

COUNTRY REPORT

FIJI

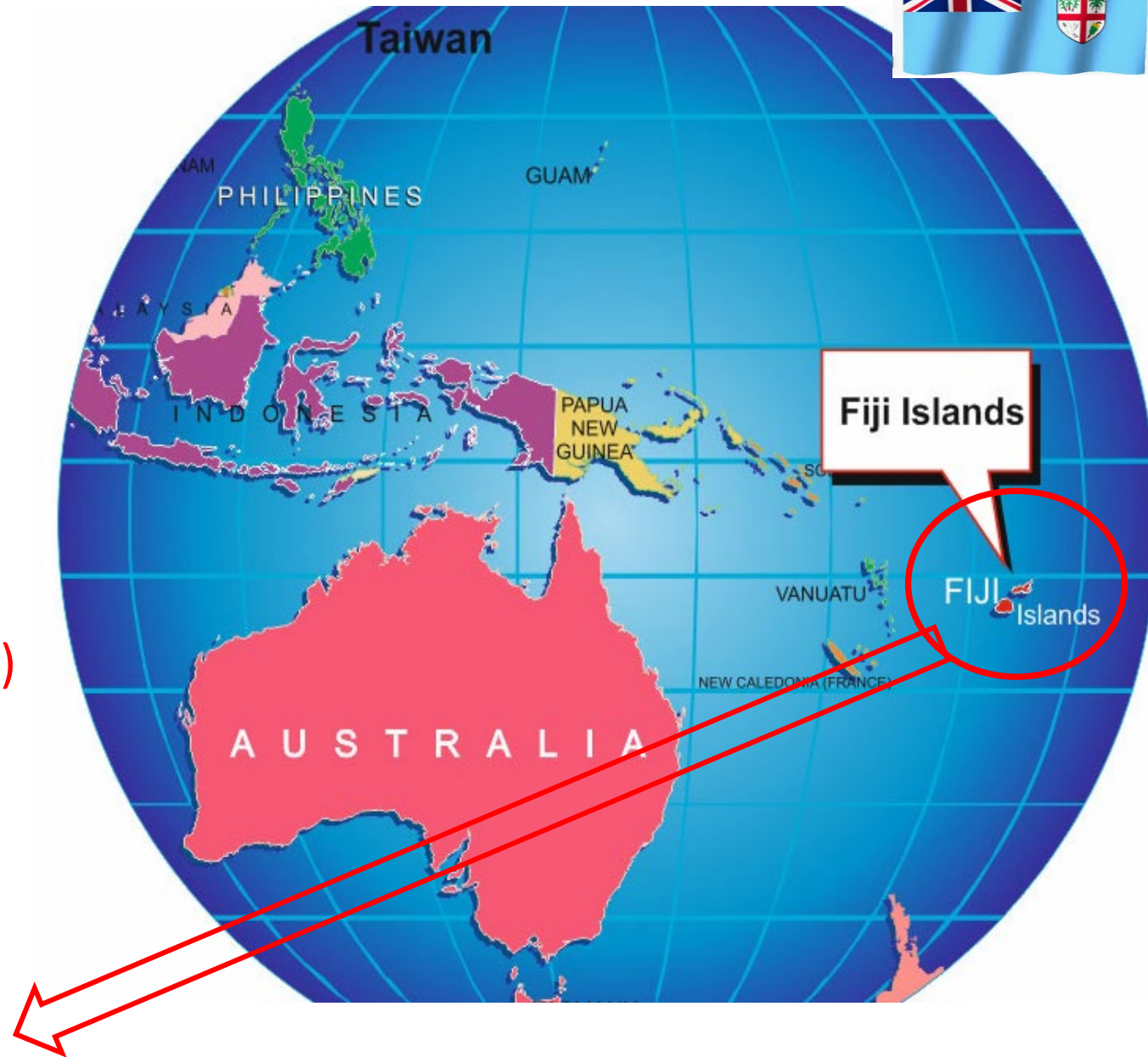


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Organization: ENERGY FIJI LTD



COUNTRY PROFILE

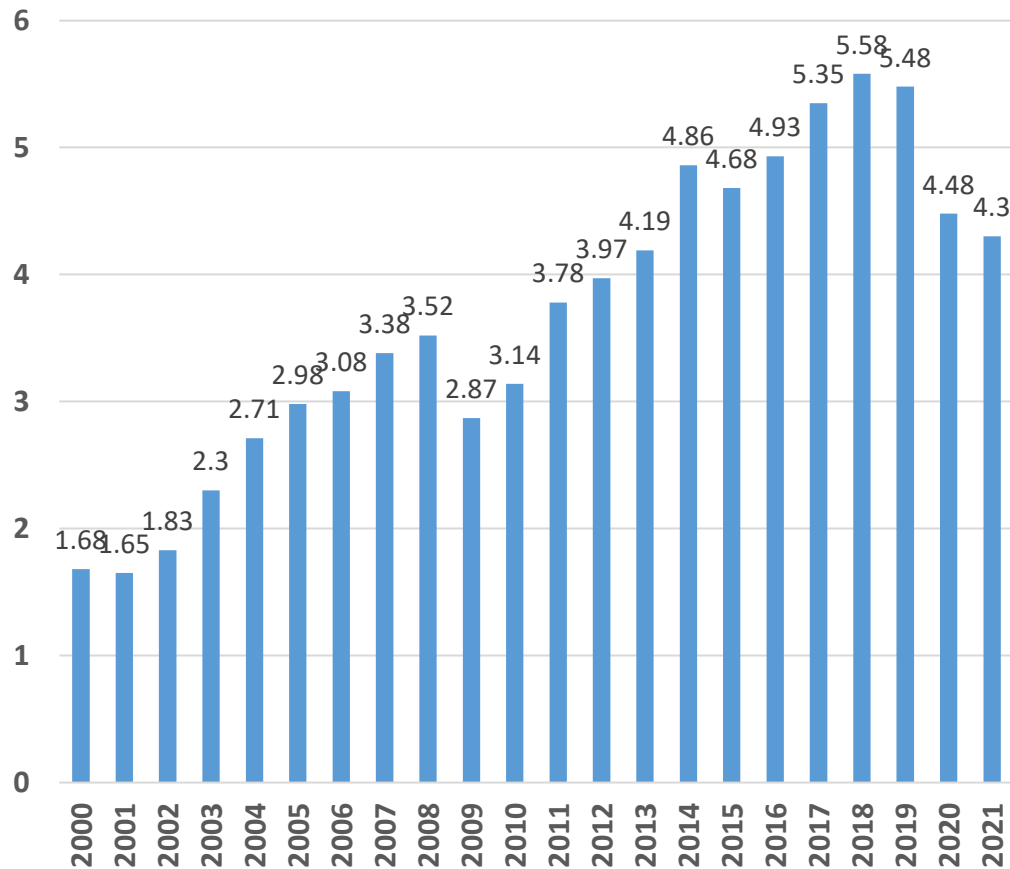
- Archipelago – over 332 islands
 - 110 inhabited
- Gained independence in 1970
 - British Colony for 92 years
- area of 18,300 sq.km
 - (7,056 sq mi)
- Population 884,867 (58,749 households)



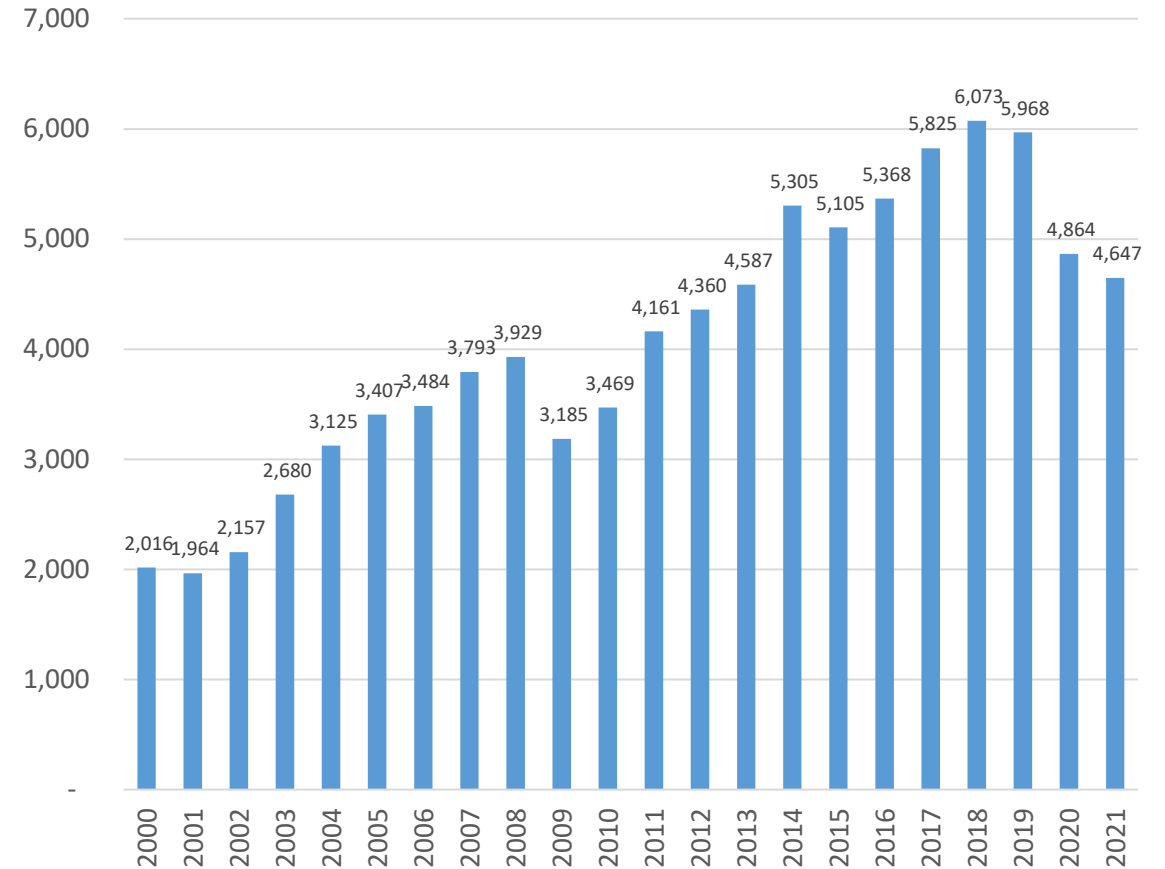


Fiji – Gross Domestic Product

GDP (in US \$billion)



GDP per capita (\$US)





ENERGY FIJI LTD



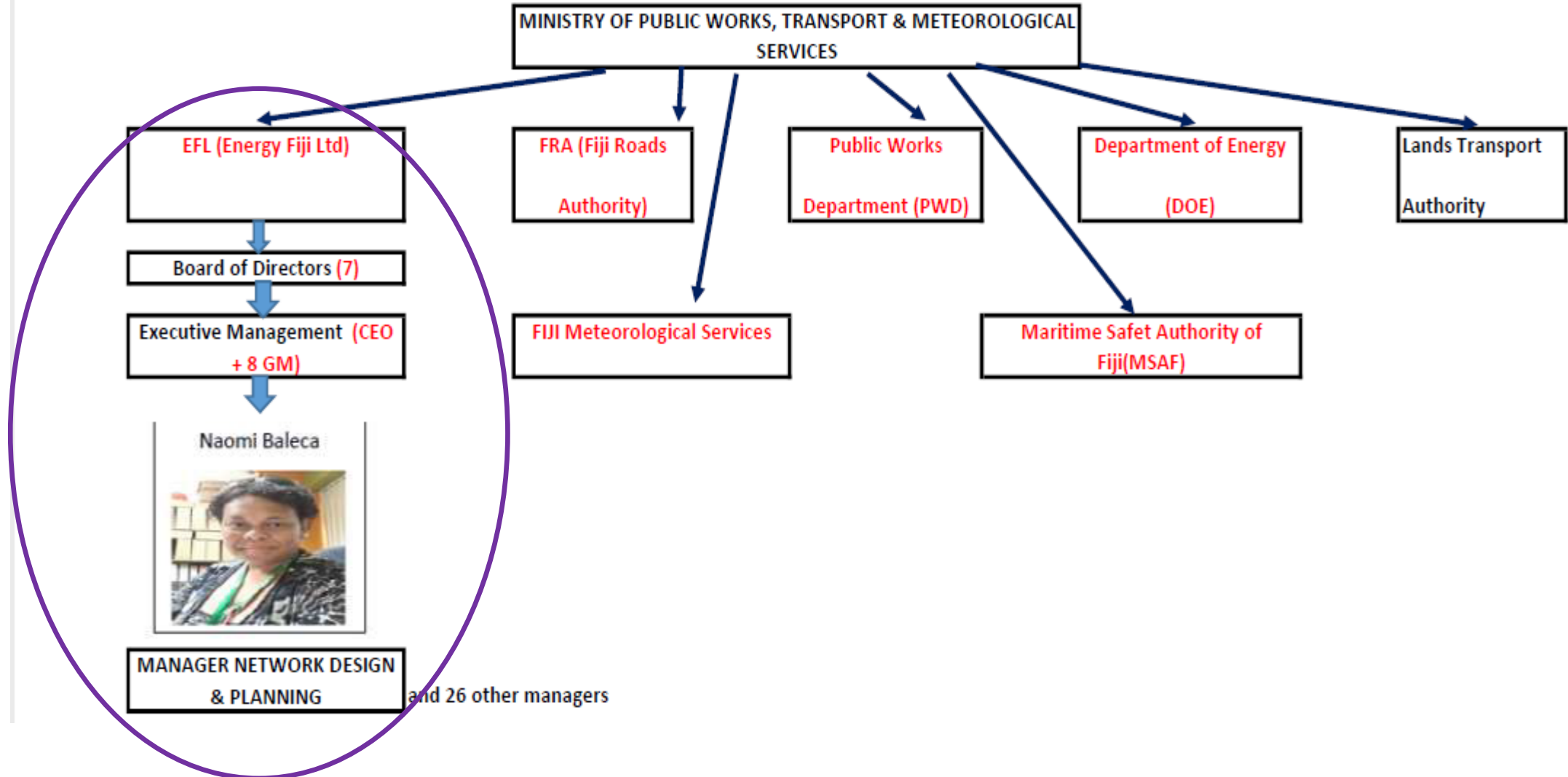
- Established in 1966 under the Electricity Act Cap 180
- Functions of Generating, transmitting, distributing & selling electricity
- Originally a public enterprise, now a **limited liability company** with shareholders (Fiji Govt 51%, Domestic Customers 5%, Sevens Pacific 44%) as of March 2018
- **Sevens Pacific** – Japanese Joint Venture formed with Chukoku Electric Power Ltd & Japan Bank of International Corporation)
- **Cheapest tariff in the Pacific – 15c/kWh**

ENERGY FIJI LTD



- **Vision** – Energising Our Nation
- **Mission**: Supply 90% of all our Energy through Renewable Sources by 2035 (currently ~60%)
- 214,628 customers at the end of Dec 2022
- 870+ employees
- Supplies 4 major islands in Fiji
 - Vitilevu → MD ~ 180 MW (63% renewable, 37% thermal & IPP)
 - Vanualevu → MD ~ 10 MW (0.014% renewable, 99.9% thermal- DURING sugar crushing season(Jun to Dec) 98% IPP)
 - Ovalau → MD ~ 2 MW (all thermal)
 - Taveuni → MD ~0.6MW (96% hydro. 4% thermal)
- Other islands, isolated settlements supplied through standalone diesel, solar or hybrid systems [via Dept of Energy (Govt) Rural Electrification Program]

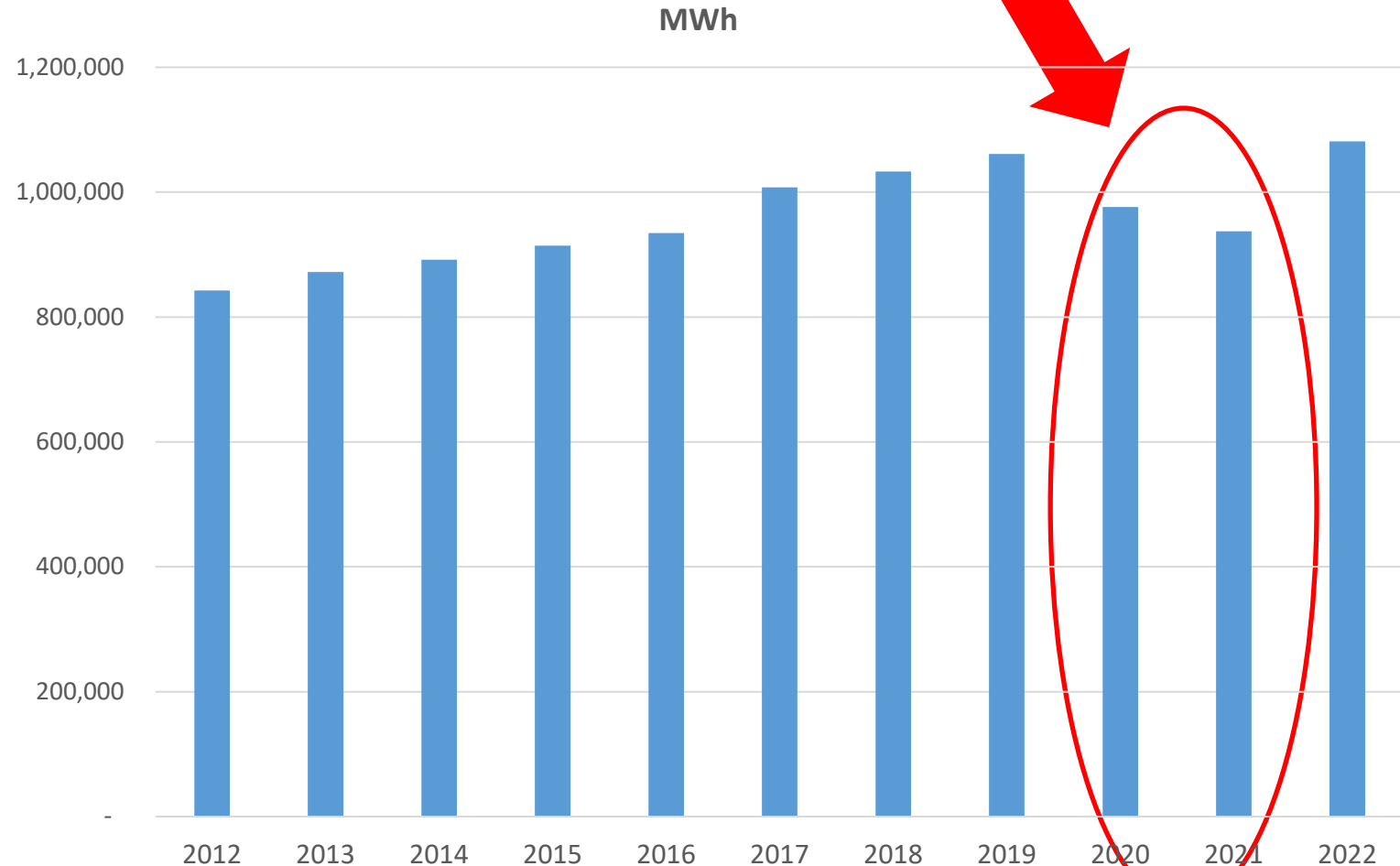
ENERGY FIJI LTD (ORG CHART)



Electricity Grid Supply in MWh (Impact of COVID 2020-21)



	MWh	kTOE
2012	842,255	72.42
2013	872,219	75.00
2014	891,789	76.68
2015	914,395	78.62
2016	934,207	80.33
2017	1,007,713	86.65
2018	1,032,947	88.82
2019	1,061,249	91.25
2020	976,373	83.95
2021	937,018	80.57
2022	1,081,461	92.99





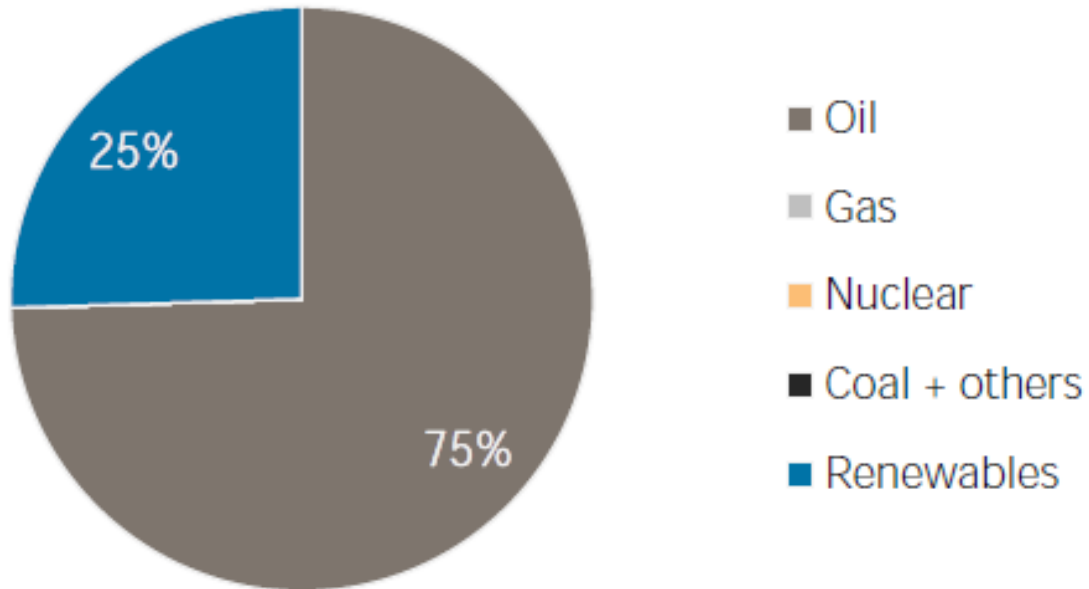
Reserves of Energy, Mineral Resources

- Mining Industries
 - Gold (existing) – Vatukoula Gold Mine
 - Copper (potential) - 1300MT (0.35 copper) 2019 estimate – Namosi
 - Bauxhite (potential)- Vanualevu
- Large untapped potential of hydro, wind, biomass, solar, and geothermal



FIJI - Primary Energy Supply

Total energy supply in 2019



	2014	2019
Non Renewable Energy Supplied (TJ)	16,869	19,471
Renewable Energy Supplied (TJ)	7,489	6,655

0.82 kTOE

0.28 kTOE

	2014	2019
Energy self-sufficiency (%)	31	25

Table 1- Energy Self Sufficient Rate

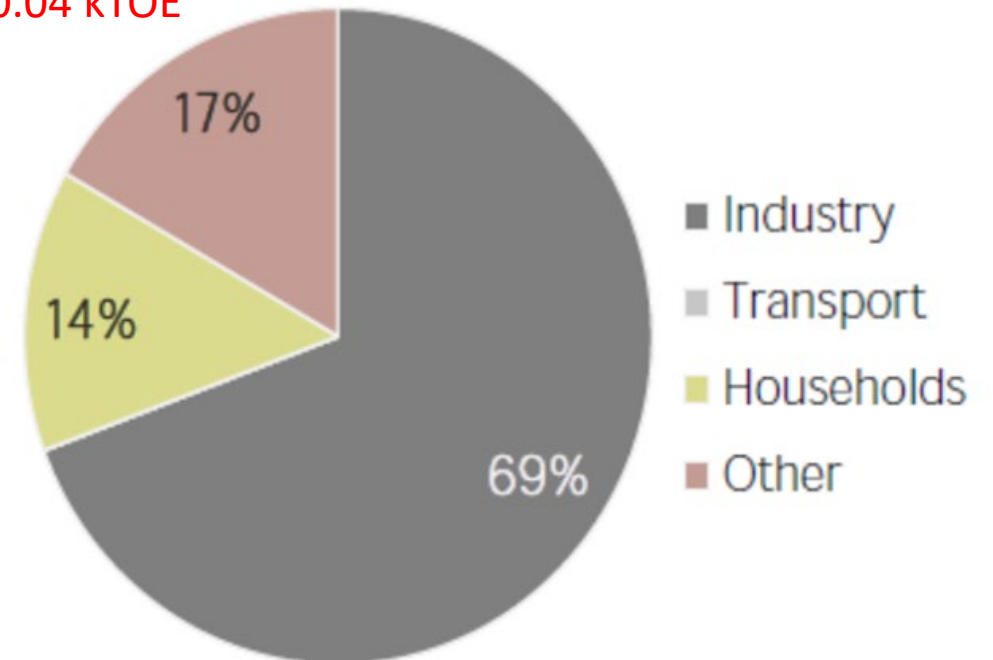
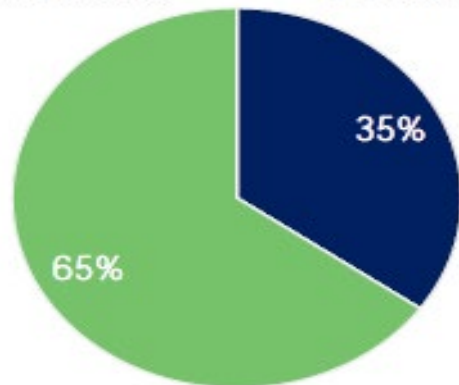


FIJI - Final Energy Consumption (Renewable Energy)

	2014	2015	2016	2017	2018	2019	
Consumption by sector				2014		2019	
Industry (TJ)				5 707		4 353	0.81 kTOE
Transport (TJ)				0		0	
Households (TJ)				661		873	0.037 kTOE
Other (TJ)				728		1 051	0.04 kTOE

Renewable energy consumption in 2019

■ Geothermal ■ Solar direct



Electricity generation by energy source

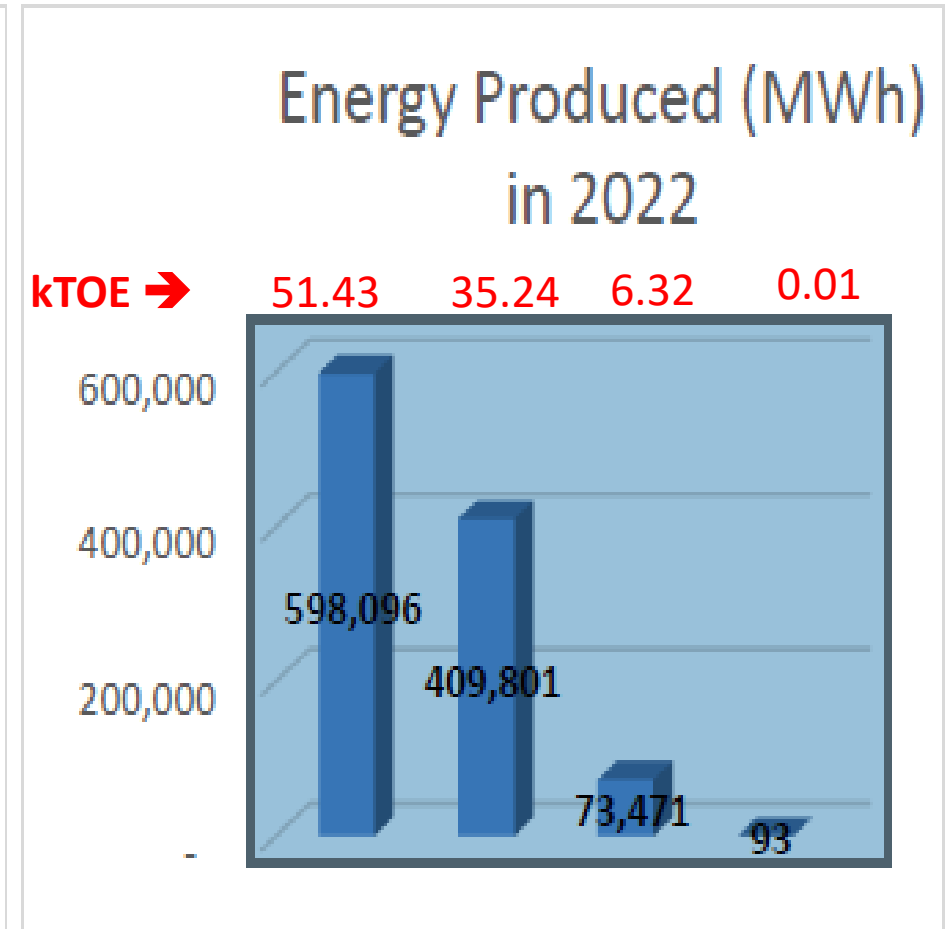
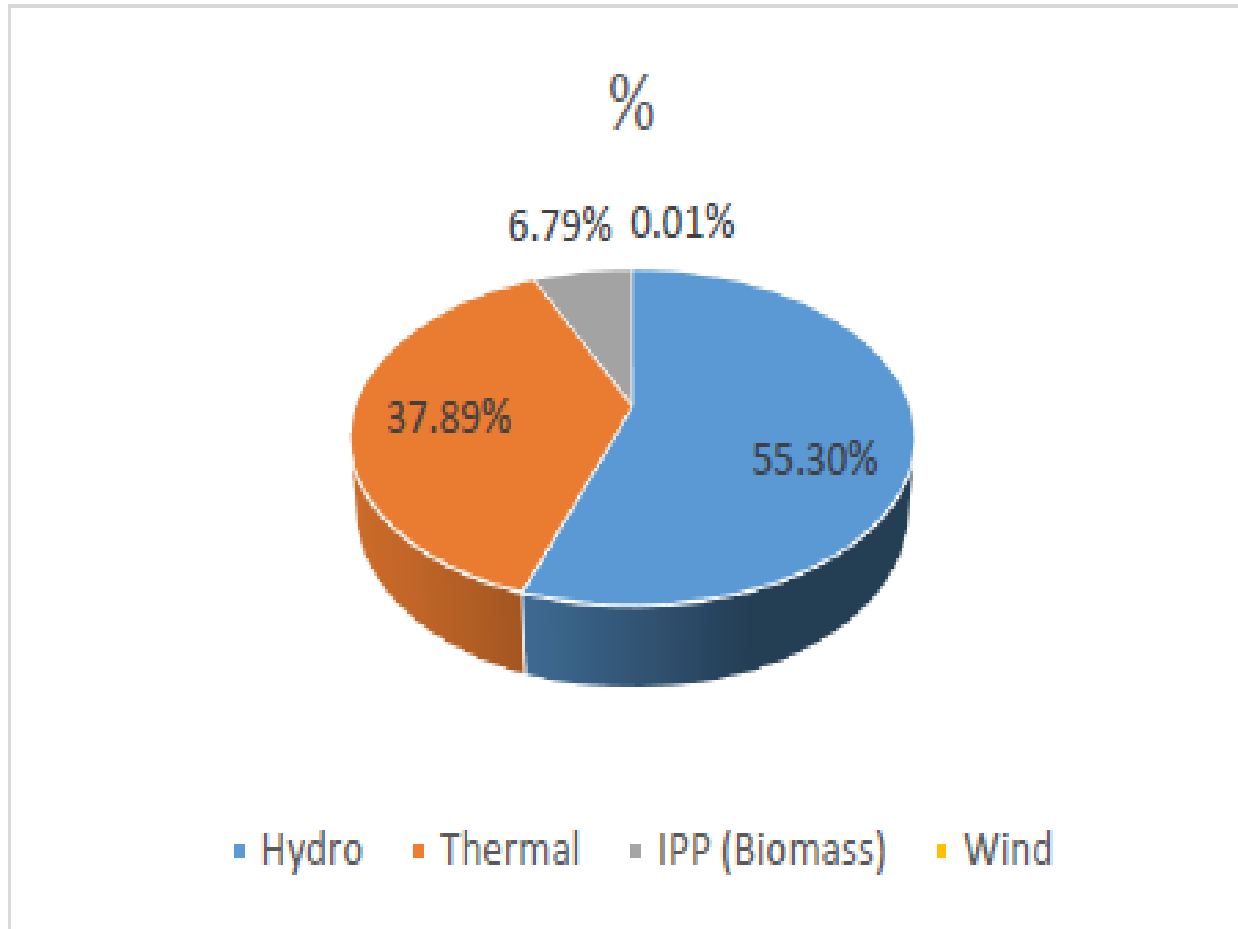
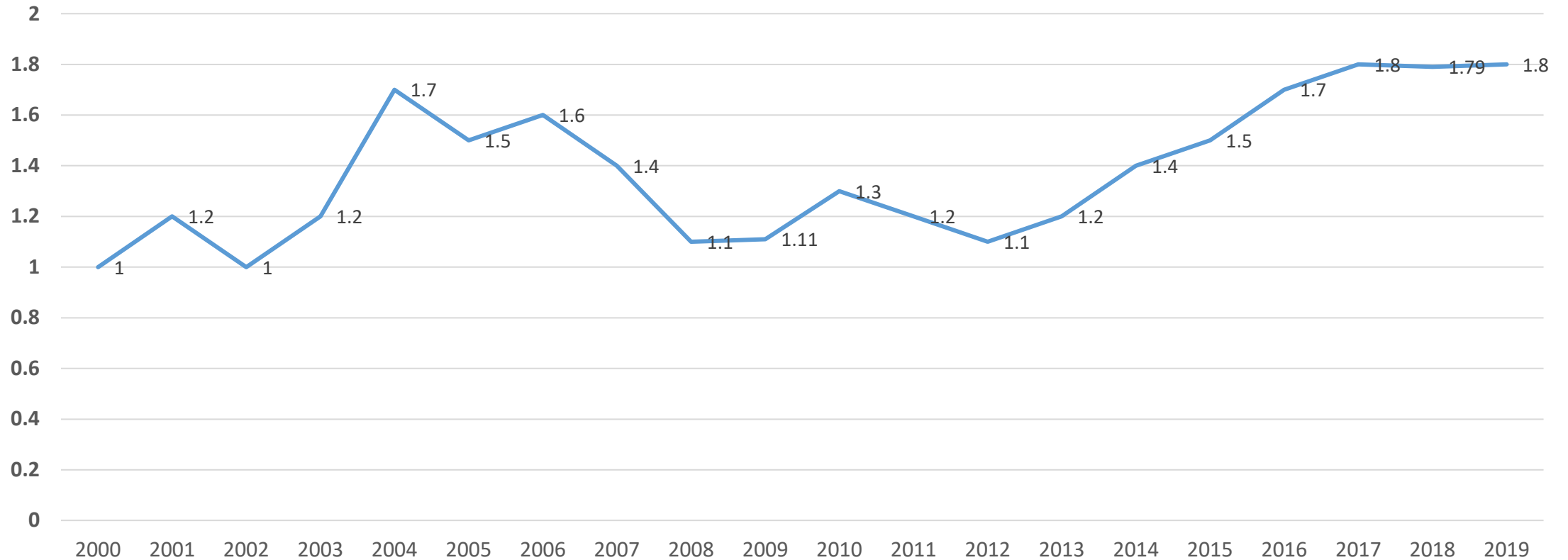


Figure 5: Power Generation/Supply Mix for Energy Fiji Ltd, 2022

FIJI → CO₂ Emissions Per Capita by year



CO₂ Emmissions - Metric Tonnes per capita



FIJI - CO₂ Emission by Sector (2006-2014)

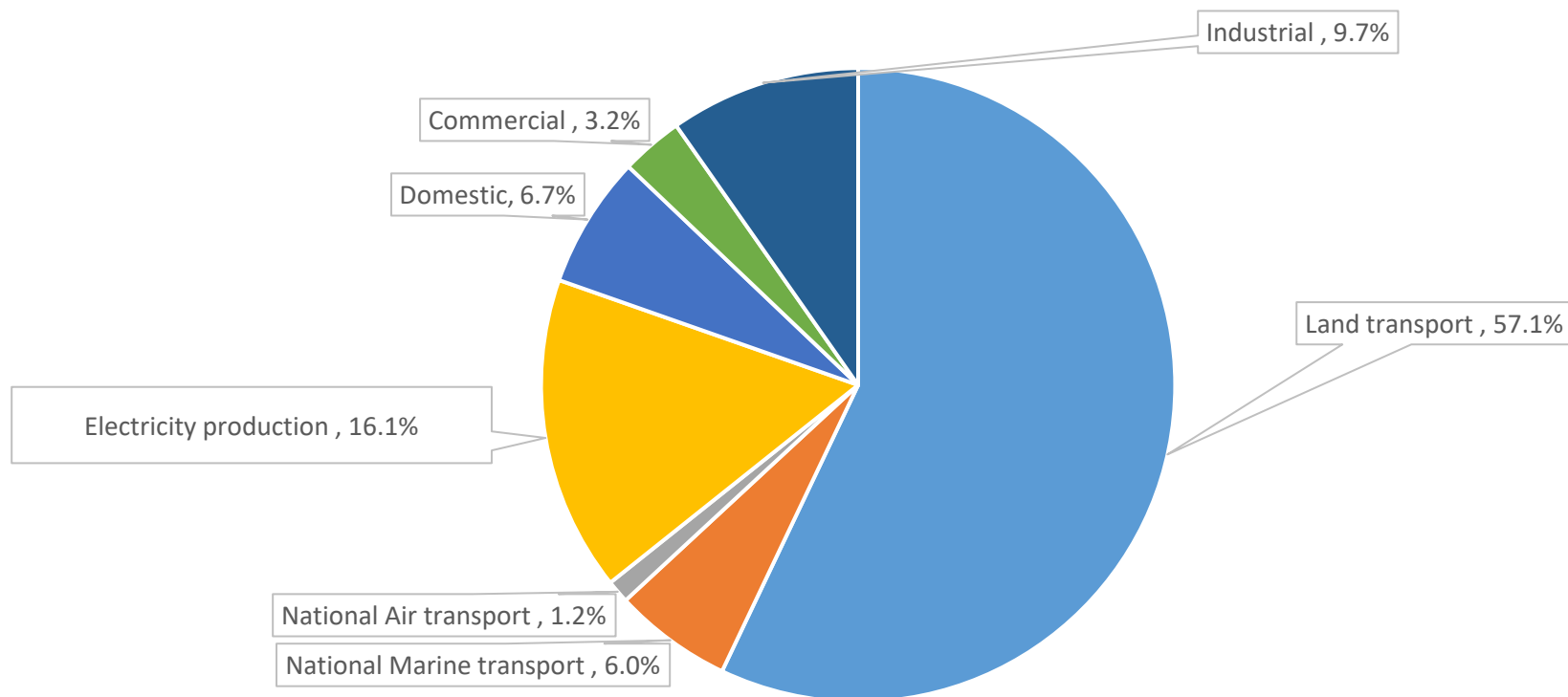


Energy Sector Emissions (Gg CO ₂)												
		2006	2007	2008	2009	2010	2011	2012	2013	2014	Average	%
	Mt →	0.916	0.901	0.91	0.876	0.879	0.881	0.876	0.904	0.918	0.896	
Land transport		916	901	910	876	879	881	876	904	918	896	57.1%
National Marine transport		94	94	94	94	94	94	94	97	97	95	6.0%
National Air transport		18	18	18	18	18	18	18	18	18	18	1.2%
Electricity production		286	200	216	233	299	238	219	247	335	253	16.1%
Domestic		86	85	85	176	187	85	85	86	78	106	6.7%
Commercial		48	44	58	56	62	59	41	41	39	50	3.2%
Industrial		105	99	134	164	188	187	168	166	162	153	9.7%
Total		1553	1441	1515	1618	1728	1563	1501	1559	1648	1569	100.0%



FIJI - CO₂ Emission by Sector

Fiji Sectoral Emissions CO₂ Average 2006 - 2014



CHALLENGES – ENERGY POLICY FORMULATION



- **Government stakeholders. NGO's and other stakeholders in the energy sector to work together.**
- **Getting the right people for the individual ministries**
- **Data is a major issue. Lack of data**
- **Politics is also a major factor.**
- **Creating an Enabling environment for Independent Power Producers (IPP)**
- **No regulations in place to monitor imported energy products**



What I Hope to Gain from this Training?

- **Japan** - renewable energy trends and transition towards decarbonization / reduced reliance of fossil fuels.
- enhance knowledge of energy policy, and improve policy planning viability – especially in the context of a power utility and implementing renewable sources of energy and their efficient operations
- Challenges faced by Japan & other country participants towards decarbonizing efforts, conservation of energy & energy efficiency
- Trends in demand side management consultancy – and implementation in end customers
- New technologies (fuel cell, hydrogen) for clean energy production and site visit
- Learn about ESCOs and how concept can be implemented in Fiji



REFERENCES

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