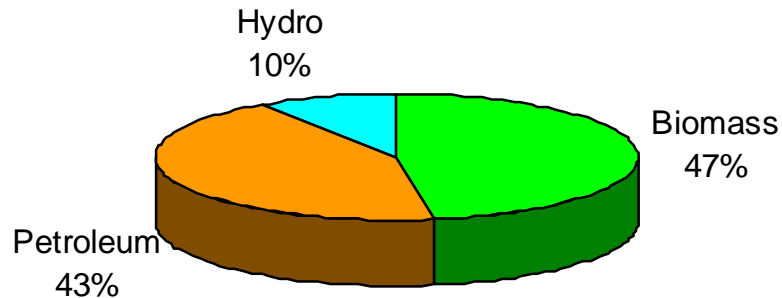


**Threats of Climate
Change to Energy
Sector in Sri Lanka**

**Overview of the
Energy Sector in Sri Lanka**

Energy Supply (2007)

Share of Primary Energy 2007



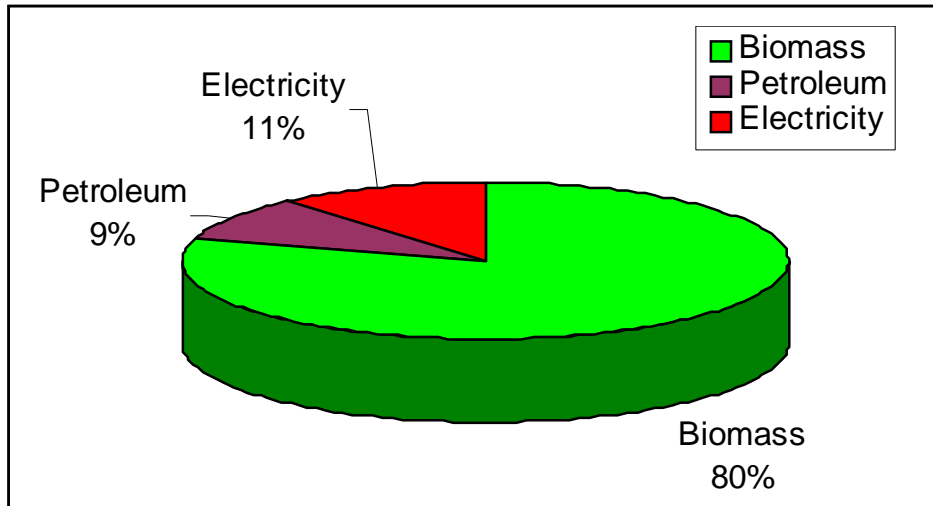
Energy Demand Growth

- Total Energy Demand in 2007: 9,976 ktoe
- Expected Demand in 2015: 15,000 ktoe
- Total Energy Growth Rate: 2007 –2015: 3%
- Electricity Growth Rate: 2007-2015: 7-8%
- Petroleum Growth Rate: 2007-2015: 7-8%
- Actual Electricity Growth: 2007-2008: 0.9%
- Actual Petroleum Growth: 2007-2008: 11%

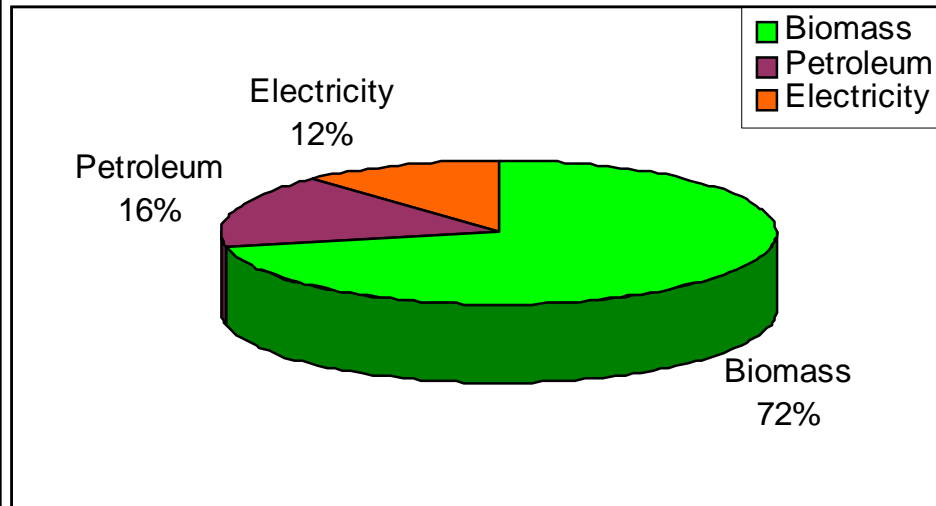
2006 National Energy Policy

- Providing Basic Energy Needs
- Ensuring Energy Security
- Promoting Energy Efficiency
- Promoting Indigenous Resources

Share of the Types of Energy Consumed by the Household and Commercial Sectors (Year 2007)



Share of the Types of Energy Consumed by the Industrial Sector (Year 2007)



CC Threats & Solutions - General

- Threats
 - Global Decline in Economic Activities
 - Difficulties in international transport
 - Countries are bound to impose restriction
 - Threat of moratoriums on High Carbon Technologies
- Solutions
 - Self-reliant – Let us build a platform for production of most of our needs

CC Threats & Solutions- Biomass Sector

Threats	Consequences	Solutions
Changes in cloud cover	Lees/ more biomass productivity/availability	•Establish more/ less Energy Plantations/ Energy Inter-Crops/ Alley Crops etc.
	Less output from Solar PV/Thermal systems	
Prolonged Drought/ High Ambient Temperature	Soil exposed to elements	• Utilize residues such as leaves, dung etc for biogas
	Soil erosion	
	Lees biomass productivity	• Plant trees in Urban areas to intercept solar radiation to lower local temperature.
	Less fuelwood availability	
Intense Rainfall	Flooding of energy crops	• Increase capacity of Solar pannels
	Soil Erosion	
	Lees biomass productivity	
	Less fuelwood availability	

CC Threats & Solutions- Hydro Sector

Threats	Consequences	Solutions
Prolonged Drought/ High Ambient Temperature	Reduced inflow to reservoir	• Catchments management – plant trees in catchments •Develop other resources
	Increased evaporation	
	Loss of tree canopy in catchments	
	Less energy generated	
Intense Rainfall	Soil erosion/Increased Siltation	
	Loss of water due to spill	
	High Tailrace Levels	
	Less energy generated	

CC Threats & Solutions- Solar PV Sector

Threats	Consequences	Solutions
Increased cloud cover/ cloudy days	Less energy output	Develop other resources
		Increase capacity of Solar systems

CC Threats & Solutions- Wind Sector

Threats	Consequences	Solutions
Change in wind pattern	Less / more energy output	•Develop other resources
Cyclones	Damage to wind mills – less energy out put	•Increase capacity of Wind systems

CC Threats & Solutions- Thermal Power Plants

Threats	Consequences	Solutions
Sea Level rise	Water intake/discharge for cooling get affected Sea	•Develop smaller power plants inland •Deign coastal power plants incorporating CC impacts
•Coastal Cyclones • Sand dune damage	Damage to coastal power plants - less energy out put	
Rise in ambient temperature	•Less energy output •Lower efficiency- higher fuel cost	Increase capacity of power plants

CC Threats & Solutions- Imported (Fossil) Fuel Sector

Threats	Consequences	Solutions
Disruption in Sea Transport	Shortage of Energy Services	Develop indigenous resources
Lack of Foreign Exchange to import fuels		
High cost of imported fuels	Poorer segment unable to obtain energy services	

Gaps to be addressed

1. Information Gap

- Misunderstanding on CDM
 - Facilitating Sustainable Development
- Unaware of local resources and threats
 - 40% of our land are under utilized (Prof. Mathuma Bandara)
 - Some areas are on the verge of desertification (Dr. M.A.U.Tennakoon)

2. Agenda & Priorities

- “Follow Other Countries” !!!
- Picking the wrong examples

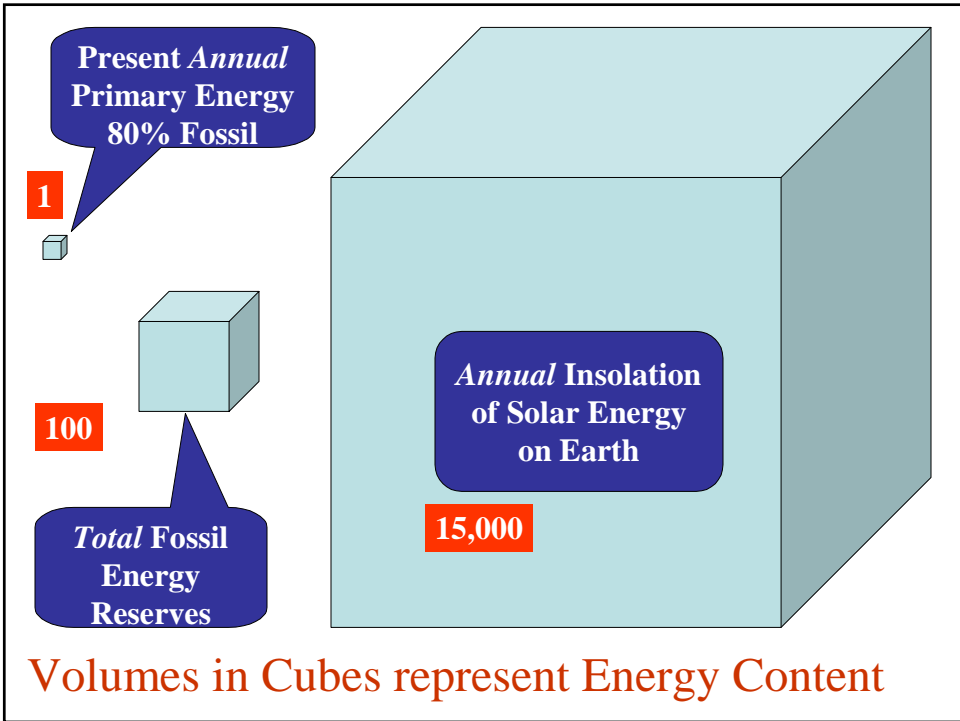
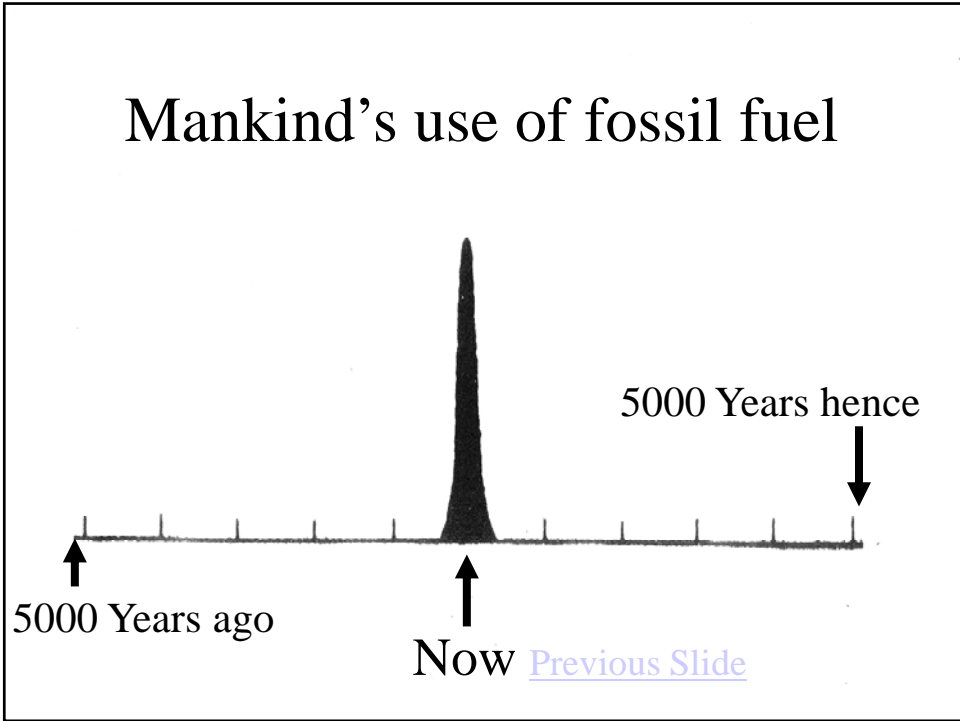
Gaps to be addressed.....

3. Coordination Gap

- Energy sector is largely inter linked
- National optimization with internalizing the externalities is needed.

4. Resources

- CDM
- Green Funds



Thank You

P.G.Joseph

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