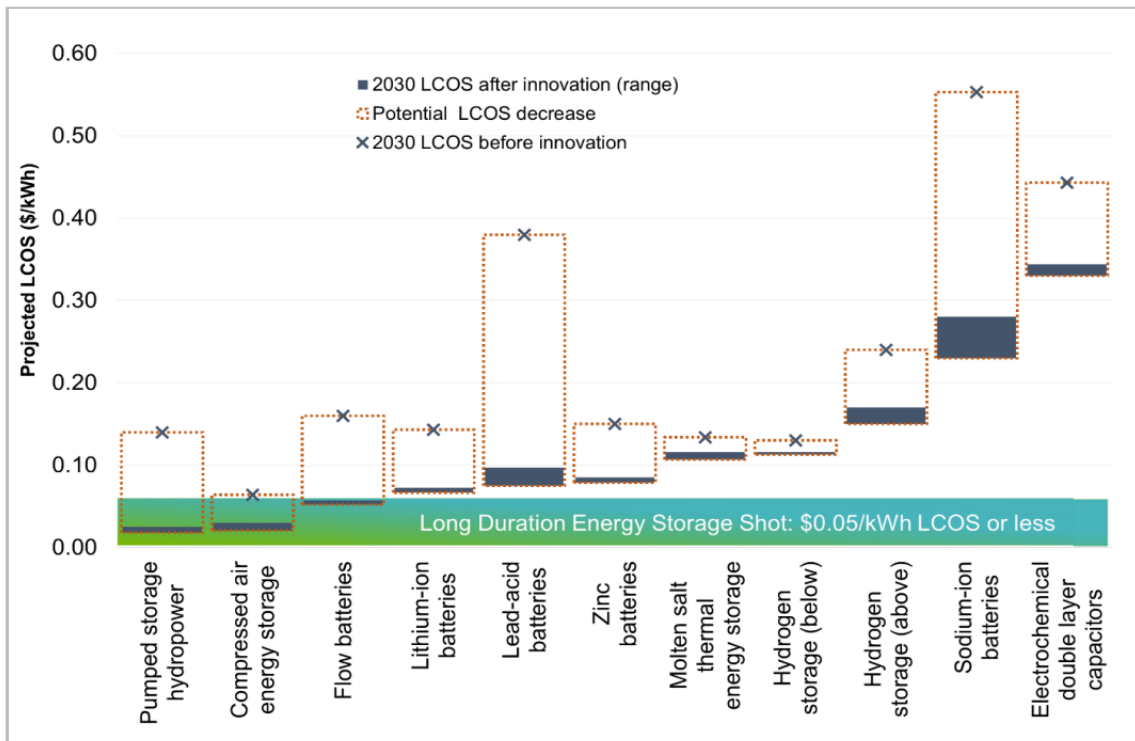
CAPEX

THE JOURNEY

Department of Energy | August 2024

Innovation Reduces Long Duration Storage Costs

Figure ES1 shows the range of projected change in LCOS after implementing the top 10% of LCOS-reducing innovation portfolios for each LDES technology, relative to DOE's Long Duration Storage Shot target (\$0.05/kWh LCOS or less).



Potentially achieve

\$0.06/kWh

LCOS

with

\$330M

investments

over

10 YEARS

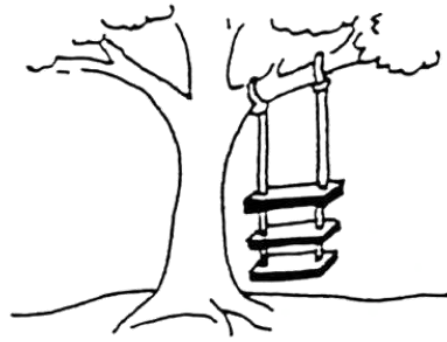
Values are rounded averages

Figure ES1. For long duration energy storage, the range of impact on the 2030 LCOS after implementing the top 10% of LCOS-reducing innovations. Above and below ground hydrogen storage are shown separately. LCOS: levelized cost of storage.

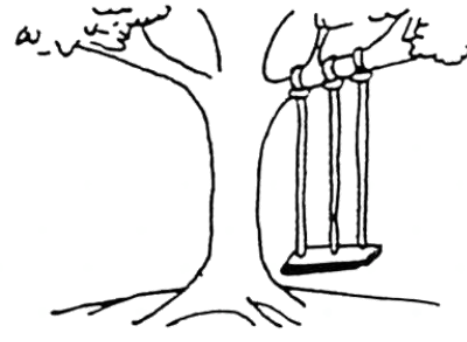
REAL OPPORTUNITY MUST BE WIN-WIN

IT CAN BE WIN-WIN-WIN-WIN

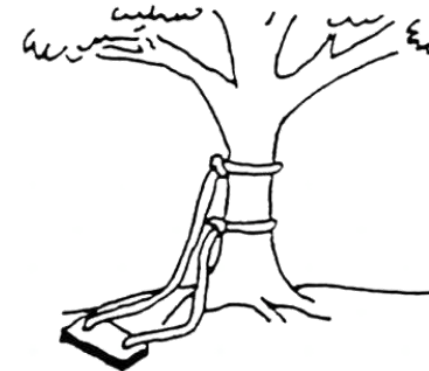
HOW HARD IS IT TO BUILD A SWING...



As proposed by the project sponsors



As specified in the project request



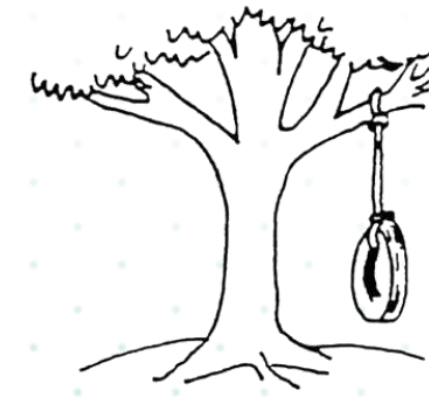
As designed by the senior analyst



As produced by the programmers



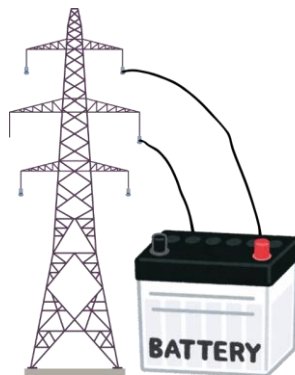
As installed at the user's site



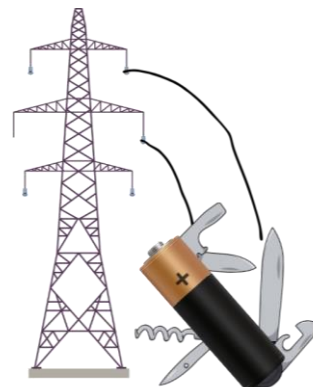
What the user wanted

Tree Swing graphic by S Hegh 1993 - from Businessballs.com/treeswing.htm 2013

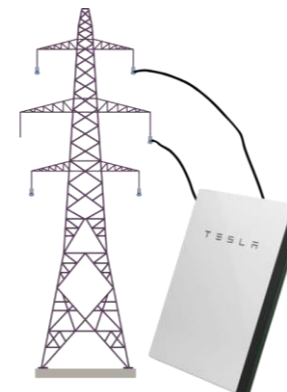
WHAT ABOUT A BATTERY?



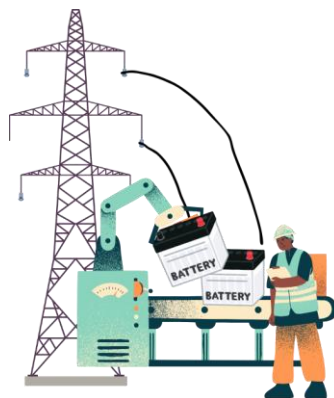
As proposed in the EOI



As described by Sales



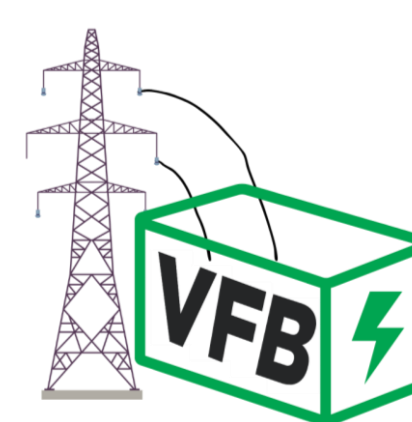
What project finance wanted



What the Govt expected



What was Installed



What the Customer needed

THE OPPORTUNITY

FOCUS

Coordination

throughout the supply chain

Long term thinking

the future comes quickly

Suitable technology

real world tested +
tangible pathways for improvement

BENEFITS

Customers

cost + ongoing support

Energy consumers

cost + speed

Local communities

jobs + investment

Government

new industry, CO2 targets

THE SUPPLY CHAIN OPPORTUNITY

If you make **Local** matter

and get the **Customer** in focus

you have real **Opportunity**.

VECCO

