



Renewable Energy

Case Study: BESS Seals

In an era where clean energy is imperative, Battery Energy Storage Systems (BESS) technology has become a cornerstone for capturing, storing and releasing energy.

These systems support the grid, provide backup power and store energy from renewable energy sources like solar and wind. The shift towards renewable energy is essential for a sustainable future and advances in BESS technology is crucial in making this transition possible.

The Opportunity & Challenge

A prominent BESS manufacturer approached Silicone Engineering with a critical challenge: to provide a robust silicone sealing solution to seal and protect the BESS units from water ingress and environmental damage.

As the storage systems are commonly exposed to environmental pressures, the sealing criteria must meet stringent requirements to mitigate system failure in the event of leakage or seal failure.





The Solution: **kSil[®]** GP40

Our engineering team collaborated closely with the client to understand the unique requirements of their BESS design and expected performance levels. After careful consideration, our recommended solution was kSil[®] GP40 solid silicone sheeting, a general purpose 40 Shore A silicone which provides robust but flexible sealing performance in extreme conditions. The sheeting was then customised into gaskets through precise die-cutting by the customer for seamless integration into the units.

Implementation and Results:

The kSil[®] GP40 seals were efficiently integrated into the BESS units, providing a high performance seal from water, dust, and environmental factors. This not only safeguarded the battery systems but also contributed to the overall efficiency of the energy storage system. The successful implementation showcased the adapt-ability and effectiveness of Silicone Engineering's silicone solutions in critical energy applications.

Click the links for more information on kSil[®] solid silicone sheeting and silicone applications in the broader energy sector. <https://silicone.co.uk/industries/energy/>

