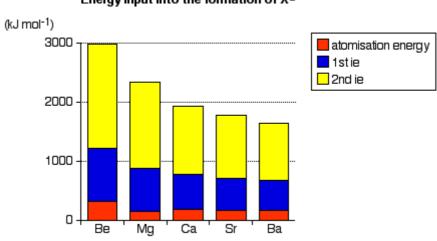
## Chemguide - questions

## **GROUP 2: REACTIONS WITH WATER**

- 1. a) How does the reactivity of the metal with cold water vary from beryllium to barium?
  - b) Write the equation for the reaction of strontium with cold water.
  - c) Write the equation for the reaction of magnesium with steam.
  - d) Describe what you would see if you dropped some pieces of calcium into cold water.
- 2. The bar chart shows the combined effect of atomisation energy and first and second ionisation energies of the Group 2 elements.



Energy input into the formation of X2+

- a) Write the equations for the changes corresponding to
  - (i) the atomisation energy of calcium;
  - (ii) the first ionisation energy of calcium;
  - (iii) the second ionisation energy of calcium.
- b) Explain the relationship between this bar chart and the way the reactivity of the elements changes as you go down the group.