

SRI LANKA



COUNTRY REPORT

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Statistical Data

Area	65,610 sq. km
Population	20.966 Mn
Population Density	334 Persons per sq. km.
GDP	82.3 billion USD
GDP per capita	3924 USD
Per capita Electricity Consumption	562.1 KWh
Literacy Rate	93.3%
No.of Households	5.4 Mn

Based on Annual Report – 2015 , Central Bank of Sri Lanka

13/06/2017



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overview

Sri Lanka is ranked in the mid-range of United Nations Human Development Index, while the GDP per capita too is in the mid-range, at USD 3,924 (2015). The government's drive to reach the upper middle income level within this decade intensifies the role of energy in Sri Lanka's economy. As a nation embarking on a progressive social market economy after a three decade-long conflict, a holistic approach to development is desirable compared with an incremental approach.

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overview

An energy policy consistent with social and economic development goals is required owing to the significant impacts of the energy sector on each social and economic activity of the country.

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Energy Reserves

Sri Lanka does not have Fossil fuel reserves or any other fossil related reserves.

Many natural rivers and reservoirs available in the country. Therefore Hydropower is widely used for generating electricity.

Sri Lanka is a tropical country as located closed to equator. Massive potential of solar power production is available.



National energy policy - introduction

National energy policy carries the vision of Sri Lanka in achieving carbon neutrality and complete transition of the electricity supply to renewable energy by 2050. The policy will spell out the ways and means of making that transition in the energy sector to power the nation and its social market economy, attaining a new level of stability, security, affordability and sustainability with the least environmental burden to provide a fertile ground for all public and private enterprises, homes and institutions to flourish in a future where energy will never be a constraint.

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Energy policy

Primary objective of the energy policy is to ensure that energy is available through economically viable supplies that are clean, secure, sustainable, reliable, to provide convenient, affordable energy services to support socially equitable development of Sri Lanka.

The policy will be effective for five years and will be reviewed after two years in a mid-term review . This policy is founded on ten pillars, rooted in the broad areas impacting the society, economy and the environment.



10 Pillars

1. Enhancing the Share of Renewable Energy
2. Strengthening the Governance in the Energy Sector
3. Securing Future Energy Infrastructure
4. Providing Opportunities for Innovation and Entrepreneurship
5. Assuring Energy Security



10 Pillars contd...

6. Providing Access to Energy Services
7. Providing Energy Services at the Optimum Cost to the National Economy
8. Improving Energy Efficiency and Conservation
9. Enhancing Self Reliance
10. Caring for the Environment

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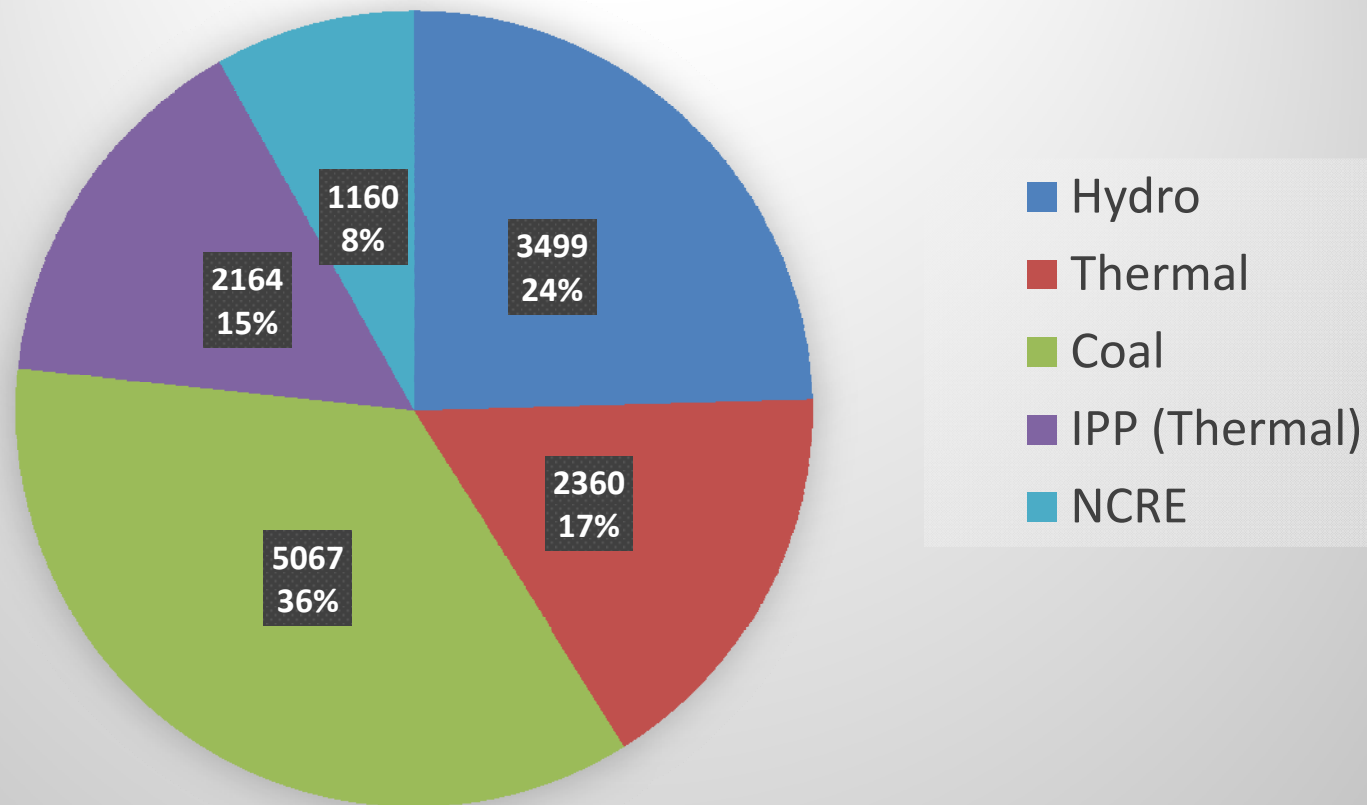
Electricity Supply in GWH for last 15 years



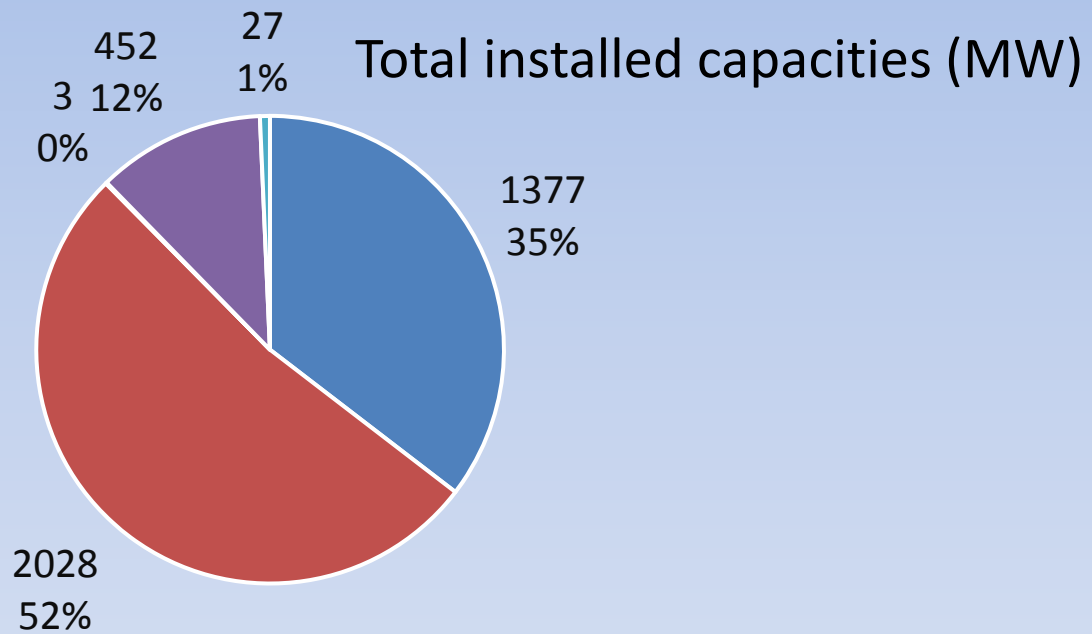


Past Energy Demand in GWh

Energy demand in 2016



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Total installed capacities



- Hydro
- Thermal Power Producers
- Wind
- New Renewable Energy
- Micro Power Producers

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Growth in System capacity and demand

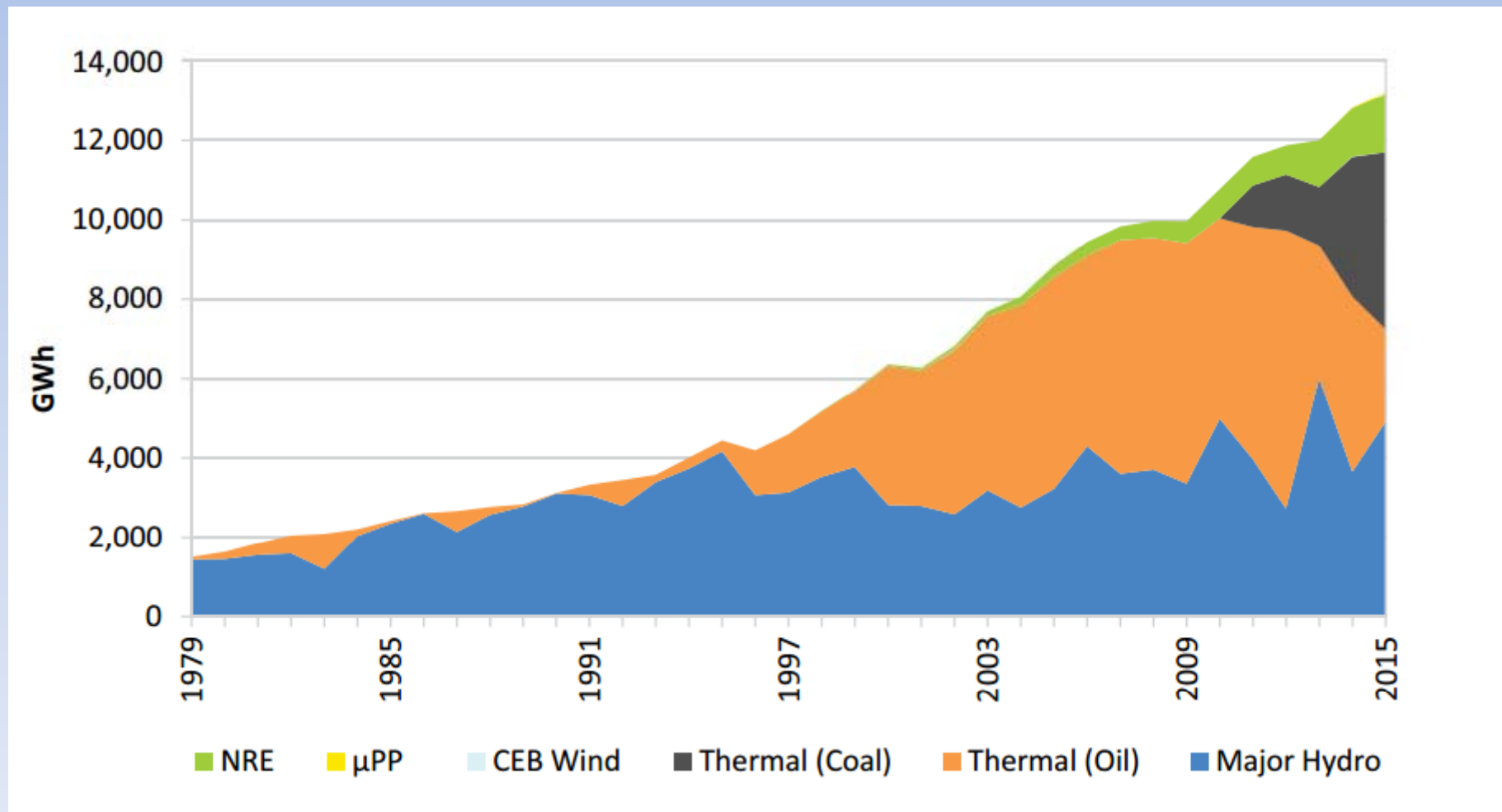


System Parameters	2014	2015
Total Gross Generation (GWh)	12,848.9	13,226.6
Total Grid Connected Capacity (MW)	4,043.6	3,888.4
Maximum Demand (MW)	2,151.7	2,283.4
Reserve Capacity	1,891.9	1,605.0
System Load Factor	68.1%	66.0%
System Reserve Margin	87.9%	70.3%

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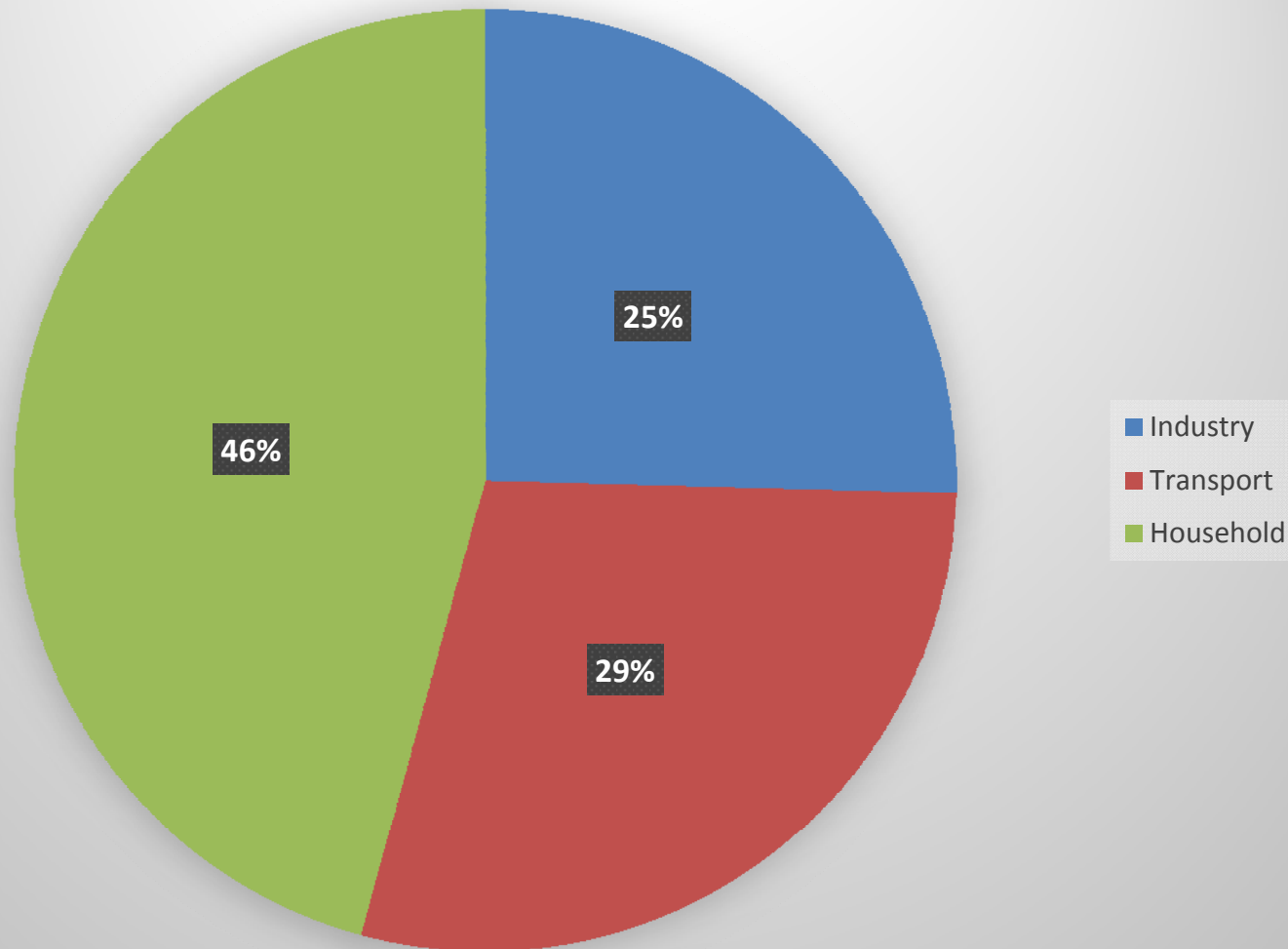
Outlook of Energy Demand Electricity Generation Energy Mix





Energy Consumption in Sri Lanka

Final Energy Consumption by Sectors

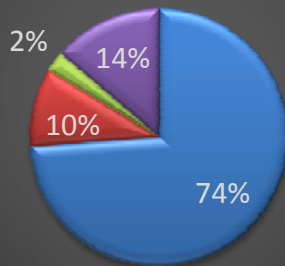


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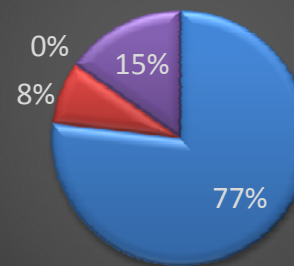
Energy Consumption in Sri Lanka

Energy Consumption in Industry Sector



■ Biomass ■ Petroleum ■ Coal ■ Electricity

Energy Consumption in Household Sector



■ Biomass ■ Petroleum ■ Coal ■ Electricity

Energy Consumption in Transport Sector

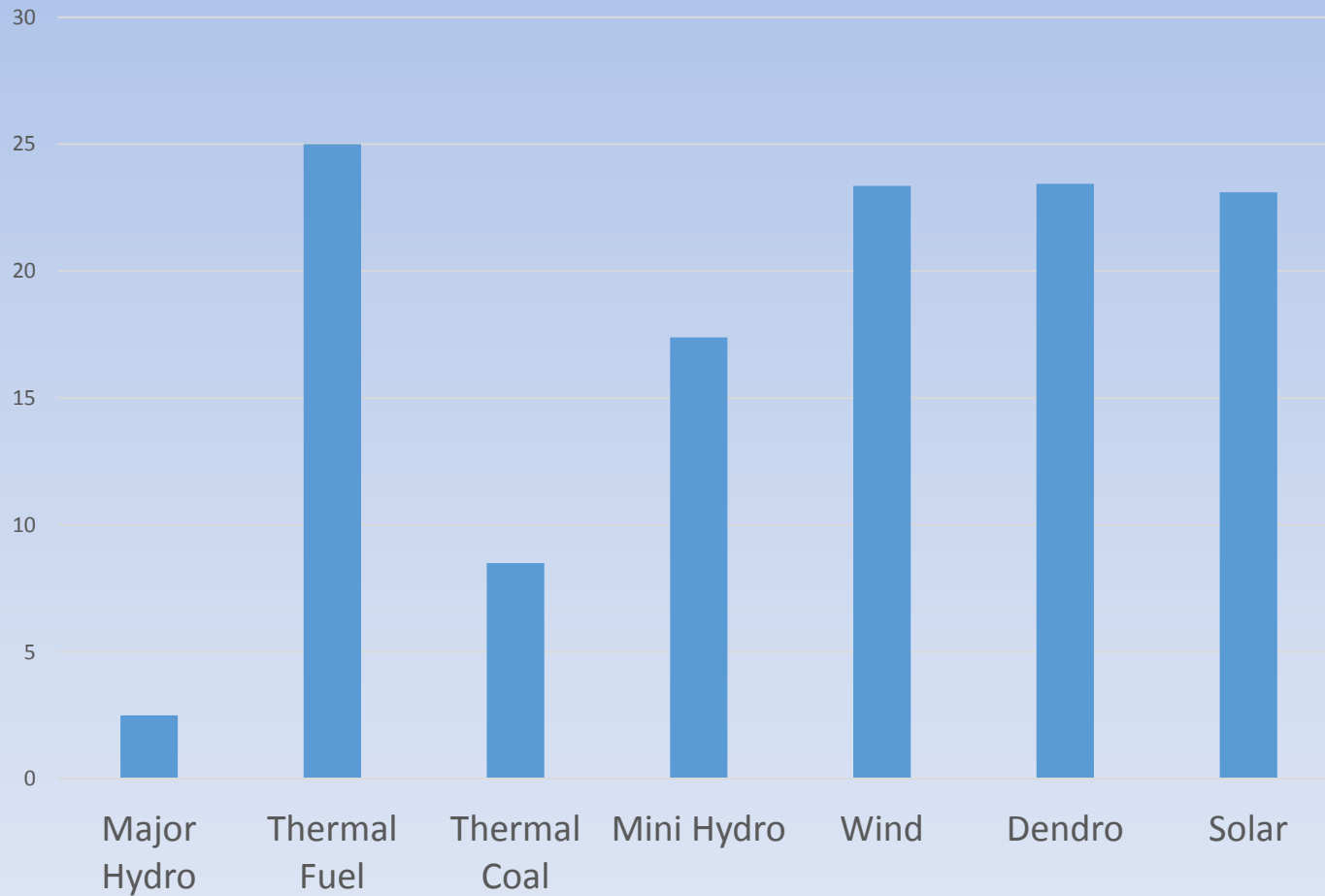


■ Biomass ■ Petroleum ■ Coal ■ Electricity

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Energy Prices for 2015



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Projected Energy Demand

Year	Demand in GWH
2020	15700
2030	25600

Energy Related Investments Generation Projects

Project	Total Estimated Cost (Rs. Mn)	Project Period	Funding Agency
Construction of 31 MW Moragolla Hydropower Plant	14,916	2016 - 2020	ADB
Construction of 35 MW Hydro Power Plant at Broadlands	10,660	2013 - 2018	China
Rehabilitation of Samanala Power station (Polpitiya)	3,667	2015 - 2017	CEB
Solar Rooftop Power Generation	1500	2015 - 2018	ADB
Estate Micro Hydro Rehabilitation & Repowering Pilot	290	2015 - 2017	ADB
Promoting Sustainable Biomass Energy Production and Modern Bio-Energy Technologies	288	2015 - 2020	UNDP/GEF
Construction of 120 MW Uma Oya Hydro Power Plant	525	2013 - 2017	Iran
100 MW Semi- Dispatchable type Wind Farm along the Southern Coast of Mannar Island 13/06/2017	23,000	2015- 2018	ADB

Transmission Projects - Ongoing

Project	Total Estimated Cost (Rs. Mn)	Project Period	Funding Agency
Transmission System Strengthening - Grid Substations Augmentation of Kurunegala GSS,	5,172	2010 - 2015	ADB
System Control Modernization Project- Establishment of New System Control Centre at Sri Jayawardanapura	3,009	2014 - 2016	ADB
Mannar Transmission Infrastructure	3,645	2014 - 2017	ADB
Construction of 220kV Transmission Infrastructure	7,259	2015 - 2017	ADB
Construction 132kV Transmission infrastructure	3,018	2014 - 2017	ADB
Transmission Infrastructure Capacity Enhancement Project	5,615	2016 - 2019	ADB
Kelaniya Grid Substation Augmentation Project	485	2014 - 2016	ADB
Augmentation of Kiribathkumura 132/33kV Grid Substation	1,099	2015 - 2017	ADB
Grater Colombo Transmission & Distribution & Loss Reduction Project	18,229	2014 - 2018	JICA
Enhancement scope of work under Vavuniya Kilinochchi Transmission Project	672	2014 - 2016	JICA

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Energy related investments

- Large scale generation projects are funded by the government.
- Small scale generation projects and Demand side management projects done by private sector.



Major difficulties & Bottlenecks

- Heavily depend on imported fossil fuels which the prices cannot control.
- Inadequate Transmission capacity particularly for renewable integration.
- Issues in Upgrading the existing transmission and continuous rehabilitation of transmission network.
- Technical barriers for integration of Renewable Energy to its maximum level.
- Pressure groups try to drive the policies towards their personal milestones.
- Upgrading power sector institutions capacity to meet the emerging power sector needs



Major difficulties & Bottlenecks

- Development of Human Resource capacity for emerging needs
- Introducing cost reflective tariff
- Upgrading power sector institutions capacity to meet the emerging power sector needs
- Structure of affiliated organizations (CEB, SLSEA, etc.) and Public Utilities Commission of Sri Lanka (PUCSL) should be revised

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Areas of interest

- Energy situations and policies shared with other countries and examined the issues of Sri Lanka. Then solutions could be proposed by studying the energy policies in similar countries.
- Study the Renewable energy sources applications. Select and propose relevant energy sources which can be more critical in future.
- Scrutinize the technical barriers for integration of Renewable Energy to its maximum level.

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THANK YOU