

The diagram illustrates the flow of energy through three stages, represented by arrows of decreasing width. The first arrow, labeled 'Thermal energy (Q)', is the widest and darkest red. It transitions into a second arrow labeled 'Exergy (X)', which is narrower and a lighter shade of red. This second arrow then splits into two paths: a top path that continues as a thin, light red arrow labeled 'Useful work (U)', and a bottom path that curves downwards into a large, dark red arrow pointing away from the main flow, labeled 'Waste heat'. The label 'Residential usage' is placed just before this downward curve. The overall flow is from left to right, with the downward arrow indicating a loss from the system.

**Thermal energy
(Q)**

**Exergy
(X)**

Useful work (U)

Residential usage

Waste heat