



ພະລັງງານ ແລະ ບໍ່ແຮ່
ENERGY AND MINES



Policy and Measures on Energy Efficiency and Conservation in Lao PDR



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Overview of Laos



- ❑ Mountainous area with major tributaries of the Mekong River covering 35% of total Mekong River basin.
- ❑ and Land rock Country with Area of 236,800 sq km.
- ❑ Population of 7,012,995 Millions. Female: 3,499,221 Millions
- ❑ GDP growth rate : 6.9% (2017, World Bank)
- ❑ GDP per capita : 2,457 USD
- ❑ Still Poor (LDC status)
- ❑ Currency (Lao Kip)

Commercial Unit

MINISTRY OF ENERGY AND MINES



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Energy Management

Energy Policy & Planning

Mines Management

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Geology & Mines

Department of Laws

Institute of Renewable Energy Promotion

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Division

Electricity Generation
& Planning



Country Background

- National Goal to graduate from a least-development Country status by 2020
- Energy sector is one of important driving forces to social and economic growth (17% of GDP)
- 94% of households are electrified
- Potential total installed capacity 34,000 MW
- Existing installed capacity of 7,207 MW (2018) with generation output of 37,000 GWh/year



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Current energy policy and measures

- ❑ Government has issued the “Policy on Sustainable Hydropower Development in Lao PDR”.
- ❑ Ministry of Energy and Mines has, then, approved the Guideline of the Policy on Sustainable Hydropower Development in Lao PDR.
- ❑ MEM has submitted the draft Decree on Electrical Tariff Structure to Government for approval. The draft promotes tariffs to agriculture and industry growths.

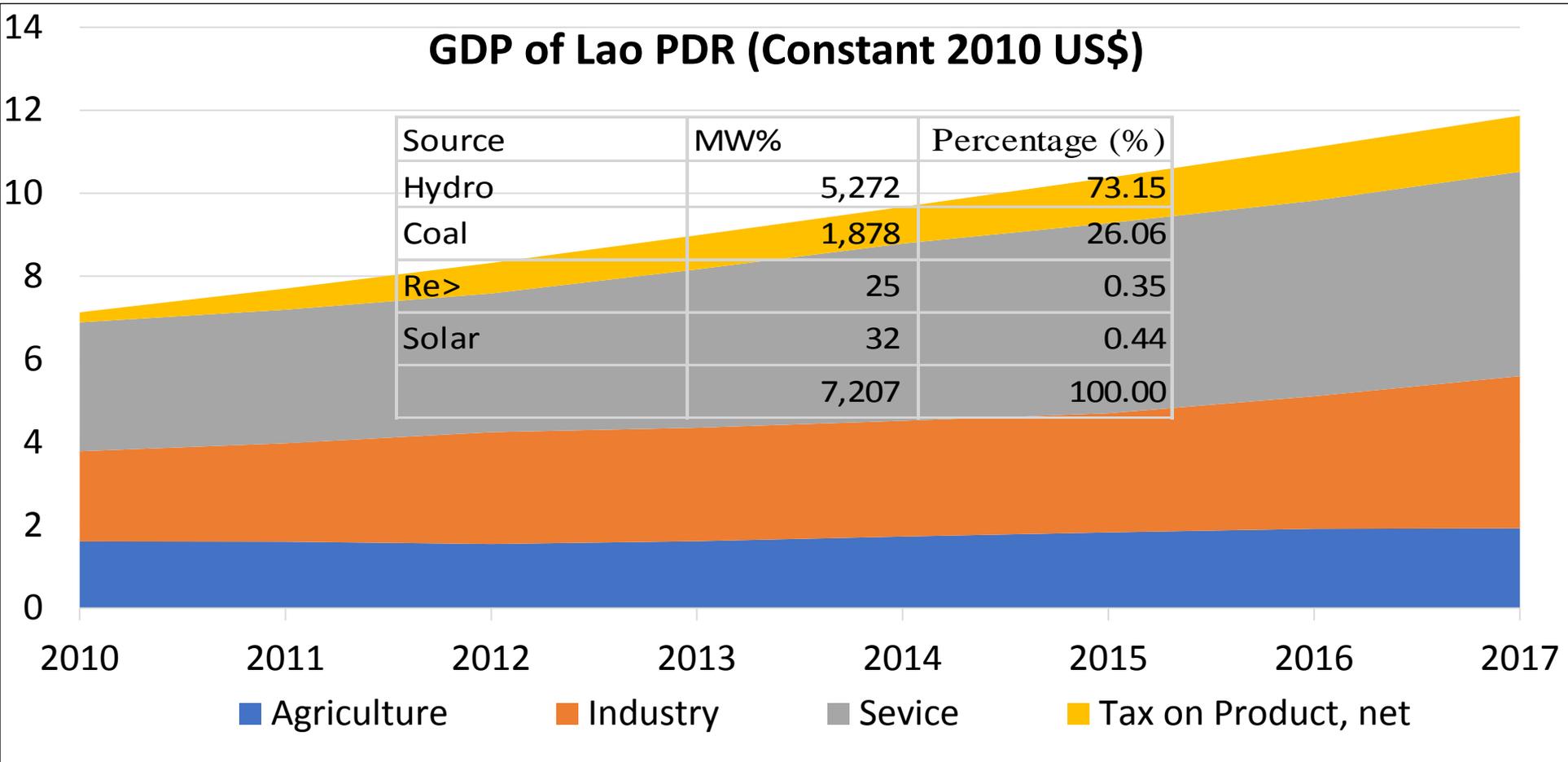
Current energy policy and measures

- ❑ MEM Decree on Small Hydropower Development
- ❑ MEM Guidelines on approving feasibility study of hydropower projects
- ❑ Drafting of NPDP (focusing on integration of power sector with other sectors)
- ❑ Promotion of investment in Bio-fuel to increase its share in transportation up to 30% by 2020
- ❑ Drafting of National Strategic Plan for Bio-fuel development.
- ❑ Drafting of National Policy of Renewable Strategic Policy

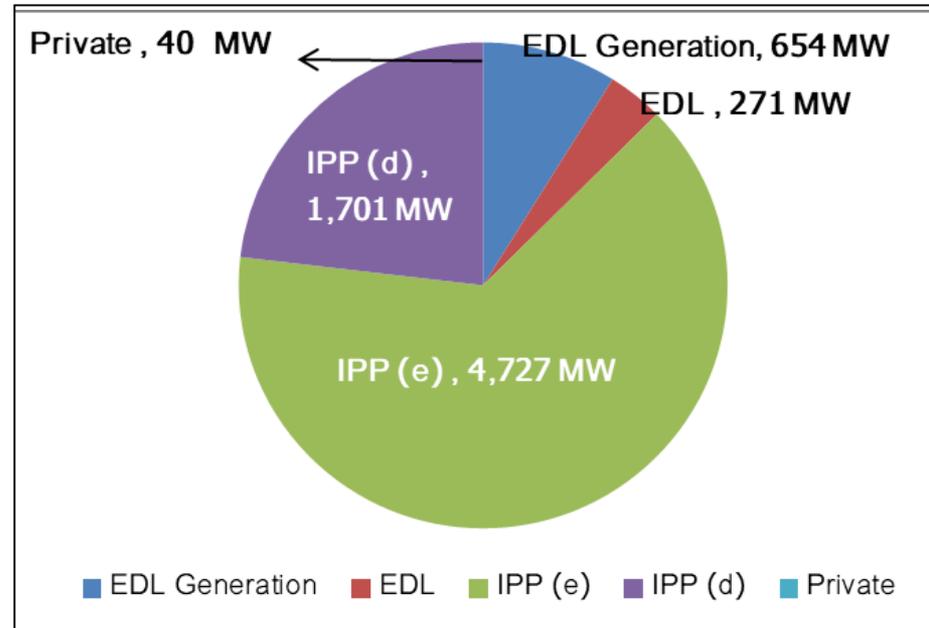
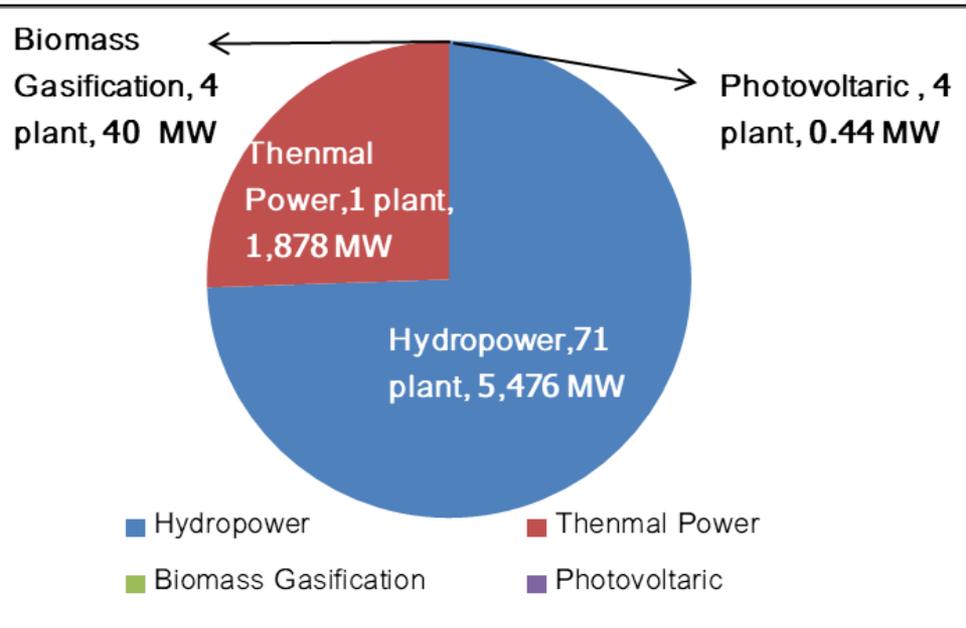
Current energy policy and measures

- Maintain and expand affordable, reliable and sustainable electricity supply around the country
- Upgrade and expand transmission networks to support the industrialization and modernization policy, and to integrate our power sector with the ASEAN community through power exchange programs
- Bring private investment into potential and large hydropower projects
- Promote alternative renewable energy to reach 30% by 2025 with reasonable feed-in tariff

Social and Economic Situation

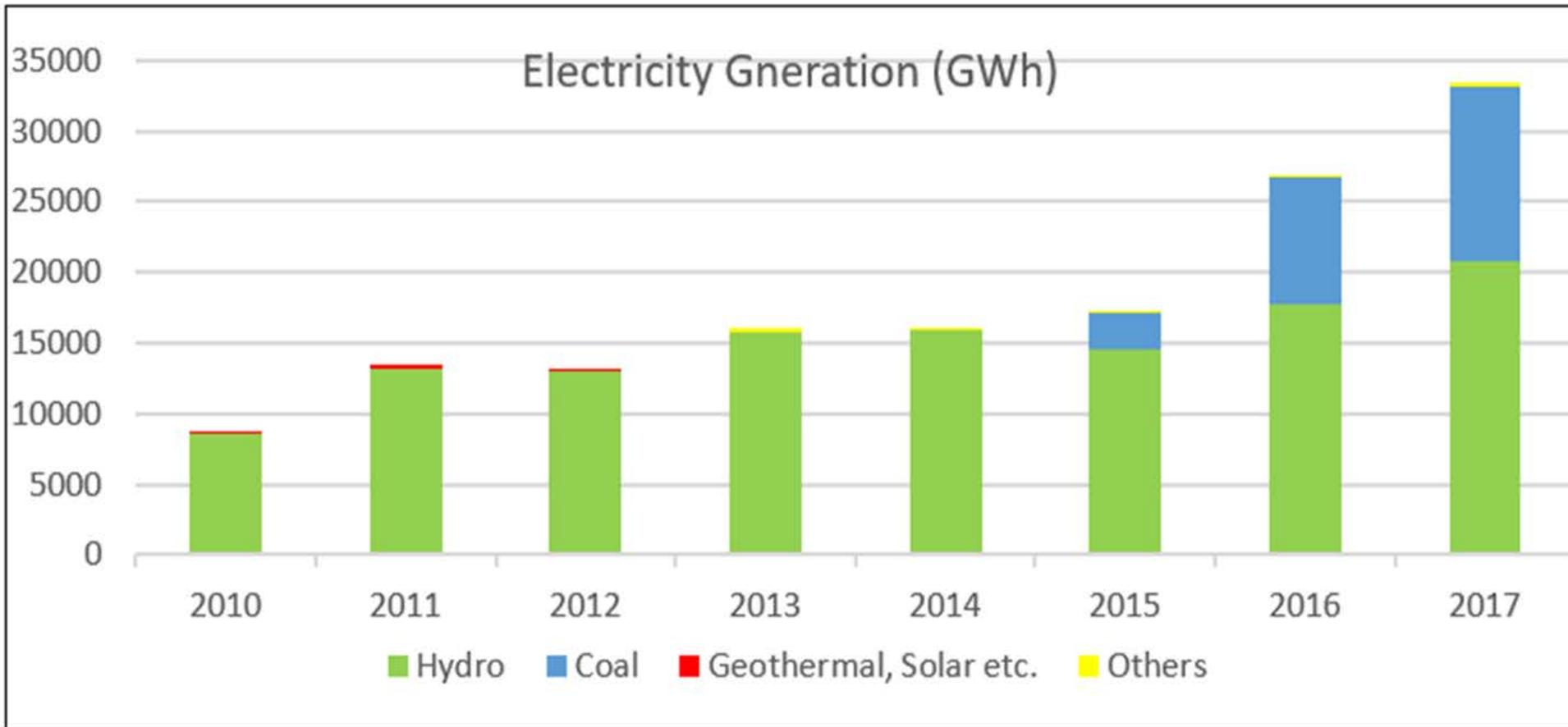


Electricity Generation in 2018



Source	MW	Percentage (%)
Hydro	5,272	73.15
Coal	1,878	26.06
Re>	25	0.35
Solar	32	0.44
	7,207	100.00

Electricity Generation in 2010-2017



Source: Lao PDR EBT 2010-2017



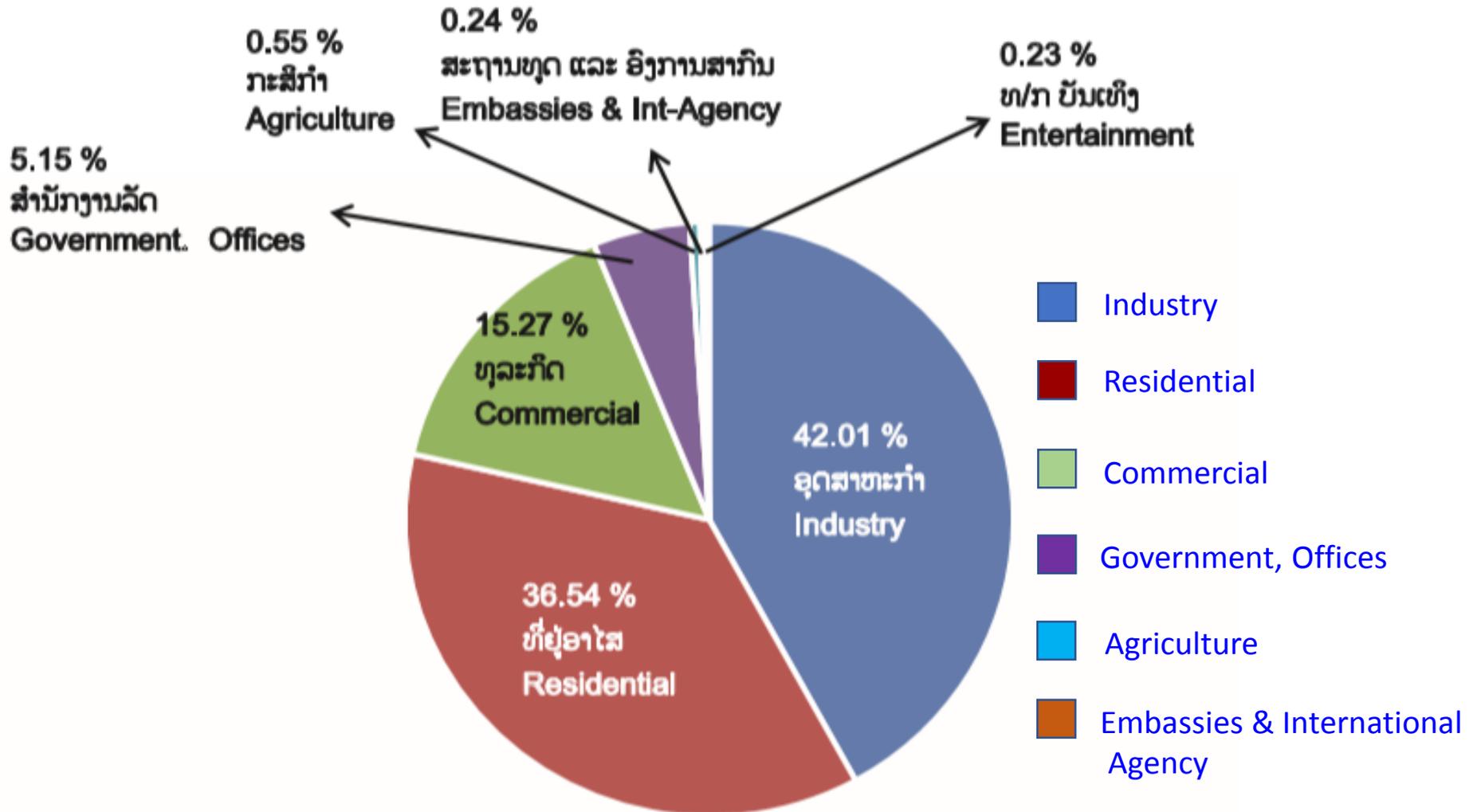
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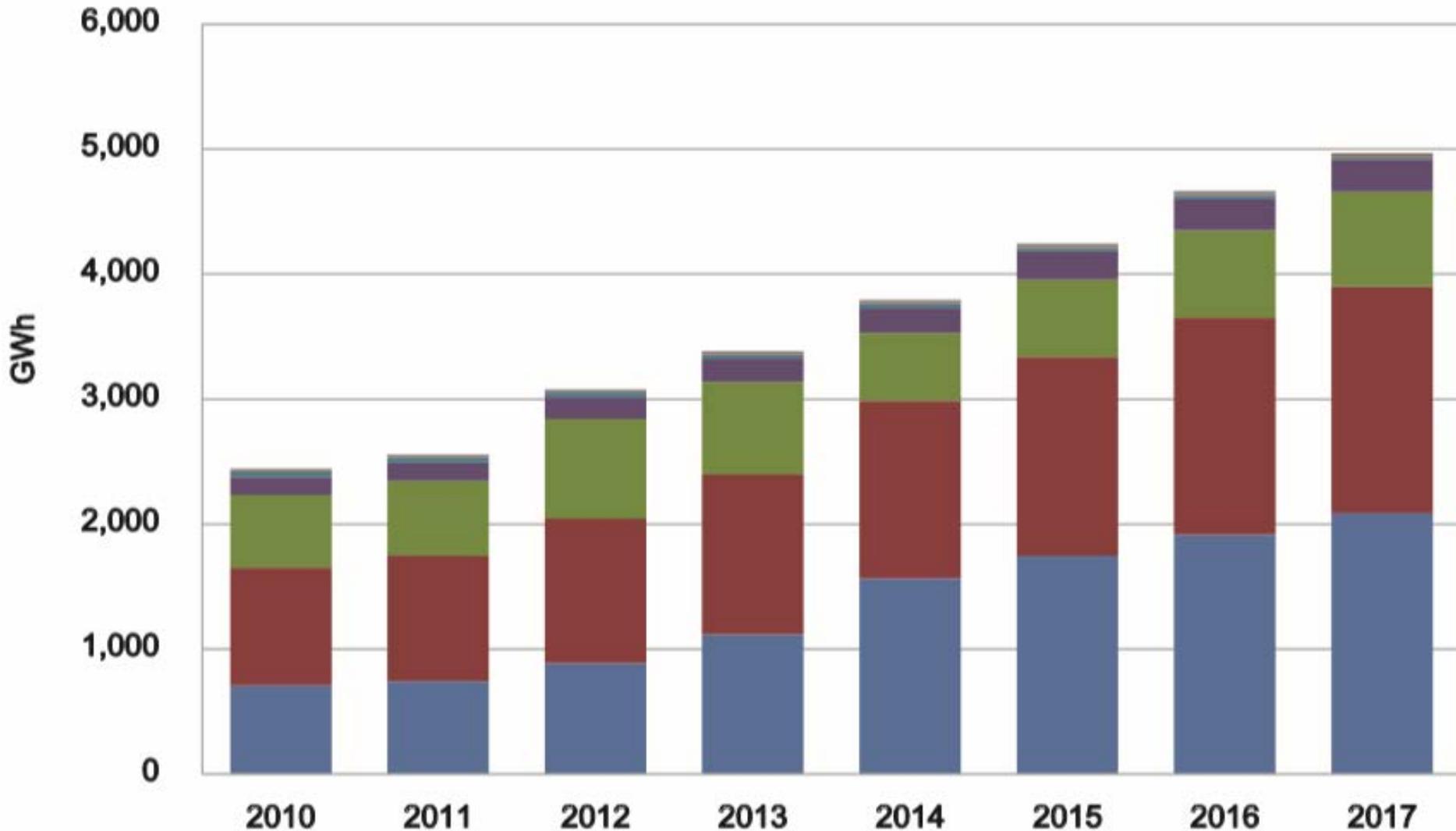
Energy Demand and Supply



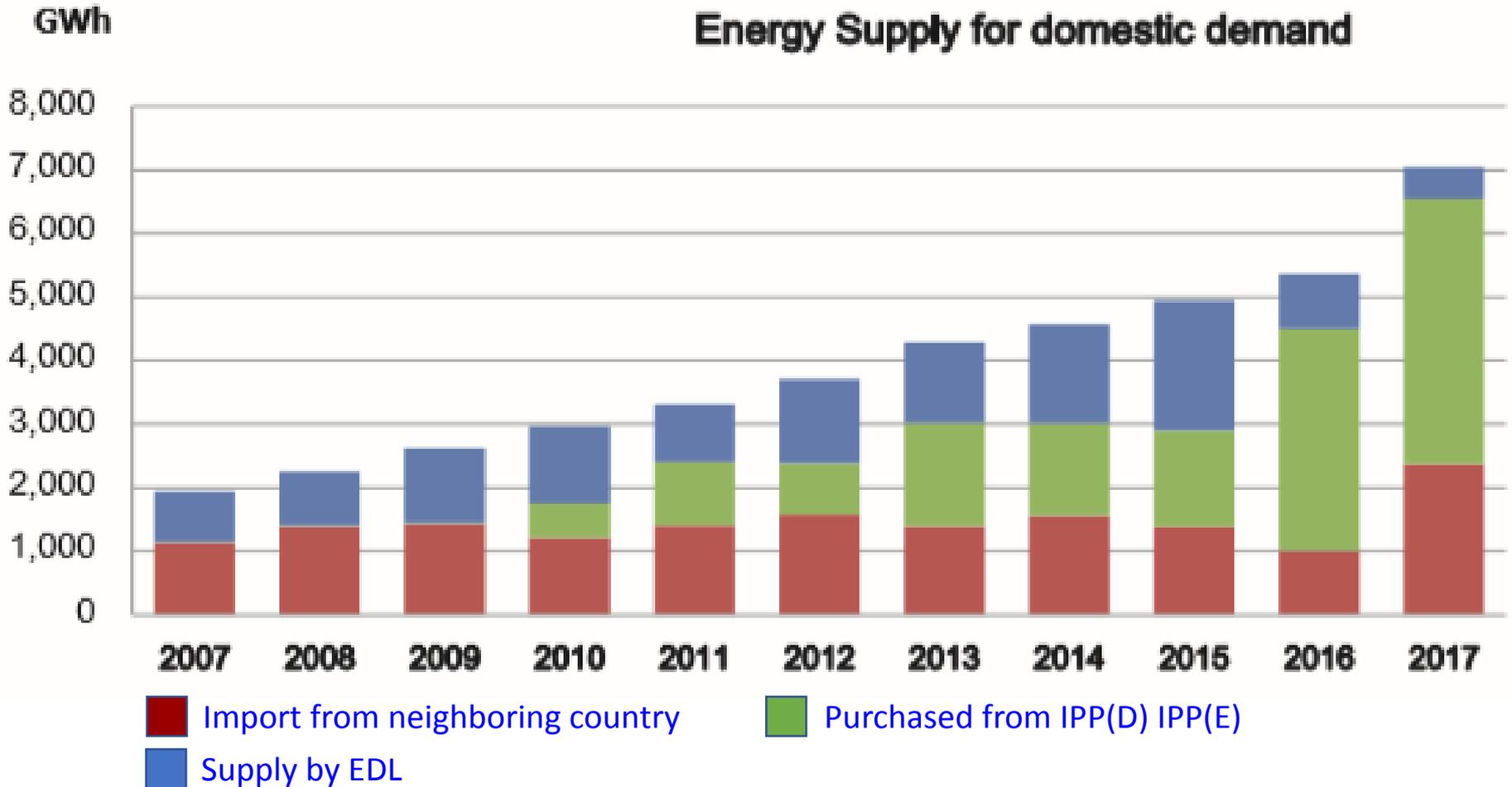
Energy Consumption in 2017



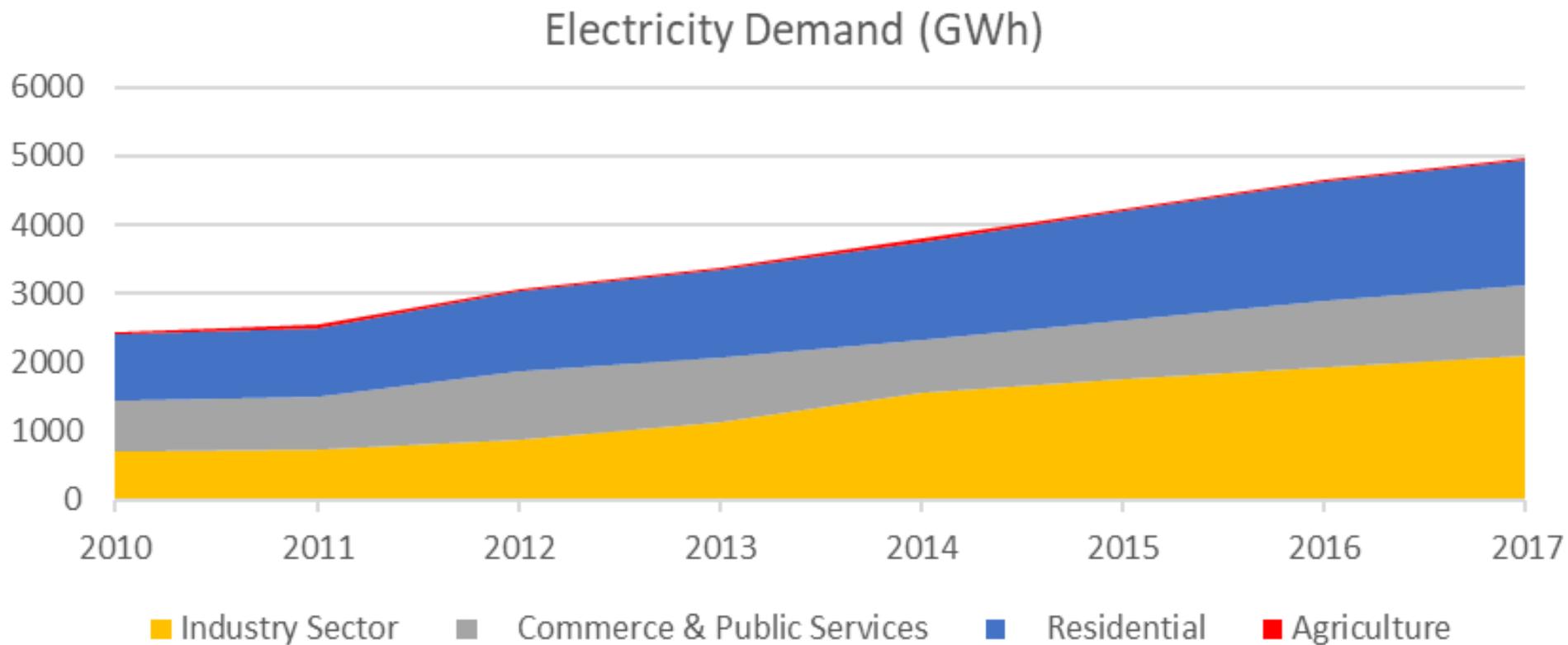
Energy Demand and Supply 2010-2017



Energy Supply 2007-2017



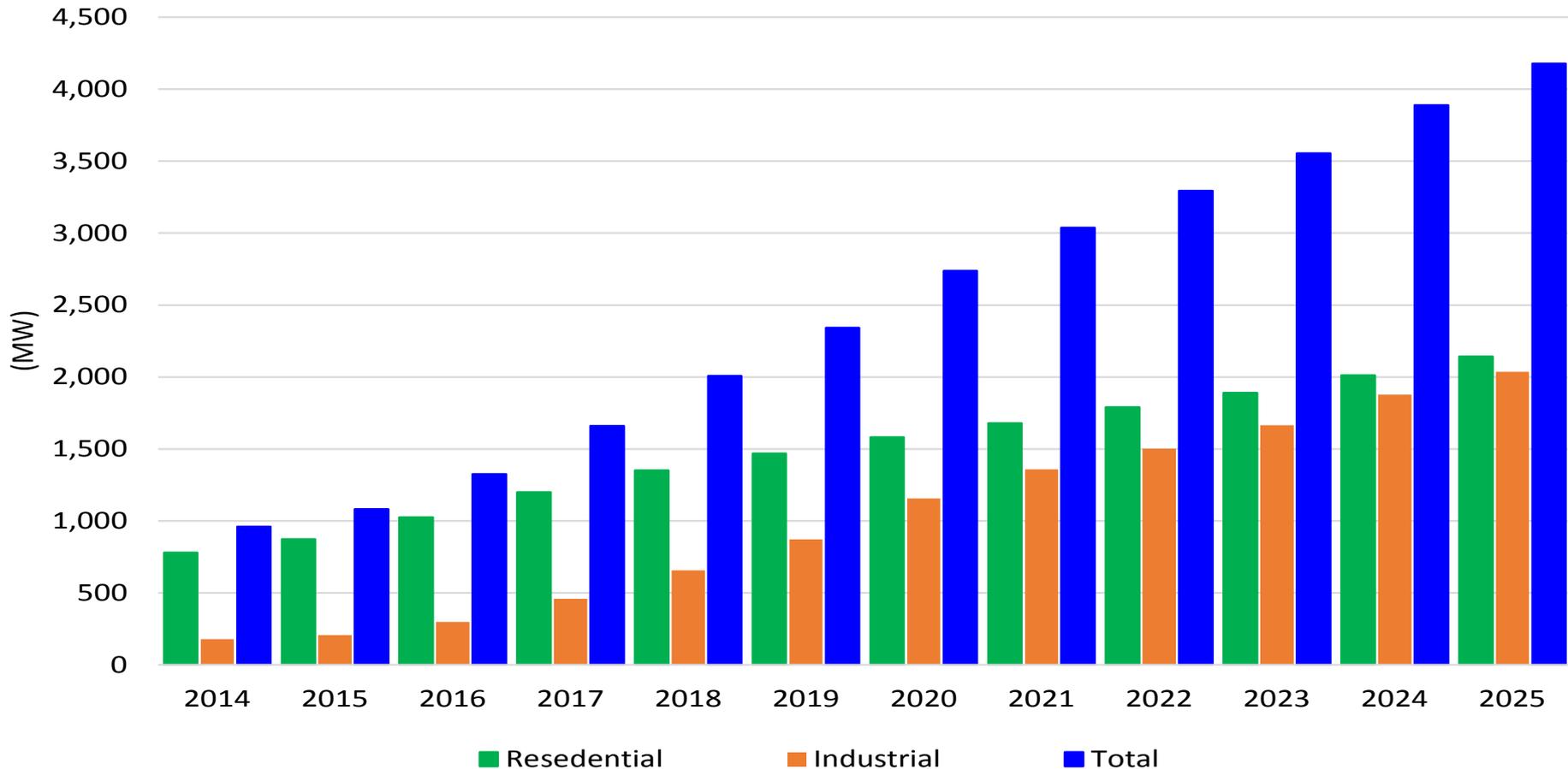
Electricity Demand



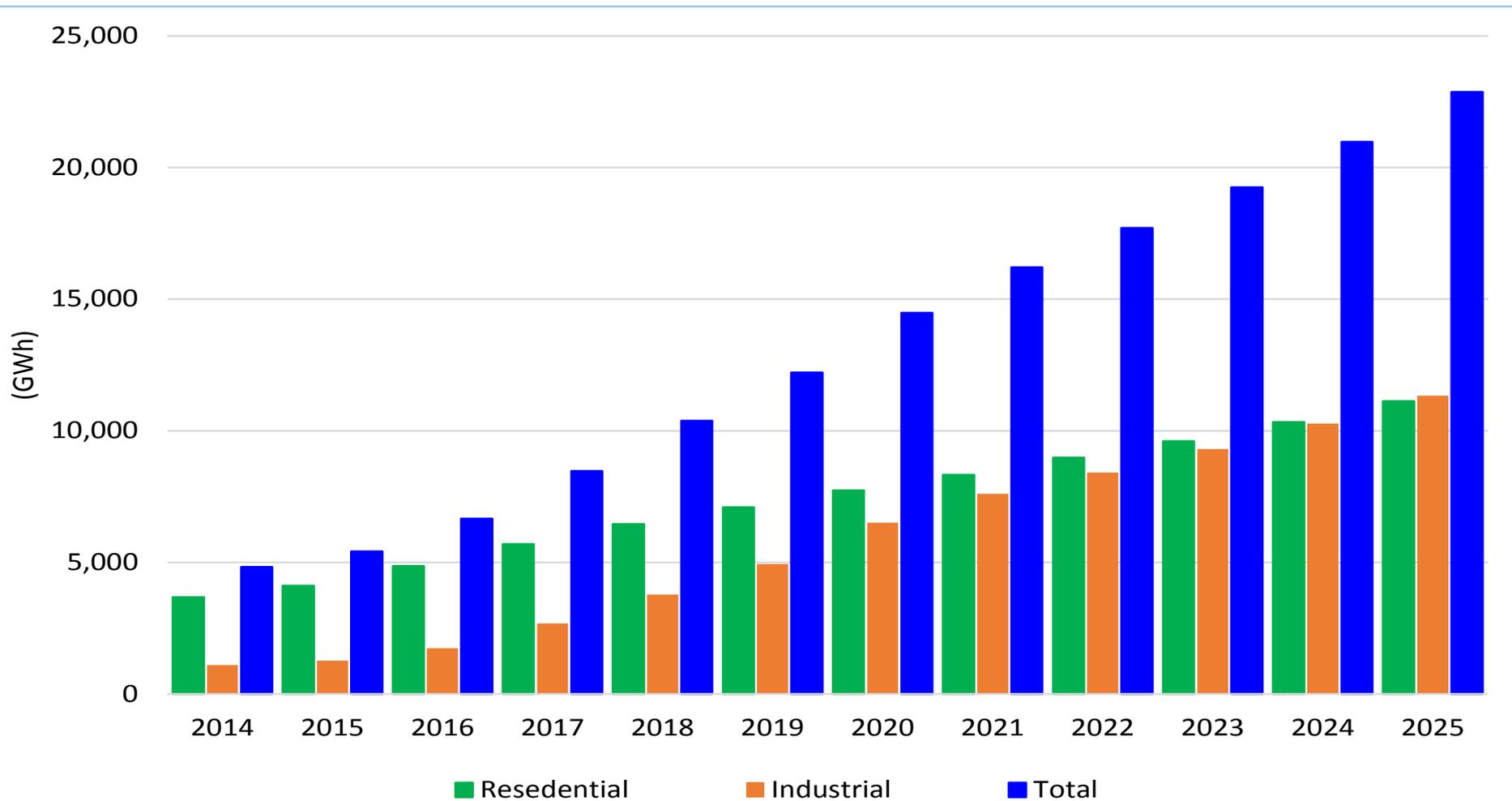
Long-term Power Development Plan

- Power Demand forecast for Whole Country (MW)

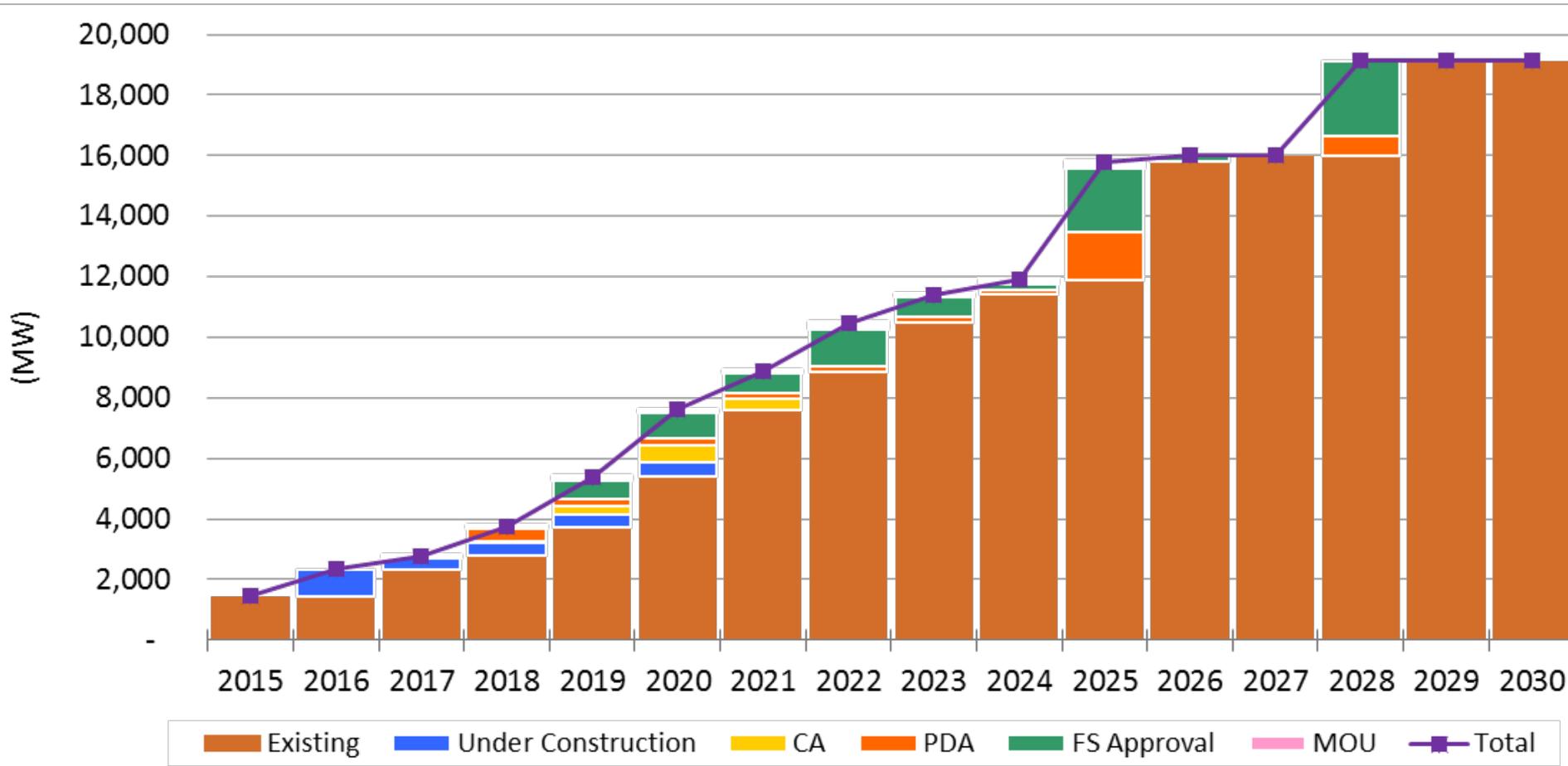
Year	2015	2016	2017	2020	2025
Demand forecast (MW)	1,082	1,325	1,659	2,738	4,179



Energy Demand Forecast for Whole Country (GWh)

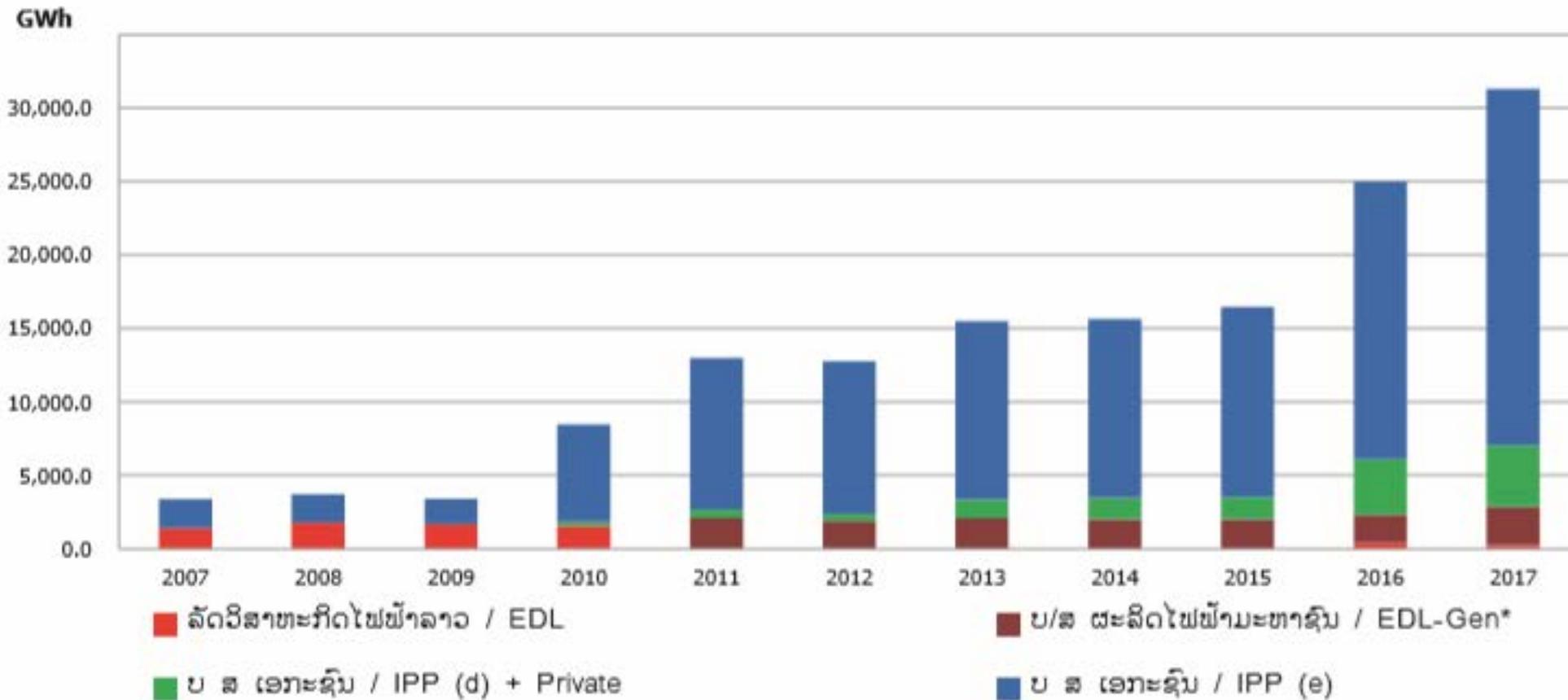


Power Development Plan from 2015-2030

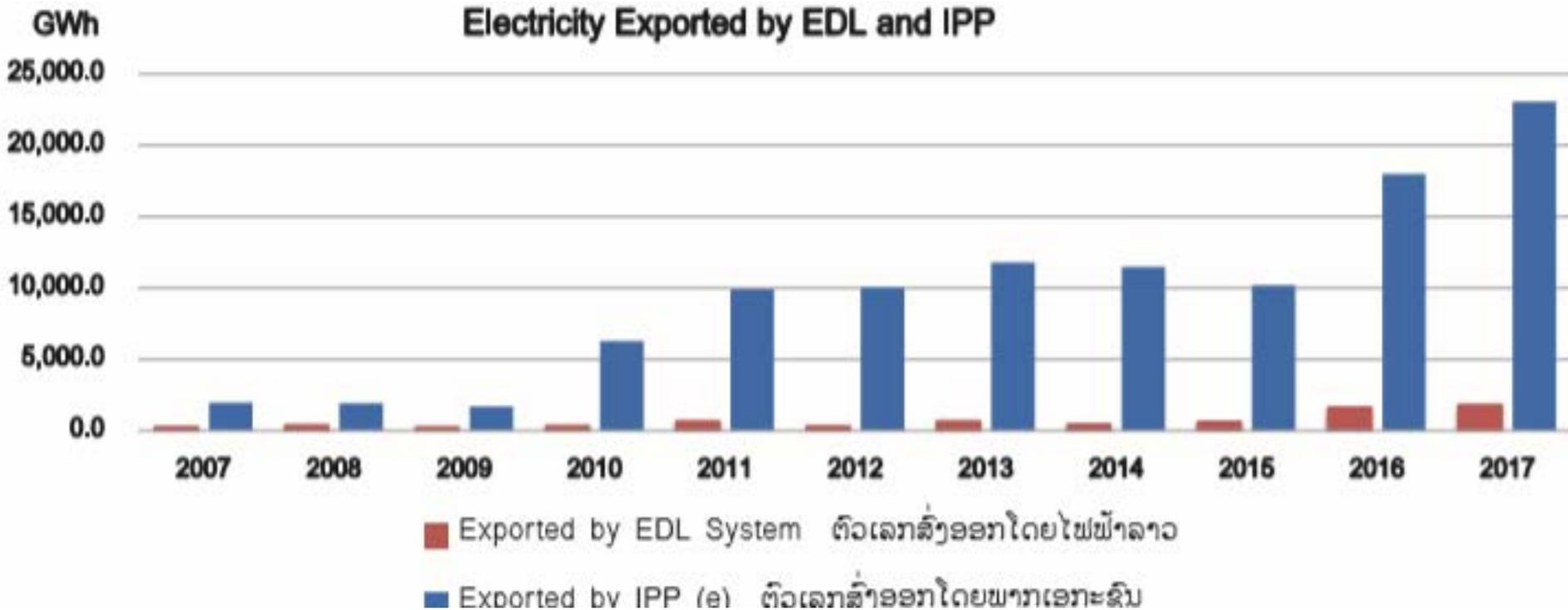


Electricity Generation of IPP and EDL

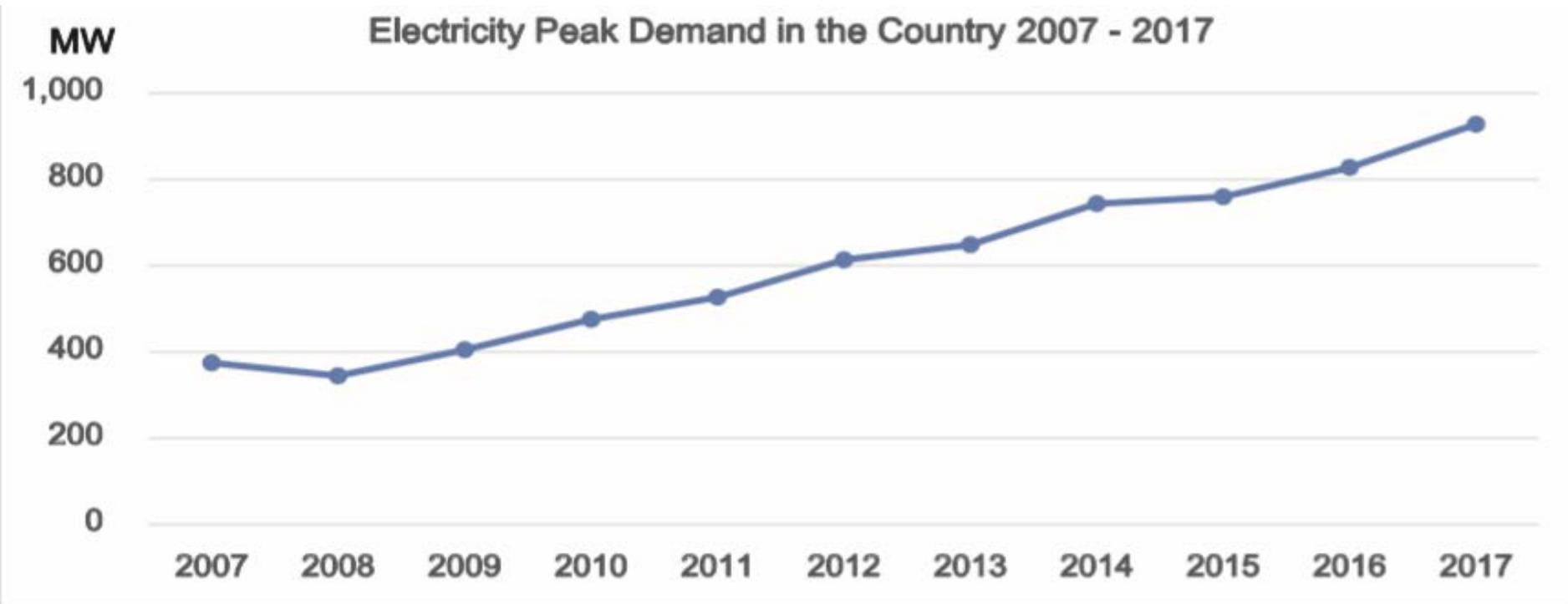
Electricity Generation of IPP and EDL



Electricity Exported by EDL and IPP



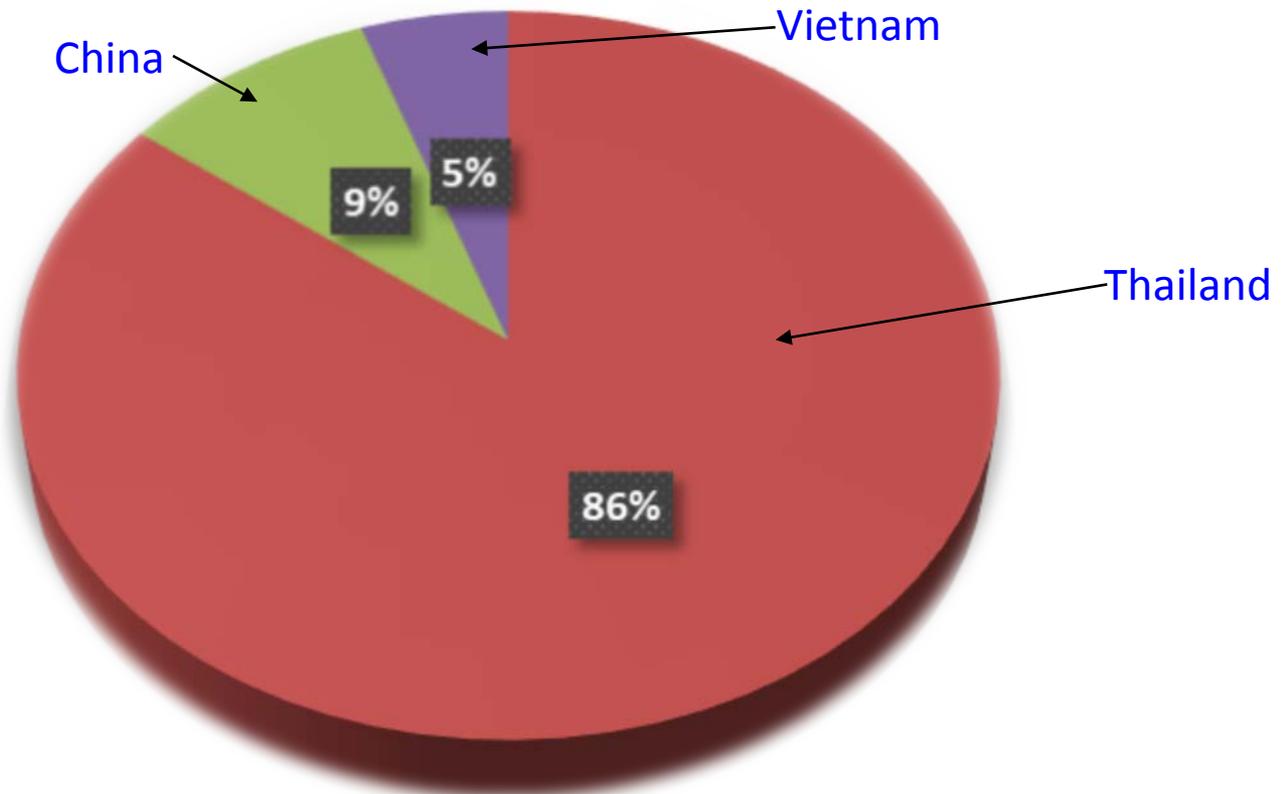
Electricity Peak Demand in the Country 2007 - 2017



* In this Table, Total Peak Demand is total of all province peaks, in different timings.

* Data only from EDL, not included supply from neighbouring utilities at border area.

Energy Imported in 2017

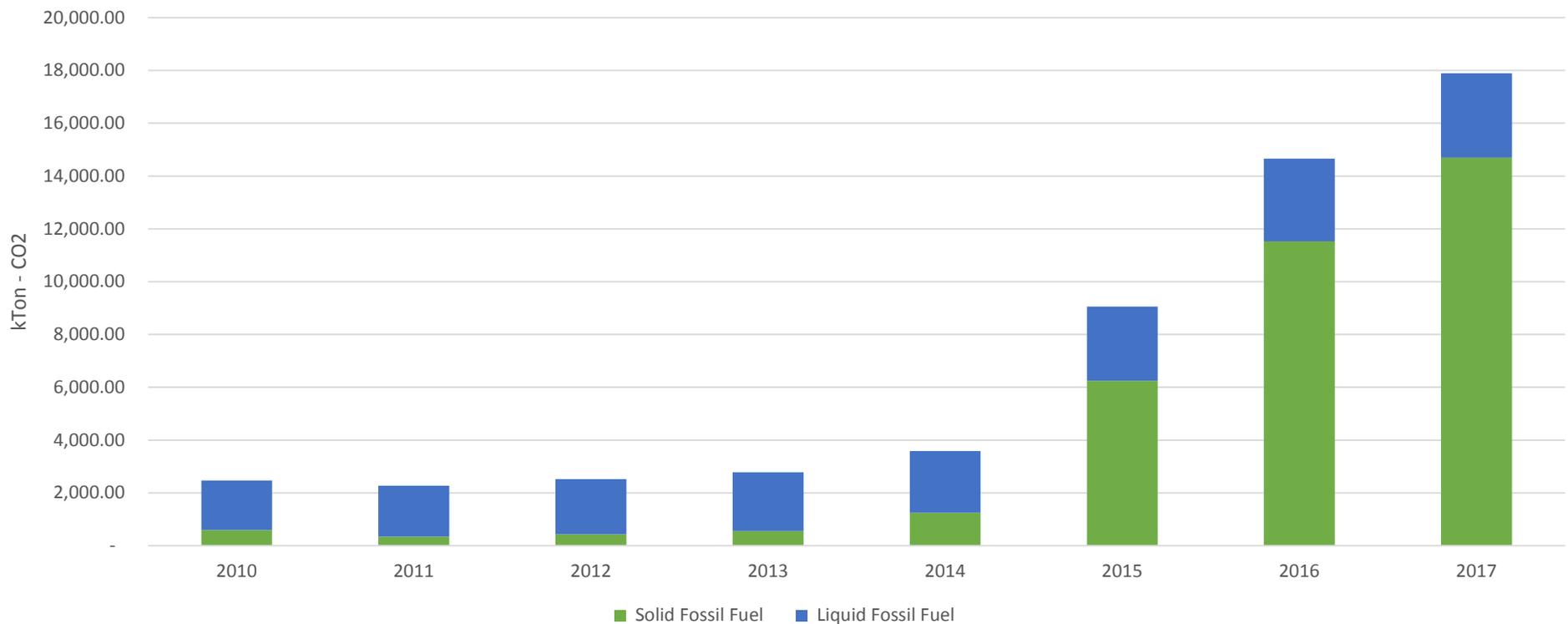


Electricity imported from other country

Thailand	85.10%
China	9.30%
Vietnam	5.30%

Emission CO₂

CO₂ Emissions from fuel Combustion by Sector



Promotion of Energy Efficiency and Conservation

- **Decrease the energy import;**
- **Promote sustainable use of natural resource and protecting the environment;**
- **Reduce energy used during office hours;**
- **Raise public awareness on economical and efficient use of energy;**
- **Making energy consumption in the country controllable by the government;**

Challenges for Energy Efficiency and Conservation

- ▶ **Public awareness and participating willingness on EE&C are still low;**
- ▶ **Majority of consumers lack knowledge of efficient use of energy;**
- ▶ **Quality electrical equipment is expensive and unaffordable to many Lao people;**
- ▶ **No existing agency directly responsible for EE&C;**
- ▶ **Public campaign on EE&C is limited.**

Plan for Energy Efficiency and Conservation

- Establishing policy on EE&C;
- Establishing regulations and guidelines on EE&C;
- Establishing agency responsible for EE&C;
- Disseminating and raising awareness of EE&C.

Major difficulties and bottlenecks currently faced in formulating energy policies

- No integrated national energy policy and no clear on existing vision to cover all energy sub-sectors.**
- Manpower with the sufficient and strong knowledge of know-how, experiences and skills on strategic planning is still limited.**
- Responsibilities among related agencies are not clearly divided, described and functioned.**
- System on collection of energy data is insufficient and it results to lack of data and information of all sub-sectors of energy.**

Conclusion

- Well-integrated energy policy needs to be established soon and so does its subsequent plans to effectively use the resources and mitigate environmental impacts.
- While hydropower is the most abundant energy source in Lao PDR, some areas of the country still rely on imported electricity in some dry months. Good operation is needed.
- Due to the potential to have installed capacity of 34,000 MW, the country need to good plans for markets to accommodate, such long-term export deals with neighboring countries, promoting use of electric vehicles and reduce import of petrol.

Thank you very much
for your kind
attentions

