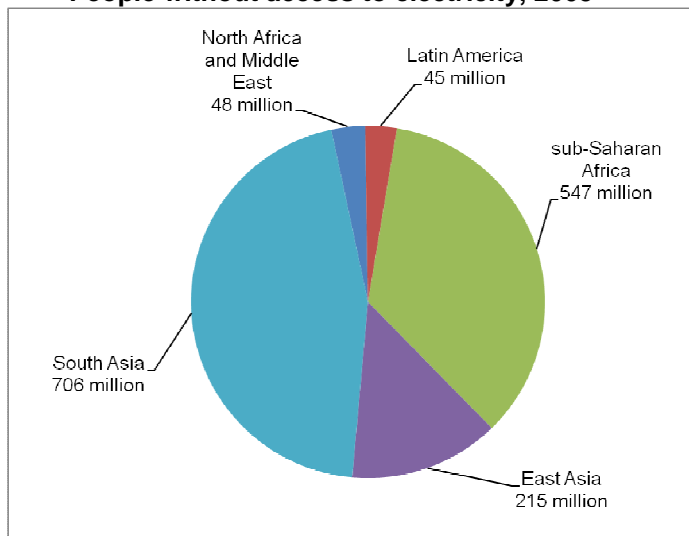




## Demand and Consumption

- **Fuel use patterns vary among income groups as well as between urban and rural areas.**<sup>1</sup>
- One billion people, located in developed regions, consume over 50% of the world's energy supply. By contrast, the **one billion poorest people use only 4% of the global energy supply.**<sup>2</sup>
- Energy demand and GDP growth are strongly linked.

**People without access to electricity, 2005**



Source: IEA. World Energy Outlook, 2006

- In comparing population growth to the current pace of electrification, **sub-Saharan Africa may be the only region in the world whose population without electricity will increase by 2030.**<sup>3</sup>

## Energy sources<sup>4</sup>

- Coal is the most abundant fossil fuel. Most coal is used within the country of extraction. **China is the world's number one coal consumer** and the second largest oil user.<sup>5</sup>

- More electricity is generated from coal than from any other fuel. In 2002, coal was responsible for 39% of world generation.
- Hydropower's share of electricity generation worldwide was 16% in 2002. The International Energy Agency (IEA) projects that hydro capacity will increase 63% between 2002 and 2030. A constraint on development, however, is the geographical separation between potential supply and demand, where the development of costly infrastructure (long transmission lines, roads, etc.) is needed.
- Around **2.4 billion people rely on traditional biomass for their basic energy needs.**<sup>6</sup>
  - According to the World Bank, the indoor air pollution from **the use of biomass in inefficient stoves causes 1.5 million deaths per year – primarily among young children and mothers.**<sup>7</sup>
  - Currently, growth in renewables is driven by government policy and support schemes (e.g., feed-in tariff support, quotas and tax incentives).
  - Off the grid energy sources such as hydropower, solar photovoltaics, and hybrid solutions offer an alternative where publicly regulated grids cannot reach.<sup>8</sup> However, many renewables are intermittent. **For off-grid customers, batteries can compensate for this, but they are expensive and inefficient.**

## Government policy

- Over the past decade, many African countries decided to reform their power sectors.<sup>9</sup> These major reforms have consisted of structural changes and ownership/management changes, including privatization.<sup>10</sup>
- However, only few of the reforms have generated significant improvement in increasing access for the poor. The few exceptions include Côte d'Ivoire, Cameroon, Malawi, Burkina Faso, Senegal, Zimbabwe, South Africa and Mauritius.<sup>11</sup>
- The government of Kenya has set a target of 25% of electricity generation to come from geothermal by 2020.<sup>12</sup>



## Energy for Development

**More than two billion people lack access to modern energy services, an essential for economic and social development. Today business has the opportunity to expand into new markets, and contribute to providing energy services to poor populations.**

## Notes

<sup>1</sup> World Resources Institute and International Finance Corporation. 2007. *The Next 4 Billion: market size and business strategy at the base of the pyramid*.

<sup>2</sup> WBCSD. 2004. Facts & Trends to 2050.  
<http://www.wbcsd.org/plugins/DocSearch/details.asp?type=DocDet&DocId=NzE1OQ> (13 June 2007)

<sup>3</sup> IEA. World Energy Outlook 2004. Fact sheet: Energy and Development.  
[http://www.iea.org/textbase/papers/2005/weoenergydevel\\_fact.pdf](http://www.iea.org/textbase/papers/2005/weoenergydevel_fact.pdf)

<sup>4</sup> Unless otherwise noted, facts for this section are taken from WBCSD (2006). *Powering a Sustainable Future: An agenda for concerted action*.

<sup>5</sup> The Economist. *Pocket World in Figures*. 2007 Edition.

<sup>6</sup> World Bank. 2007. *Atlas of Global Development*.

<sup>7</sup> World Bank. 2007. *Atlas of Global Development*.

<sup>8</sup> World Resources Institute and International Finance Corporation. 2007. *The Next 4 Billion: market size and business strategy at the base of the pyramid*.

<sup>9</sup> United Nations Economic Commission for Africa. 2007. "Energy for Sustainable Development: Policy Options for Africa"

<sup>10</sup> United Nations Economic Commission for Africa. 2007. "Energy for Sustainable Development: Policy Options for Africa"

<sup>11</sup> United Nations Economic Commission for Africa. 2007. "Energy for Sustainable Development: Policy Options for Africa"

<sup>12</sup> United Nations Economic Commission for Africa. 2007. "Energy for Sustainable Development: Policy Options for Africa"