

MAIN ENERGY CONSUMING SECTORS

Power generation is the main consumer of energy, followed by the industrial, transportation and the residential or commercial sector. For the power generation and industrial sectors, the re-use use of waste heat at the generator has a lot of potential in terms of converting the waste heat to electricity or heat for district heating and other uses. Electric vehicles, especially micro hybrid with stop start technology, are a promising option to meet energy consumption targets for transportation. Conventional vehicles with an internal combustion engine are more energy efficient if they have camless valves, continuous variable transmissions, cylinder deactivation and turbochargers, to just name a few.

In the residential and commercial sector, heating, cooling and lighting are major energy users. Energy efficiency within the sector can be improved through the use, for example, of fluorescent or LED lighting, sensors to reduce unnecessary use of lighting and other energy-demanding equipment such as air conditioning units, insulation and efficient windows. In the business sector, there is increasing energy demand from data centres. Domestically, electrical appliances are using more energy as more homeowners buy more of these goods.

Global energy efficiency market

The US is the largest energy consumer in the world. Hence it is known as potentially the "Saudi Arabia" of energy efficiency, due to the potential size of the market and effects it can have. China and India are large, growing energy consumers and thus have a lot of potential for energy efficiency projects.

The payback time for some energy efficient technologies can be less than two years, and much less than renewable energy technologies. In California it is estimated that in the first six months of 2001 the state's energy efficiency measures saved up to USD 20 billion in projected costs for summertime rolling blackouts and USD 660 million in spot market electricity purchases.

Unfortunately, the sector has not attracted the same interest in the public eye as renewable energy projects. Due to confusion over payback times, lack of upfront capital and in the case of rented accommodation, there is no incentive for the tenant or landlord to invest in the technology.

Large multinational companies such as GE, Schneider Electric and Siemens are major manufacturers of energy efficiency products on the market. Smaller start-up companies are also developing products, many of which have been or will be acquired by bigger players to enter the market on a large scale.

Most countries have energy labelling for products and minimum performance standards, but very few have specific energy efficiency legislation and subsidies for the technology.

Source: <http://www.articlesbase.com/communication-articles/main-energy-consuming-sectors-7096261.html>