Commercial sector: energy consuming device mix

Buildings require energy for various services or energy needs, such as cooling and space heating or lighting. Some devices which supply these needs are more efficient or use different fuels (or both). This lever allows the user to shift the mix of devices in the building sector to a mixture of devices which are more efficient and/or use different fuels or both.

Level 1

Coal is still used mainly for space heating and water heating. Cooling demands are met with electrical central cooling systems.

Level 2

In this level, an optimum mix of more efficient devices is obtained by 2050. Cooling devices all become new central cooling and heat pumps both of which are more efficient (about 10% more efficient). Space heating shares are 60/40 of efficient electric and heat pump.

Water heating is 20% efficient electrical boilers and 80% heat pumps. General other appliances are 90% electrical and remaining is 10% LPG.

Level 3

This Level brings forward the device mix by 10 years – so the Level 2 tech mix is reached by 2040 and not 2050.

Level 4

This level brings forward the optimal mix another 10 years, so the mix of devices as in Level 2 is reached by 2030.

Interactions

This lever applies to existing building, but it is assumed that new buildings will be ahead by one level. For instance , if this lever is set to Level 3, then existing buildings will have the device mix by 2040, while new buildings will have this mix by 2030. Level 4 however means both new and existing buildings will have the optimum mix by 2030.