

LaoLinda energy scenarios



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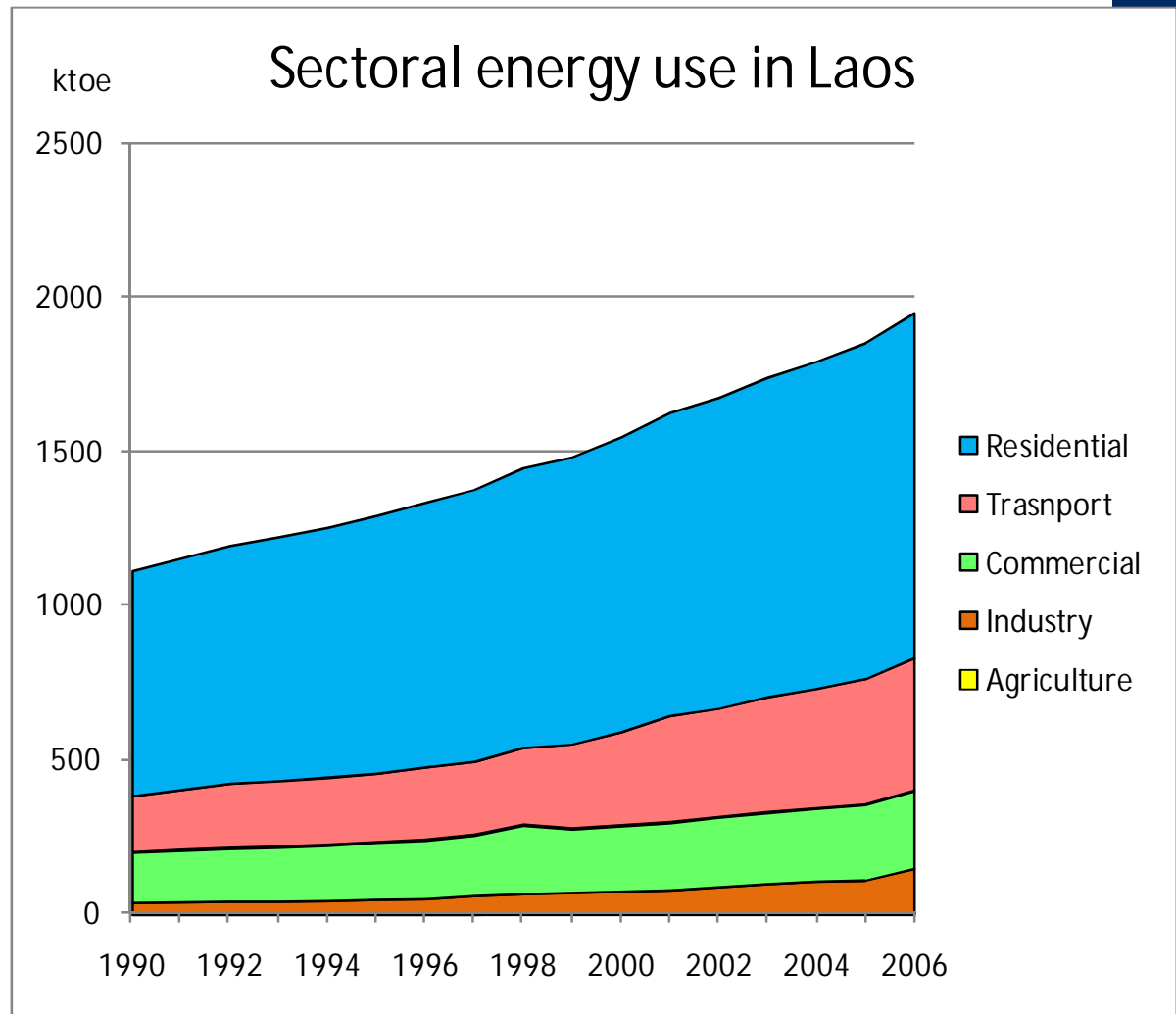


Energy use in Lao PDR

Energy in different sectors of economy

- Industry
- Transport
- Services
- Agriculture
- Household

- Future trends

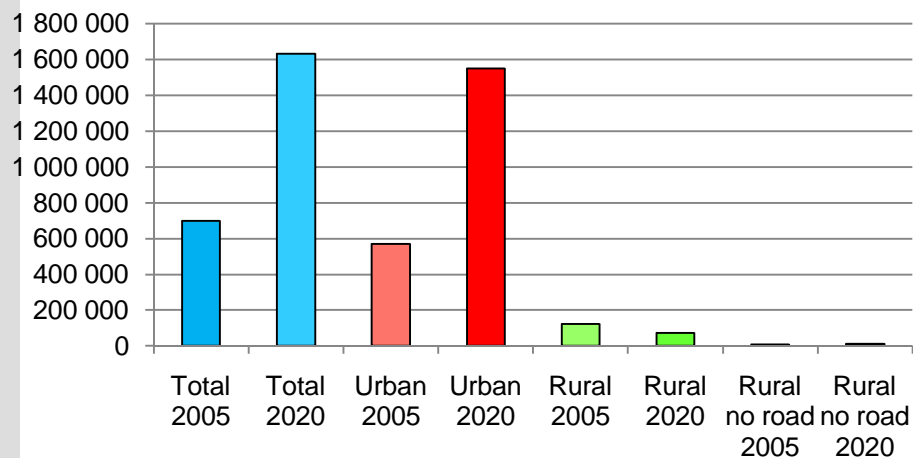


Building scenarios with LaoLinda

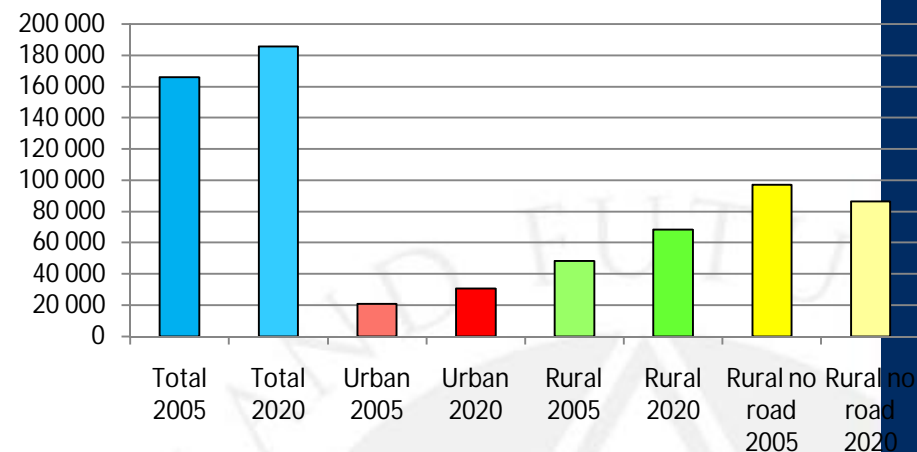
- User can change future trend data by inputting:
 - Growth figures in different sectors
 - Energy intensity data in different sectors, both electricity intensity and fuel intensity
 - Residential energy use data
 - Transport volume and energy intensity data
 - Power plant construction figures
 - Load factor data
 - In the future: inclusion of population model in LaoLinda

Population scenarios, faster urbanisation

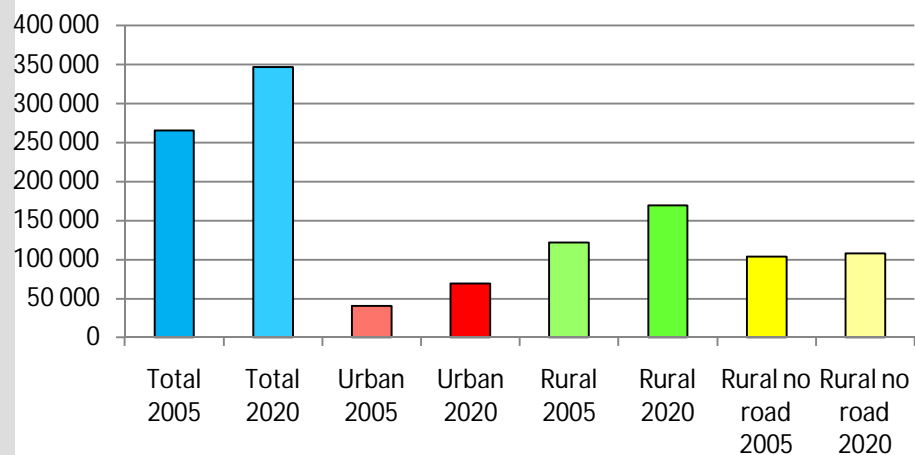
Vientiane capital



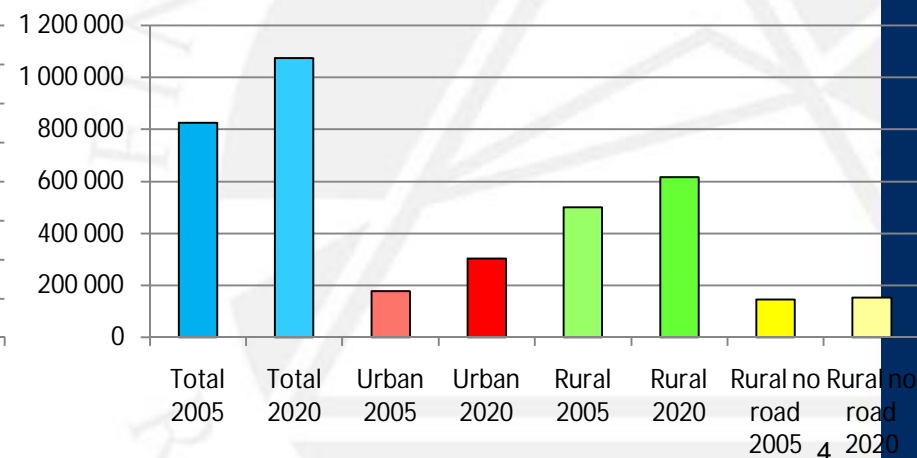
Phongsaly



Oudomxai

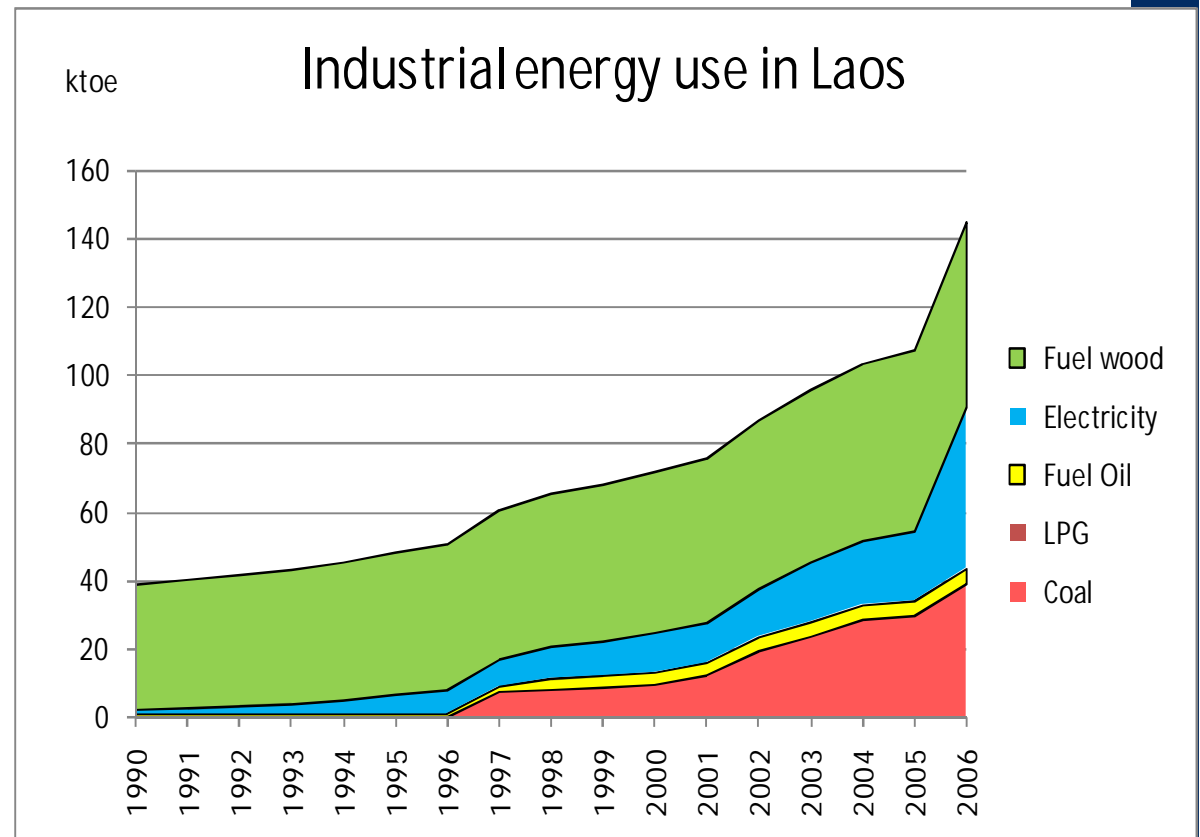


Savannakhet



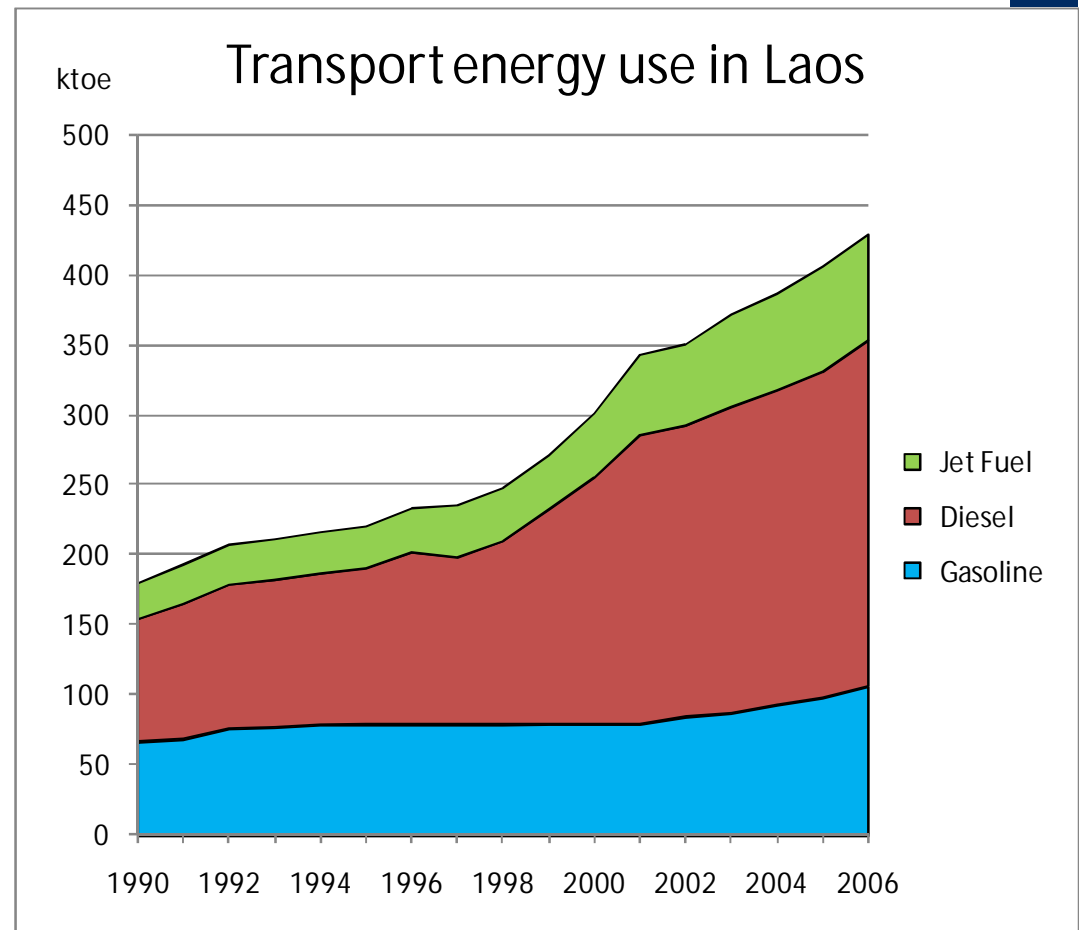
Industrial energy use

- Rapid growth in energy consumption
- What will be the role of mining and metal industry in future?
- Aluminium production?
- How do we estimate future growth?



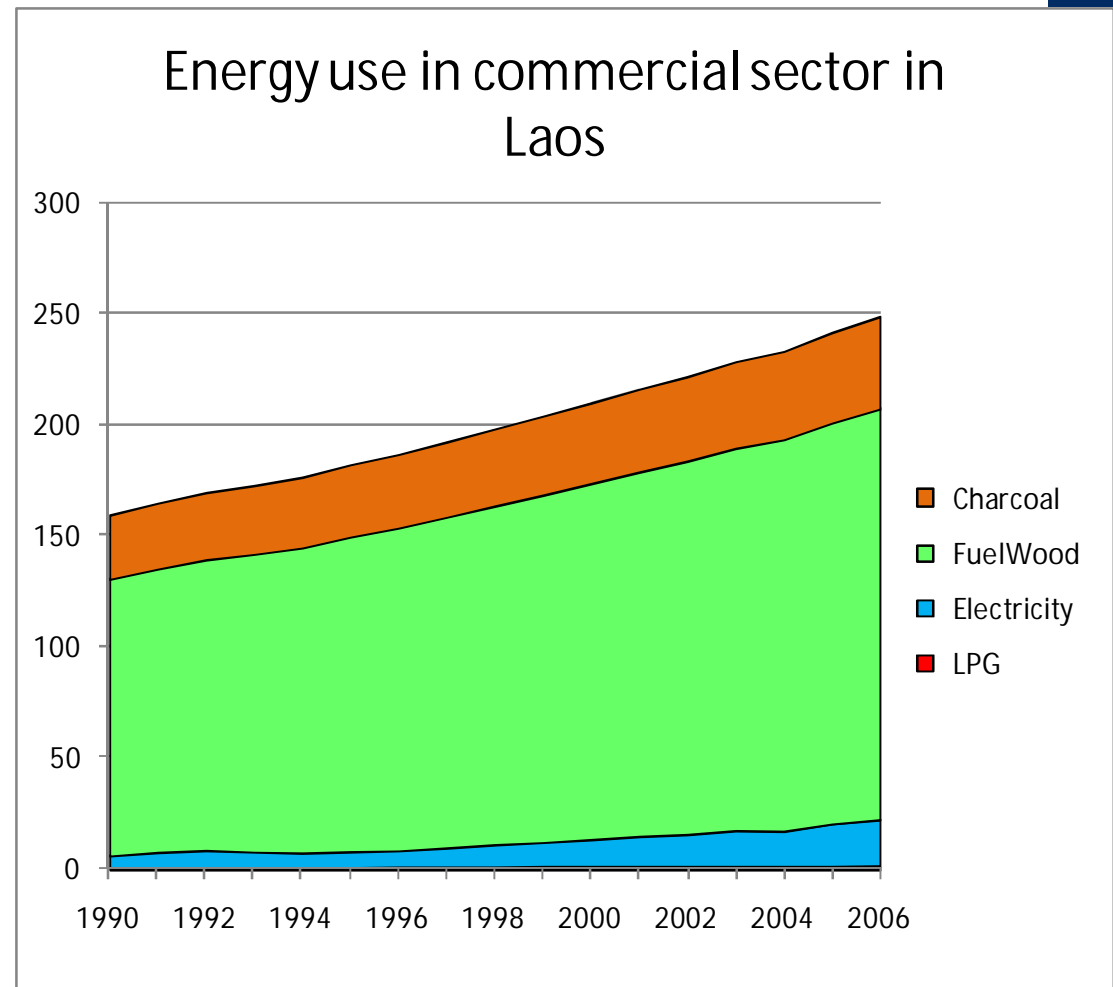
Transport energy use

- Fast growth in number of cars and motorbikes
- Rapid growth in diesel consumption
- Continuous growth requires investments in infrastructure (roads)
- Increasing demand and oil price increase will rapidly increase import bill
- What is the potential for biofuels?



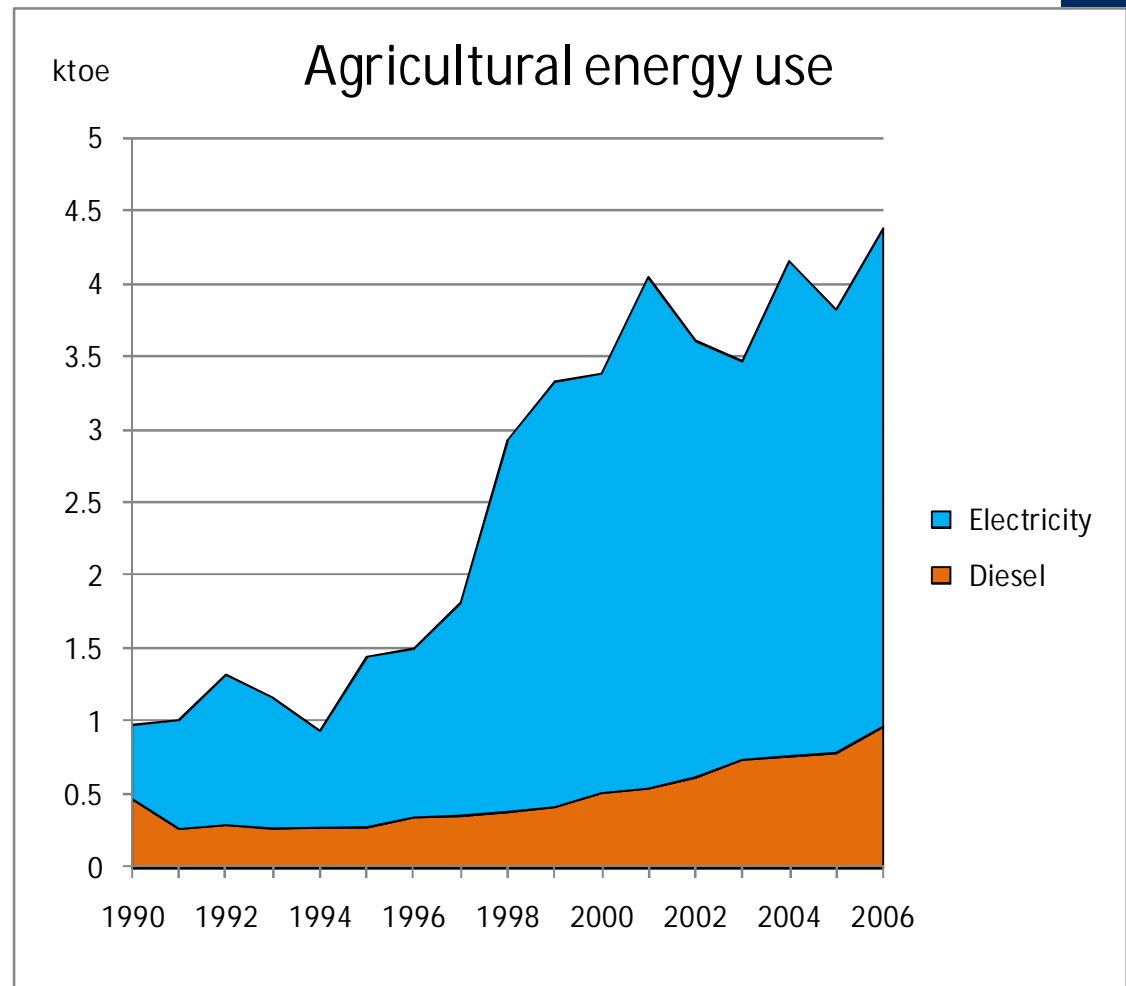
Service sector energy use

- With increasing tourism the energy use will grow, especially electricity
- Fuelwood and charcoal important in food production
- Structural change in economy in the long term will increase service sector energy use



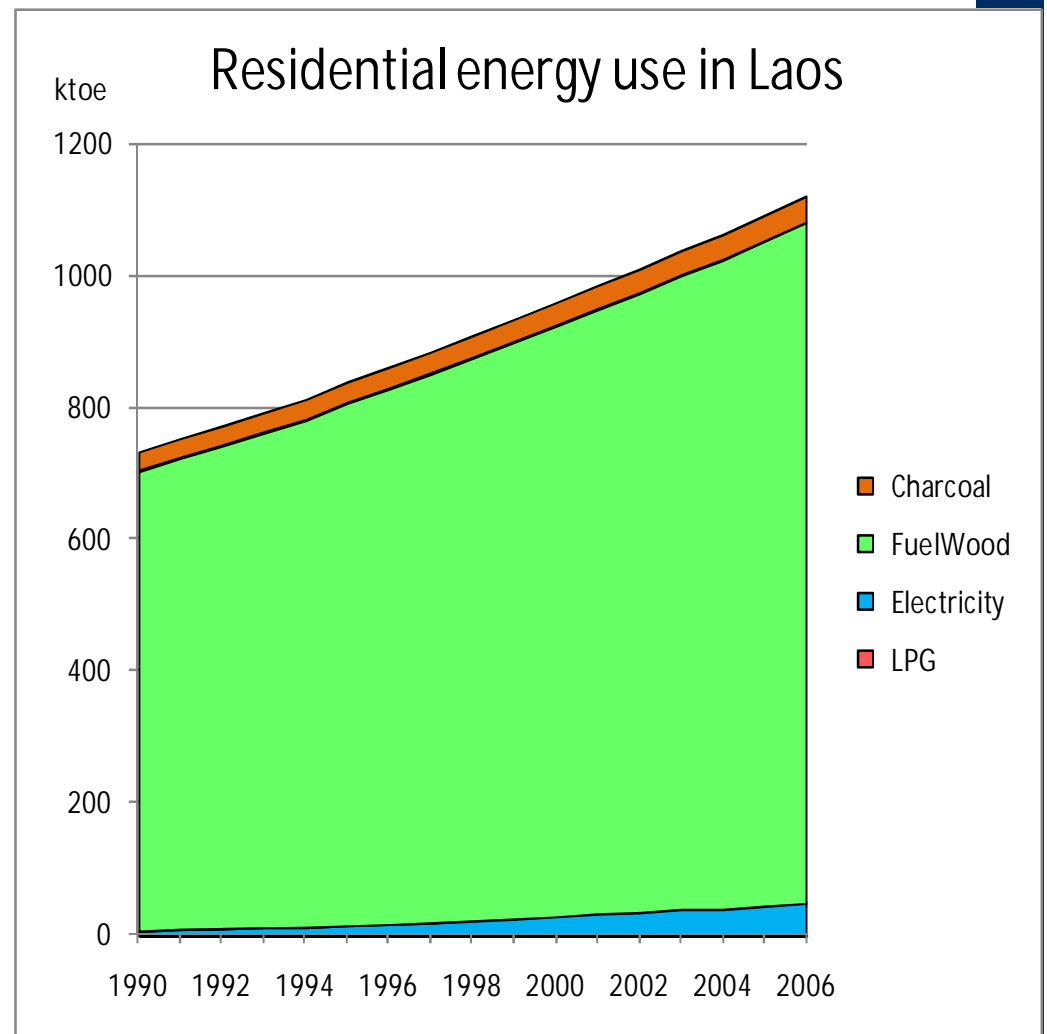
Agriculture energy use

- Electricity use has increased
- Increased pumping for irrigation
- Increased mechanisation of agriculture will increase energy use
- Potential for renewables (biogas, biofuels)?



Household energy use

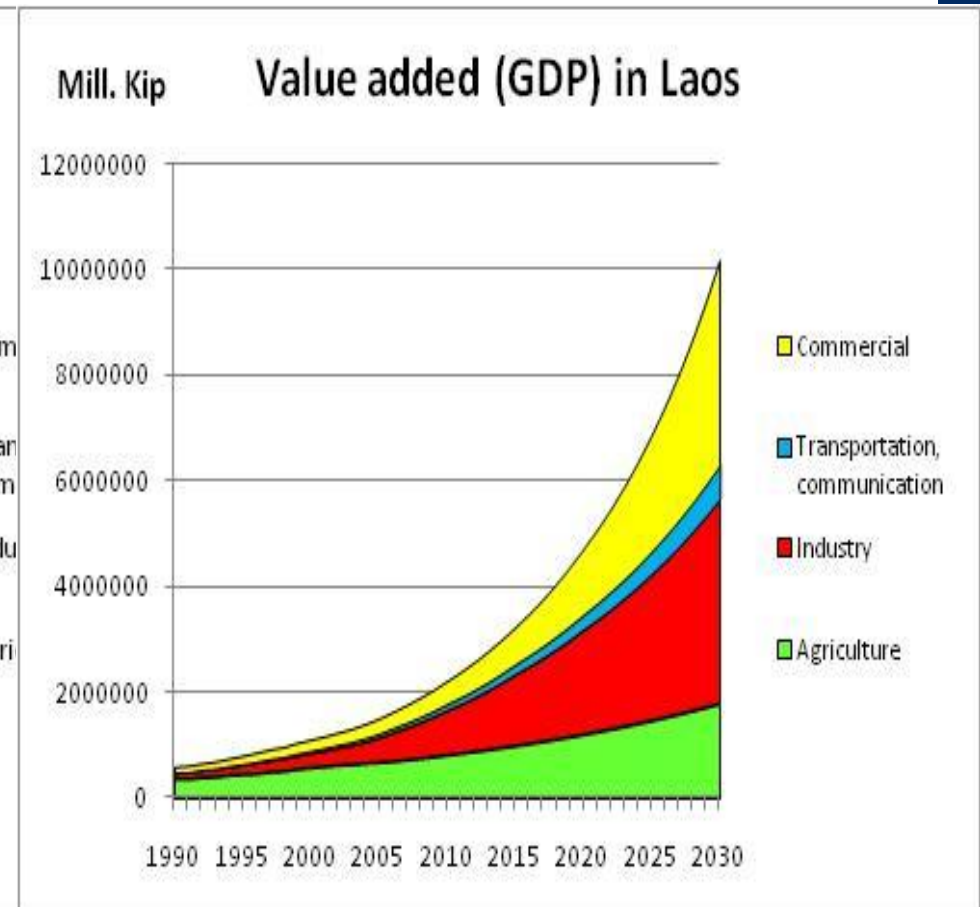
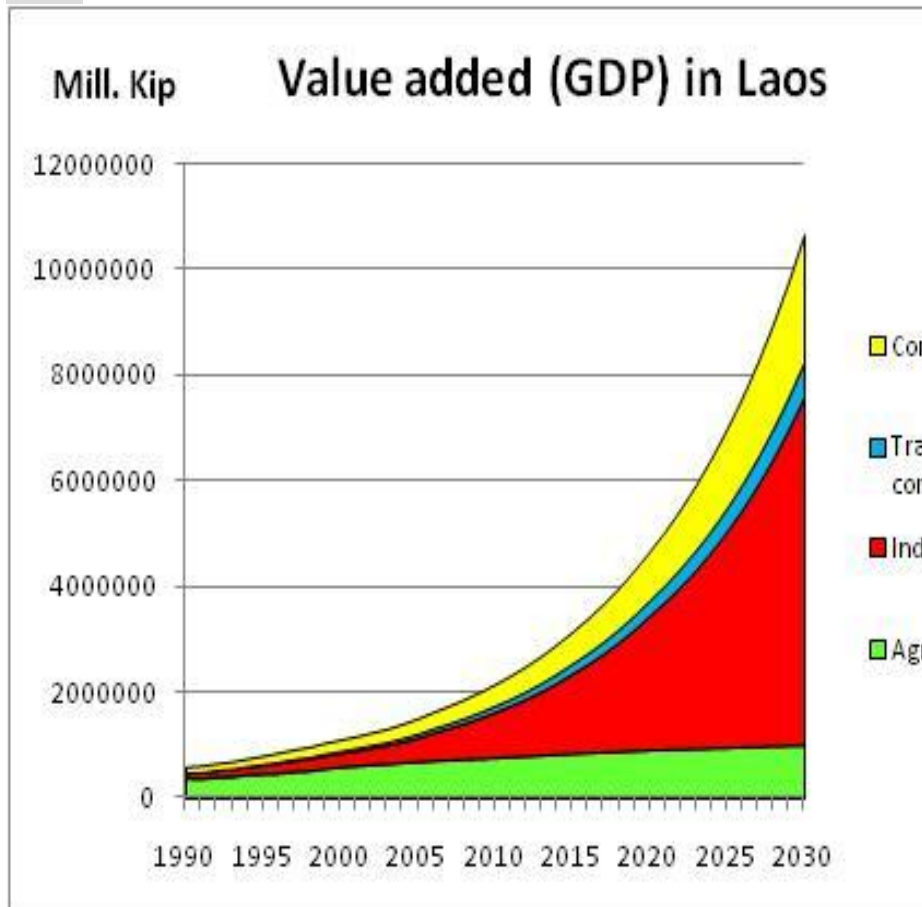
- Household energy use dominated by fuelwood for cooking
- Electricity consumption will increase with electrification rate and new appliances
- Urbanisation will increase LPG, charcoal and electricity use
- What is the potential of forests to supply enough of wood for energy and industry?



Future trends of energy use in Lao PDR

- Driving forces (these should be discussed in the work groups)
 - Population growth
 - Migration (urbanisation)
 - Economic growth
 - Industrialisation
 - Increased mobility (Transport)
- Critical issues and risks

What kind of economic development?



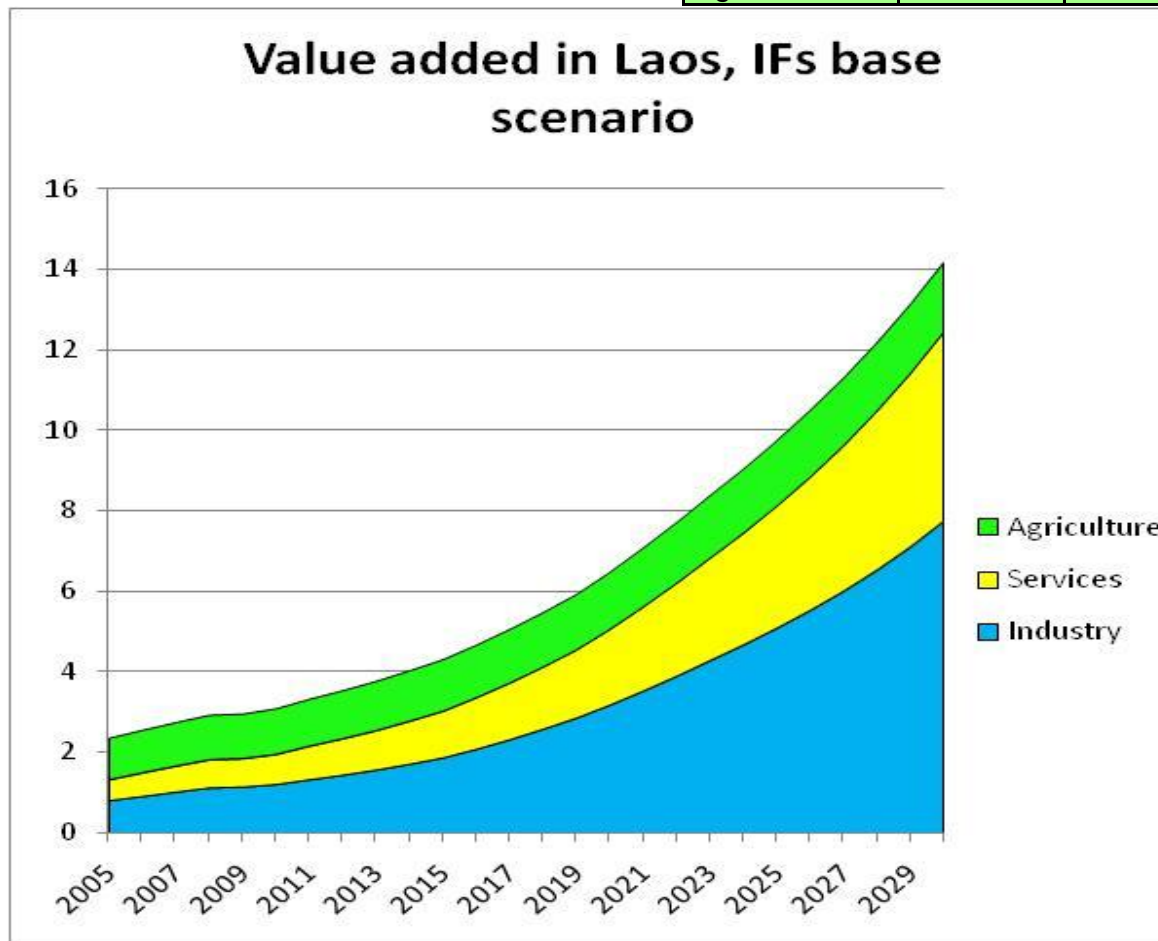
Annual % growth	2006-10	2010-15	2015-20	2020-30
Agriculture	2.0 %	2.0 %	1.5 %	1.0 %
Industry	13.0 %	12.0 %	11.0 %	10.0 %
Transportation, communication	8.0 %	8.0 %	8.0 %	8.0 %
Commercial	7.0 %	8.0 %	9.0 %	10.0 %

Annual % growth	2006-10	2010-15	2015-20	2020-30
Agriculture	4.0 %	4.0 %	4.0 %	4.0 %
Industry	12.0 %	10.0 %	8.0 %	7.0 %
Transportation, communication	8.0 %	8.0 %	8.0 %	8.0 %
Commercial	9.0 %	10.0 %	12.0 %	12.0 %

Value added in different sectors IFs, base scenario

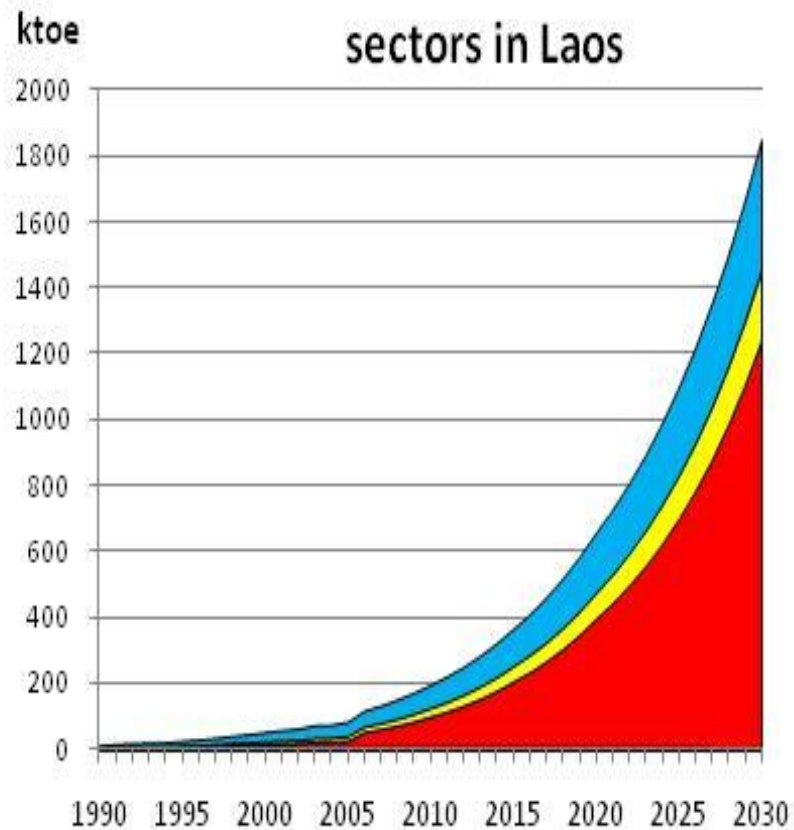
- Annual % growth

	2005-10	2010-15	2015-20	2020-30
Industry	8.4	9.1	11.2	9.3
Services	7.6	9.3	10.2	9.6
Agriculture	2.0	2.4	2.1	2.0

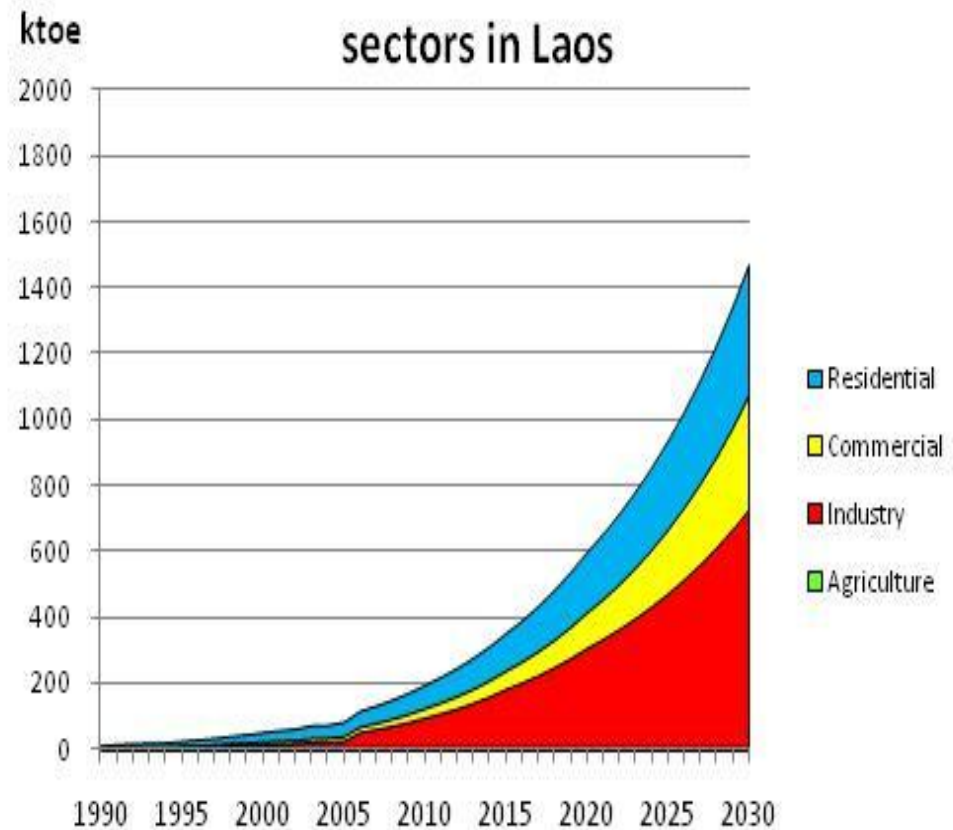


Electricity consumption in Industrial scenario and Agriculture + Services scenario

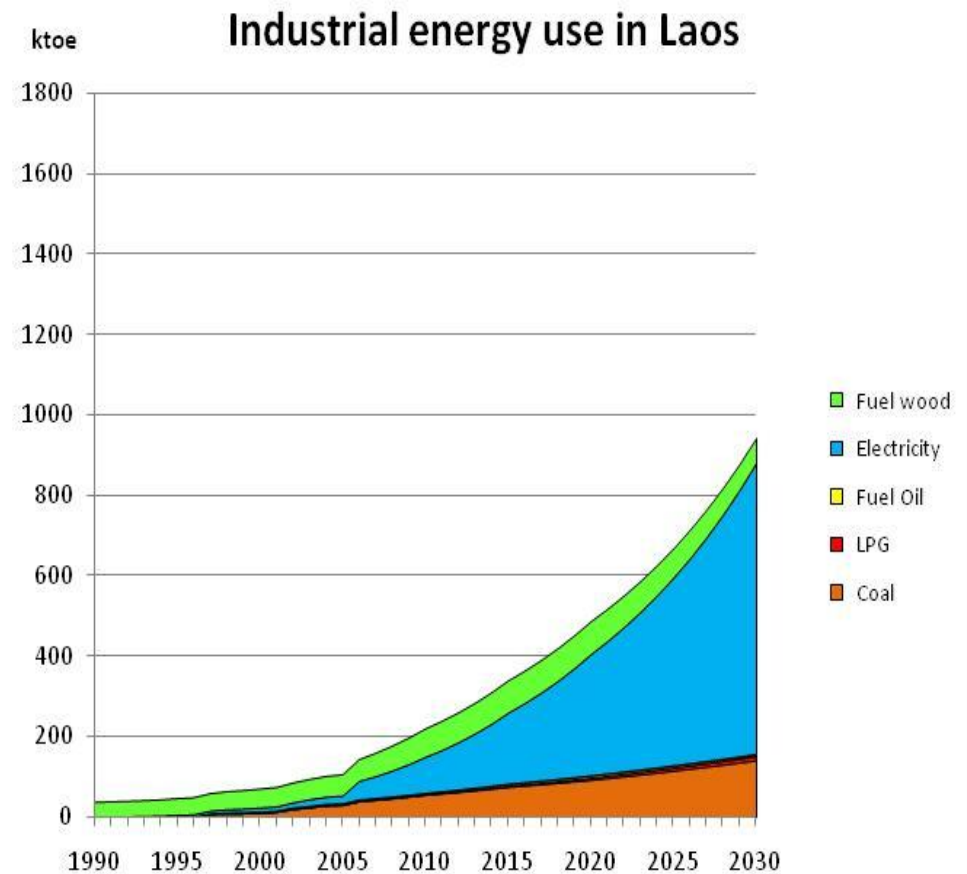
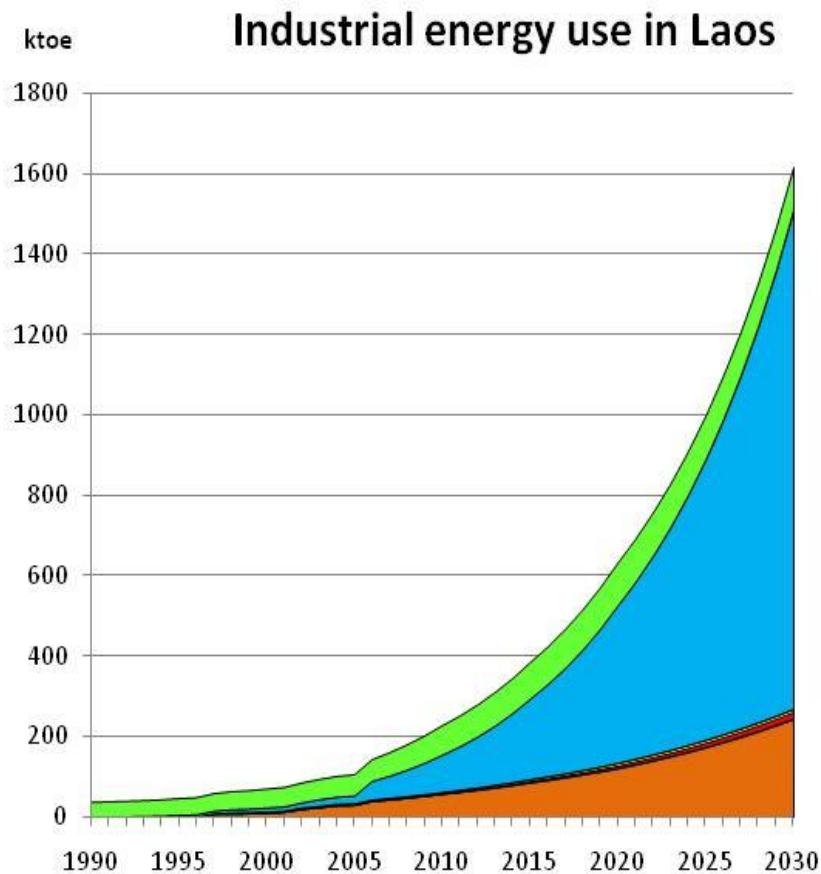
Electricity consumption in different sectors in Laos



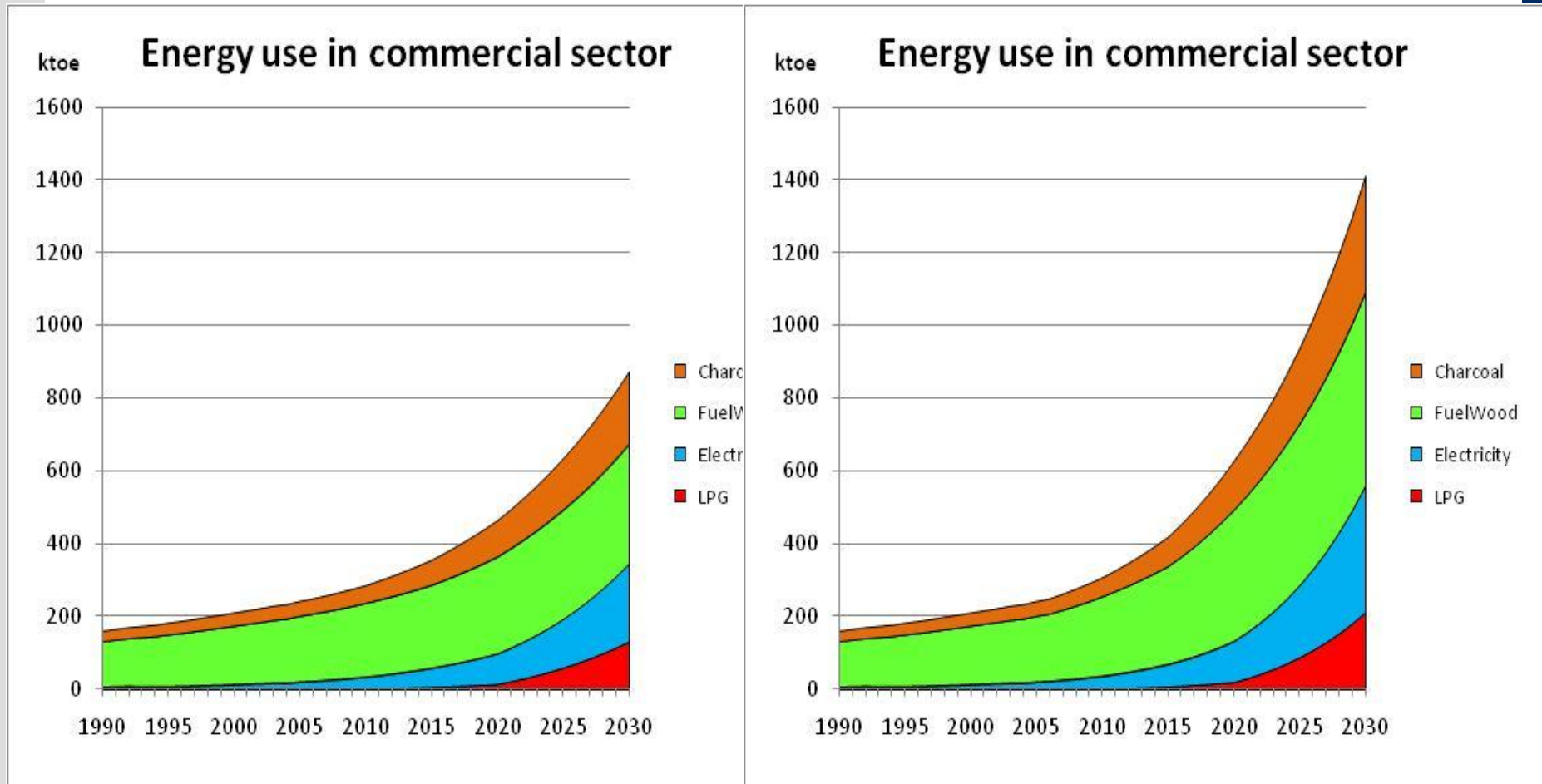
Electricity consumption in different sectors in Laos



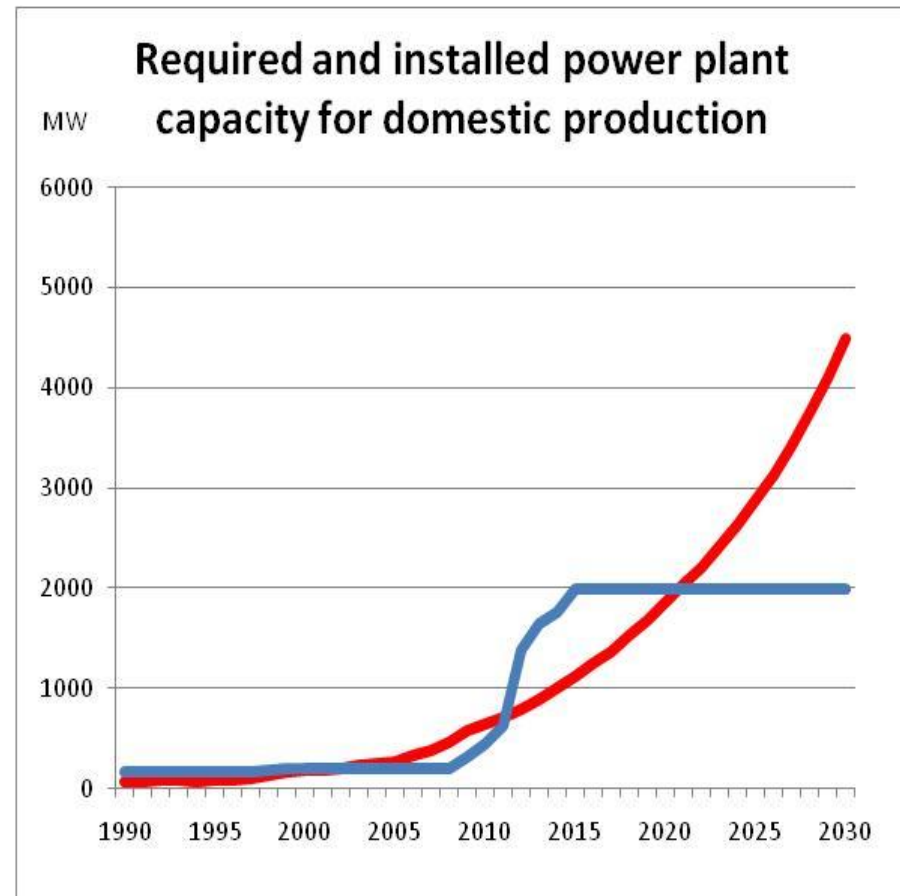
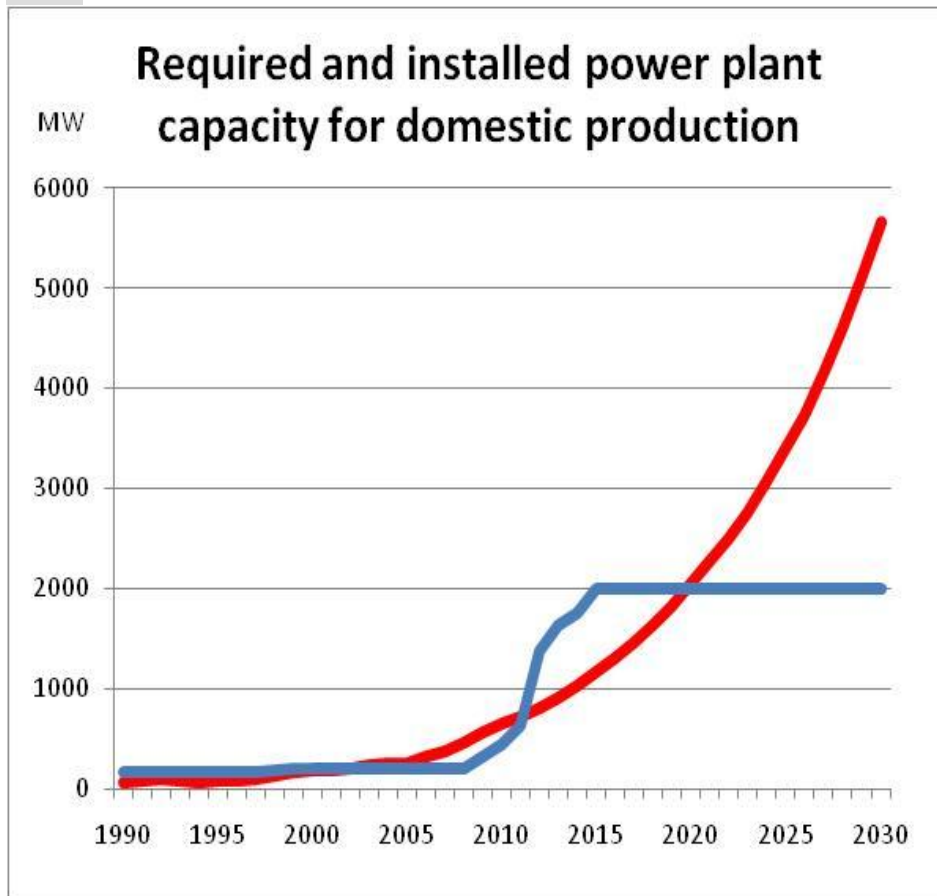
Industrial energy use in Industrial scenario and Agriculture + Services scenario



Commercial energy use in Industrial scenario and Agriculture + Services scenario



Required (red) and installed (blue) powerplant capacity in Industrial scenario and Agriculture + Services scenario



- Note: Investments only up to 2015

