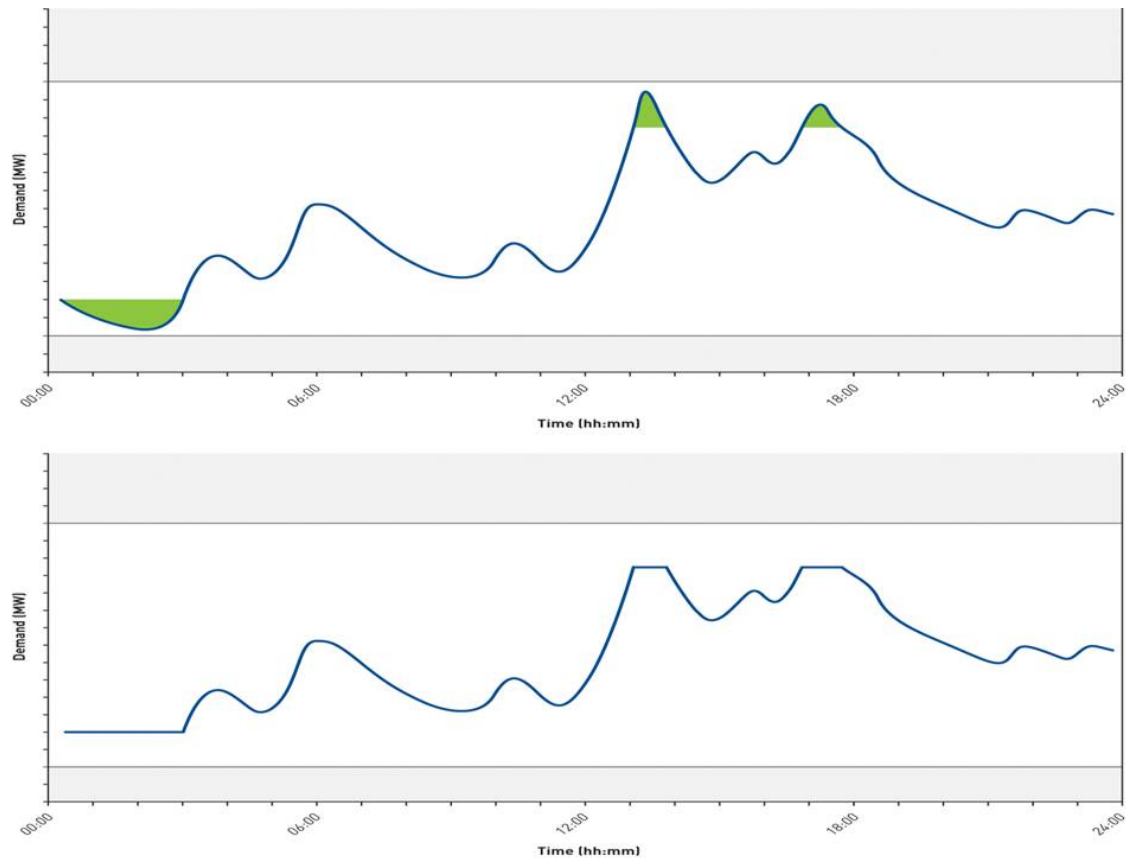


Network Demand Management

A key focus of the NINES project is to deliver a low carbon, secure and affordable source of energy supply in the Shetland Islands. One of the ways that this will be achieved is by seeking sustainable ways to replace Lerwick Power Station, which is almost at the end of its natural life. Improving the management of energy demand can help the network to become more efficient; this can help to reduce the size and cost of a new power station.



Graph A shows an example of a typical day's energy demand in the Shetlands. The areas marked in green show times when energy demand peaks or troughs. These extreme highs and lows in demand can affect the network. When demand is too low, the export of renewable energy needs to be curbed.

On the other hand, sporadic bursts of high energy demand mean that the future Lerwick Power Station would need to be big enough to accommodate this demand, even though it only occurs for a few hours of each day.

Graph B shows that changing the ways in which we store and use energy can help us avoid these peaks and troughs, improving the efficiency, quality and stability of our networks, and reducing the size of the new power station in Lerwick.