South Australian Tesla project

This project is known as the Hornsdale Power Reserve located at **Jamestown**,

above Adelaide. **Neoen** is the company operating the plant.

The battery complex is linked to a wind farm so that renewable energy is used to

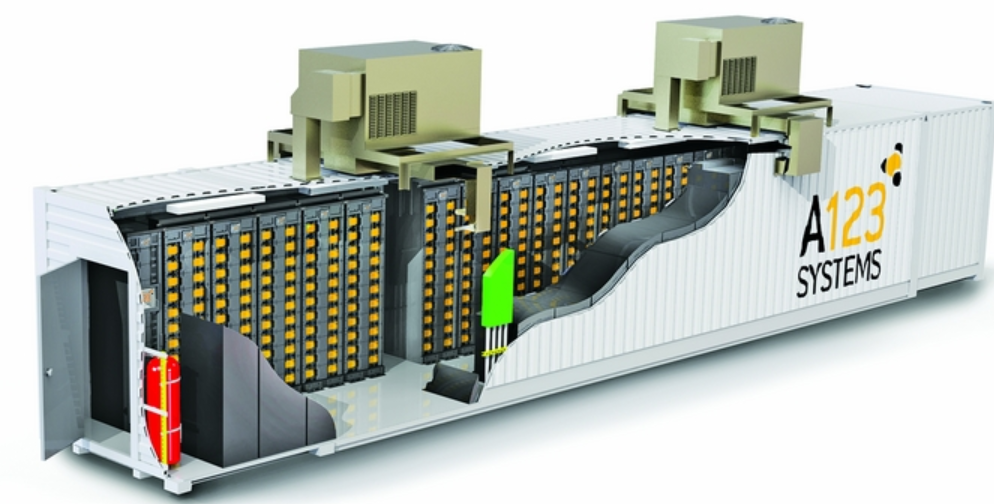
charge the batteries.

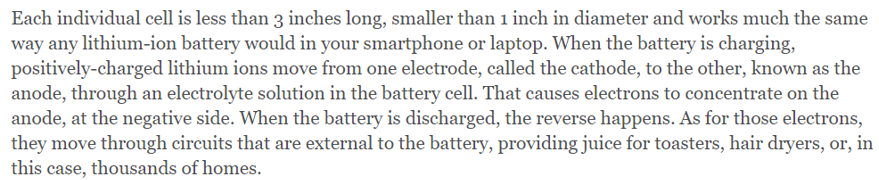
**Size**: 100 MW: Capable of powering 50000 homes for over an hour.



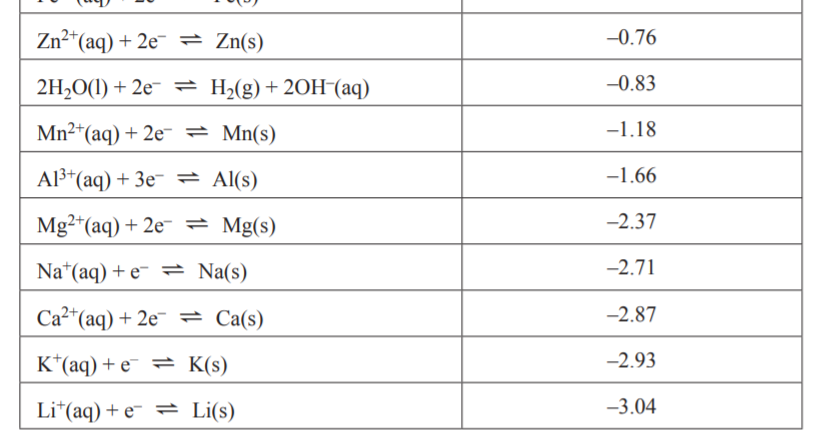


It is NOT 1 big battery. It is thousands of small batteries like the ones in your phone all connected together. This is shown in the cross-section diagram below.





Lithium-ion batteries have been prominent for several years now.

**Why lithium?** As the lowest metal on the electrochemical series it offers the highest potential voltages. It is also the lightest metal of all.

Battery Chemistry: Very complex – require conducting polymers as lithium reacts violently with aqueous solutions. Electrode materials are also very high tech.

