

Self Sufficient Energy Village: Energyzing Local People

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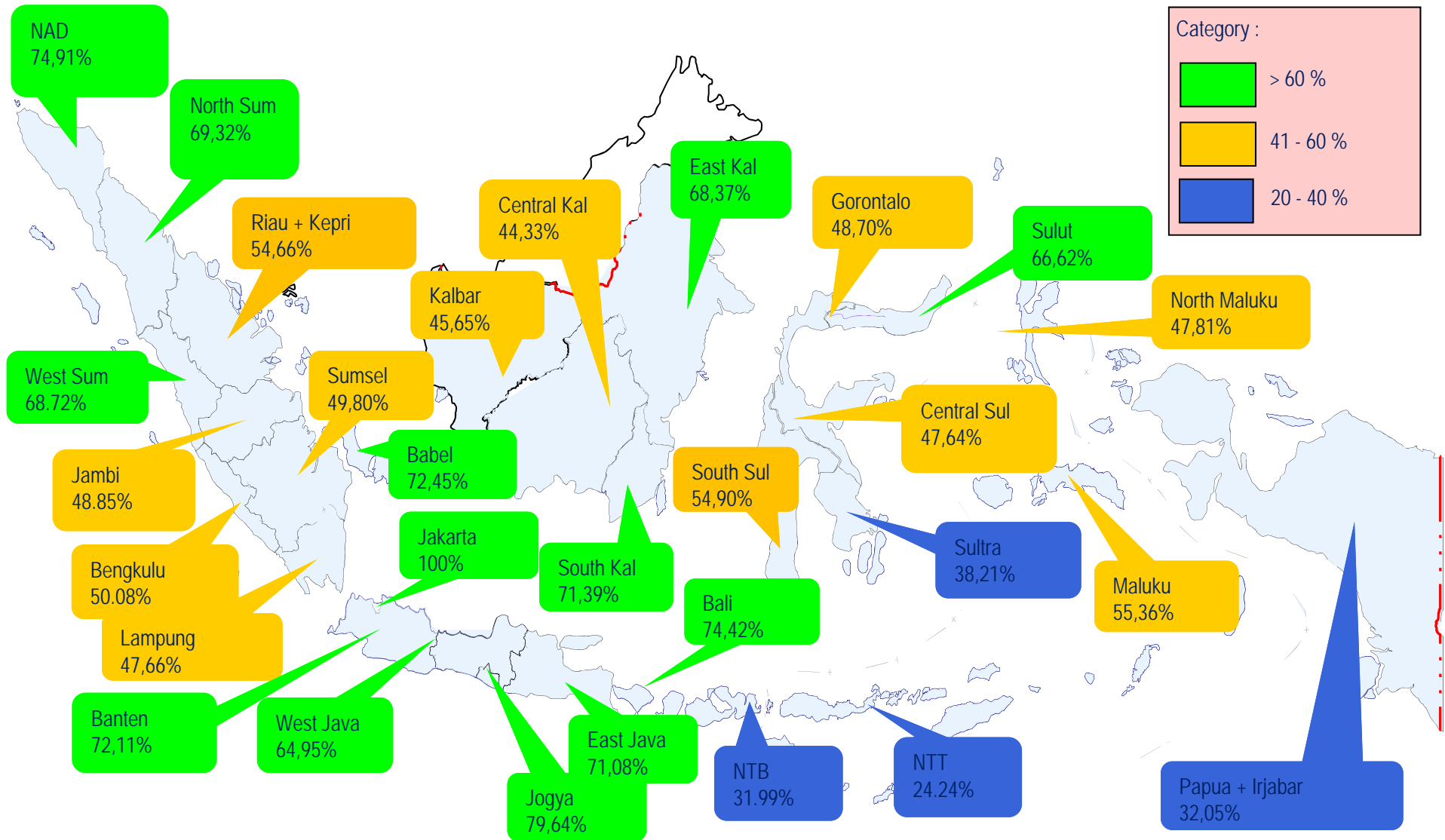
Center for Data and Information on EMR

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Current Energy Situation:

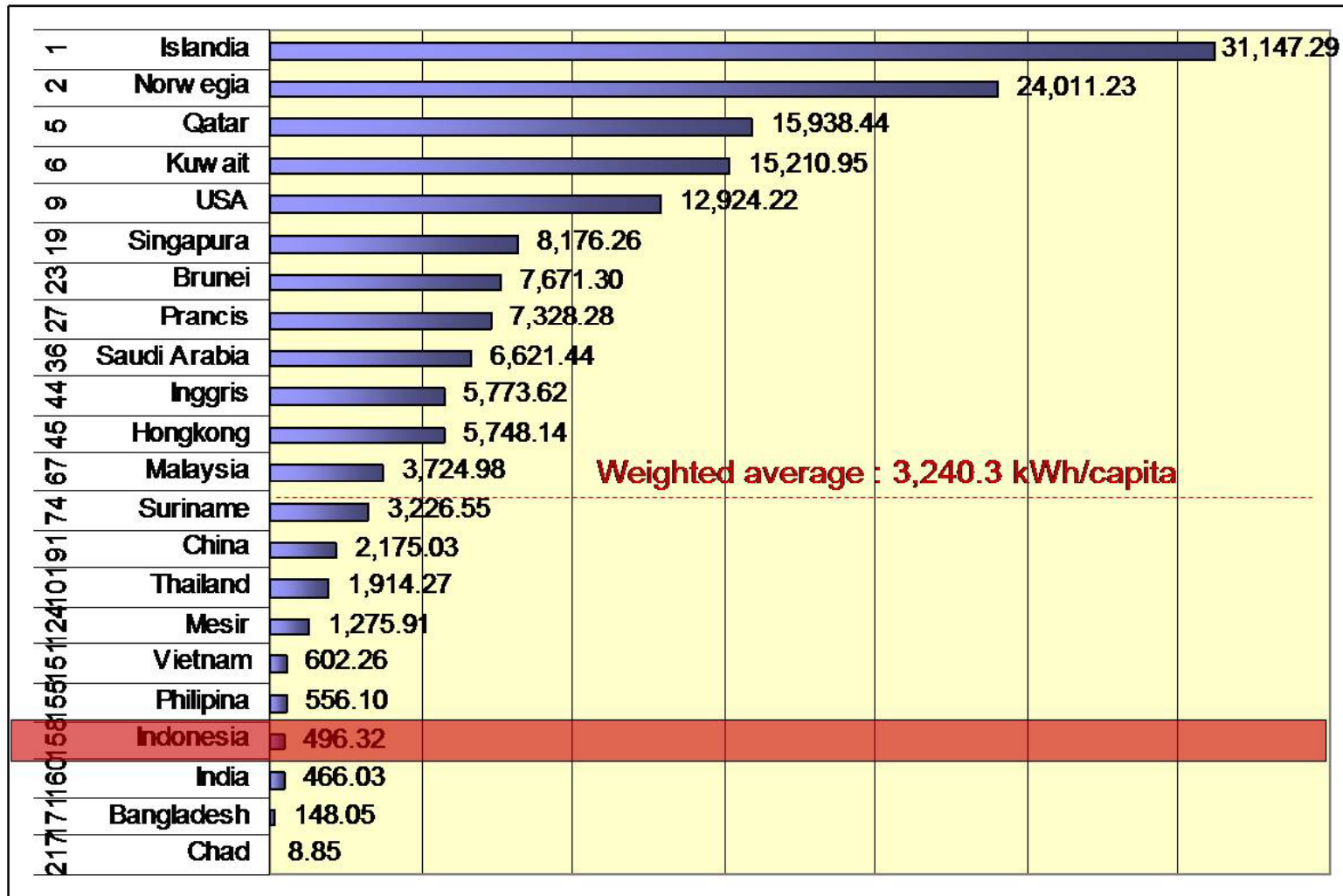
- Final energy consumption grew at around 4% per year during 2000-2008
- Share of oil is decreasing in total primary energy mix, substituted by coal and gas while share of renewable is relatively stable
- Lack of investment on rural energy project as demand scattered
- Electrification ratio is around 65%
- Energy elasticity is > 1

Regional Electrification Ratio



To improve electrification ratio and to meet increased demand, PLN need at least US\$ 58 billion from 2008-2018

Electricity Consumption (Kwh) Per Capita



Posisi 158

Sumber: www.nationmaster.com, data 2006

Progress of Energy Mix Implementation

Type of Energy	2005		2006		2007		2008	
		%		%		%		%
Oil (MMBOE)	493.6	55.1	459.3	51.1	474.0	49.4	455.6	44.9
Gas (MMBOE)	191.2	21.3	196.6	21.9	183.6	19.1	193.4	19.1
Coal (MMBOE)	173.7	19.4	205.8	22.9	258.2	26.9	322.9	31.8
NRE								
• Geothermal (MMBOE)	10.9	1.2	11.2	1.2	11.4	1.2	13.4	1.3
• Hydro (MMBOE)	27.03	3.0	24.3	2.7	28.5	3.0	29.1	2.9
• Solar (MBOE)	0.5	0.0	6.3	0.0	14.1	0.0	22.1	0.002
• Wind (MBOE)	0.6	0.0	2.4	0.0	7.8	0.0	9.2	0.001

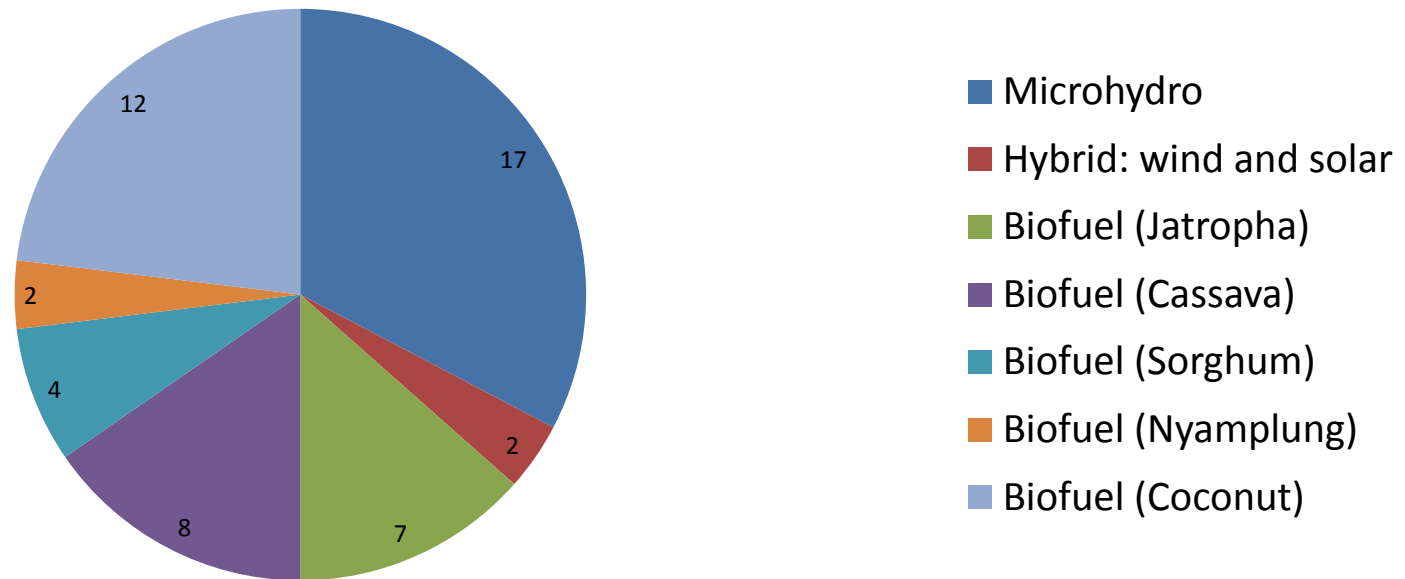
Type of Energy	Resources	Installed Capacity
Large Hydro	75,670 MW (e.q. 845 MMBOE)	4,200 MW
Geothermal	27,510 MW (e.q. 223 MMBOE)	1,052 MW
Mini/Micro Hydro	500 MW	86.1 MW
Biomass	49.810 MW	445 MW
Solar	4.80 kWh/m ² /hari	12,1 MW
Wind	9,290 MW	1,1 MW

Self Sufficient Energy Village (DME)

- An initiative to speed up energy supply (electrification ratio) with low cost and easy implementation
- An entry point to promote local economic growth (Pro Job, Pro Growth, Pro Poor),
 - not only for consumption but also for productive use
- Utilization of locally available renewable energy
- A community (participatory) based development
- Support Indonesia's GHG reduction commitment
- Targeted to reach 3000 villages in 2014

DME Progress 2009, Based on Energy Sources

(number of villages)



Year	2010	2011	2012	2013	2014
DME Established	350	300	500	500	500
Cummulative	1200	1500	2000	2500	3000

Government Budget and Employment Generated from DME Project

No	Pekerjaan	Lokasi	Volume (desa)	Anggaran (Miliar Rp)	Perkiraan Tenaga Kerja*)
1	Mycrohydro based DME	Sumut, NTT, Papua, Papua Barat, Jabar, NTB, Jateng, Sultra, Kalsel, Lampung, Sulbar	17	26,28	460
2	Wind and Solar based DME	Jateng, NTT	2	8,00	55
3	Biofuel based DME (Jatropha))	Lampung, DIY, Jateng, Sulut, NTB, Papua	6	6,75	1.100
4	Biofuel based DME (Cassave)	NAD, Banten, Jabar, Jateng, Jatim	8	8,00	2.640
5	Biofuel based DME (Sorghum)	Lampung, Jateng	4	4,00	720

*) Perkiraan tenaga kerja : termasuk tenaga kerja langsung dan tidak langsung sewaktu proyek dan dampak penyerapan tenaga kerja paska proyek

Summary

- The DME initiative is good to enhance energy supply and to promote economic activity for local people in remote areas, however monitoring of reliability is needed
- DME project is generally government funded, private sector involvement should be increased
- A specially dedicated institution in regional level may be needed to manage the initial procurement, installment, and finding financial support
- The capability of local people to manage day to day operation and maintenance of DME project needs to be enhanced