

TONGA ELECTRICITY COMMISSION

Komisoni 'Uhila 'a Tonga
by Kilisimasi Ma'asi

Visone

- ❖ 'Oku mau 'i heni ke fakapapau'i 'oku fe'unga 'a e totongi 'uhila kihe kau ma'u 'uhila, pule'anga pea moe kautaha 'uhila foki - pea ke tauhi 'ae tu'unga malu mo hao 'a e 'uhila kihe kakai 'o e fonua.

Fa'unga 'a e Komisoni 'Uhila

- Fili 'e he Minisita Pa'anga 'a e kau Komisiona 'Uhila
- Fokotu'u ki he Kapineti
- Pea toki tali mei ai ke fakanofu nautolu.
- Ko e Komisoni 'Uhila 'oku tu'u tau'ataina kakato pe 'iate ia pe.

Fatongia 'a e Komisoni 'Uhila

- ✓ Fakapapau'i 'oku muimui 'a e sekitoa 'uhila kihe lao mo hono ngaahi tu'utu'u ni;
- ✓ Fakapapau'i 'oku muimui 'a e ngaahi kupu fekau'aki 'I he sekitoa 'uhila ki he aleapau ngaue - concession contract;
- ✓ Fakahoko mo foaki 'a e laiseni ngaue faka'uhila kia kinautolu kuo taau kenau fai 'a e ngaue faka'uhila-licensing of electricians;
- ✓ Fa'u mo fokotu'u atu 'a e ngaahi lao ki he malu moe hao 'a e kakai mei he ivi 'o e 'uhila.;
- ✓ Fakapapau'i koe fale kuo fakauaea kuopau ke muimi ki he lao 'o e fakauae.

KEY ELECTRICITY STATISTICS

- ▣ More than 92% of the Kingdom's Homes are Grid connected
- ▣ 20,267 Residential customers; 4,820 Commercial customers
- ▣ 0.5% on very small islands have their own mini-grids
- ▣ 65,574,965 kWh delivered to customers last year 2020
- ▣ 16,038,748 litres of diesel used for generating electricity last year
- ▣ Total Installed Generating Capacity of around 18MW whereof 15MW Diesel and 3MW Solar (16%)
- ▣ Government Target of 50% Renewable Energy Generation by 2020. Projects to be fully operational by then include an IPP of 2MW (operational mid-2017) and a Japan Government Wind Farm of 1MW (operational 2019). Just signed a further 6MW of Solar to be operational 2021
- ▣ Distribution System comprises 301 km of HV lines and 213 km of LV lines. Over half of the Grid will have been renewed by 2021
- ▣ Current Line Losses of 8.5% (down from 22% in 1999) and expected to fall to 5-6% within the next 5 years.
- ▣ Diesel Fuel Efficiency now 4.00 kWh/litre up from less than 3.7 kWh/litre in 2008

ELECTRICITY TARIFF

- ▣ In the last two years the Electricity Tariff has been decrease from 83.16 seniti/kWh (41 US cents) to 61 seniti/kWh (31 US cents). Further reductions will follow as new RE generation implemented
- ▣ Savings from RE are passed on in FULL to Consumers
- ▣ Smart Metering being introduced gradually and eventually this could lead to a lower tariff for consumption in OFF-PEAK hours
- ▣ Reduced Rate Tariff for Residential Consumers with limited demand (under 100 kWh/month).

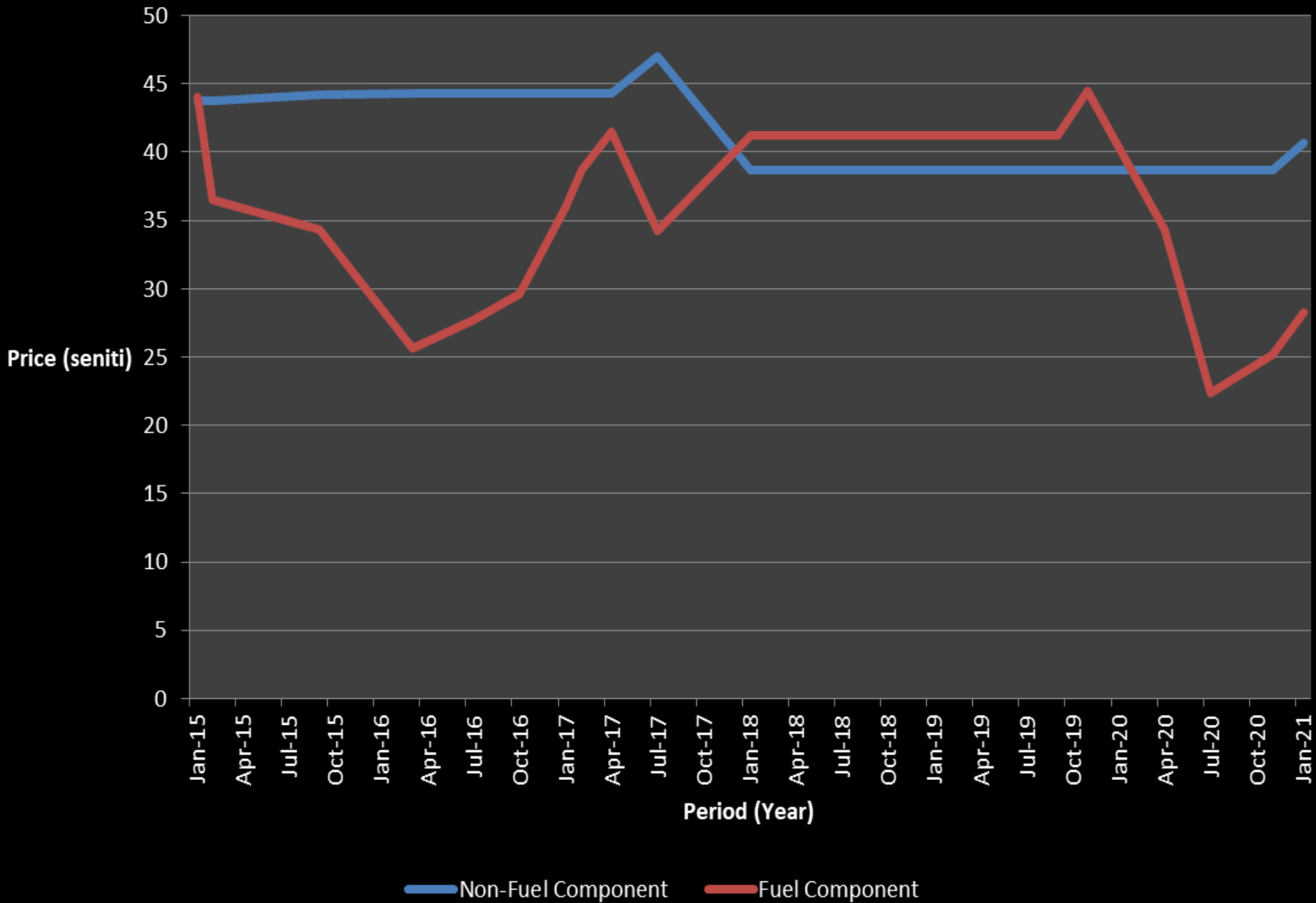
REGULATORY MODEL

- Concession Contract with (now) 5 year Resets
 - Last Reset in 2021 after full review of power producers OPEX and CAPEX for 2015-2020 : 1% decrease in Non-Fuel Component of Tariff (less than Inflation since previous Reset in 2015)
 - Non-Fuel Tariff changes annually only with inflation. No increase allowed for 2016 (deflation!) and a similar result expected for 2017
 - Fuel Tariff allows only “efficient” use of diesel. Pre-set Fuel Efficiency, Parasitic and Line Loss targets – if not met then actual fuel purchase cost reduced. INCENTIVE to meet Efficiency Targets

Electricity Regulation and its impact on the TERM targets

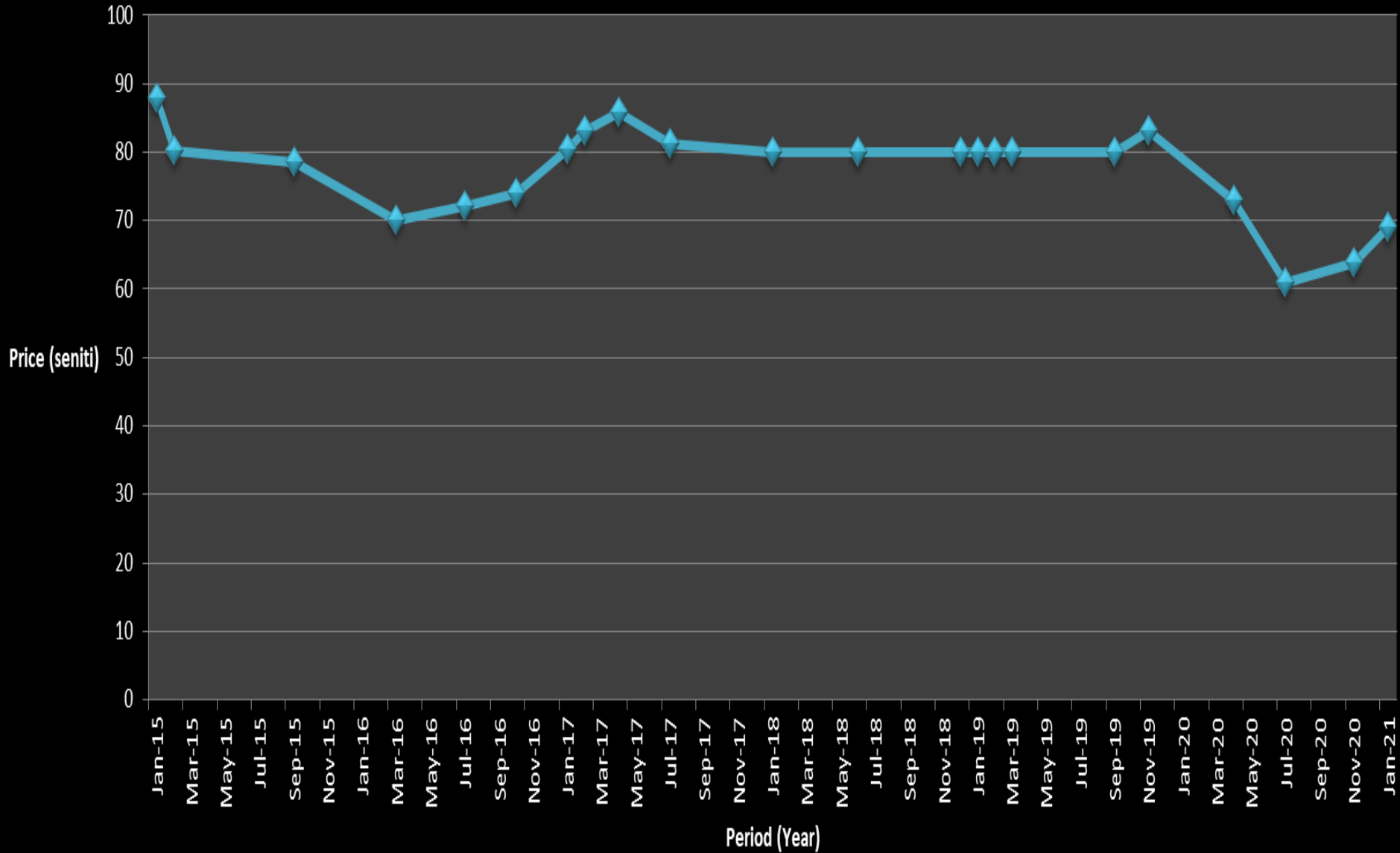
- ❖ 50% RE Generation by 2022; 70% RE Generation by 2030
- ❖ We need IPP – Why?
- ❖ Growth in electricity demand and aging capacity
- ❖ Requirement of new investments in power generation
- ❖ Public finance for power investments is not generally available
- ❖ Challenges and risks of technologies that are relatively new
- ❖ Governments seek for competition in power production
- ❖ New generation investments by Independent Power Producers (IPPs) with Power Purchase Agreement (PPAs)
- ❖ Utility should remain responsible for generation expansion planning and keeping up reserve capacity

Non-Fuel Component vs. Fuel Component (2015-2021)



Tariff Approved (2015-2021)

◆ New Tariff Approved





THANK YOU