Achieving a Competitive Power Rate

Slide 3

In 1992, Philippines had the highest power rate among the group. In 2011, about 20 years after, Philippines still have the highest power rate. To know the complete story, the generation mix and price comparators will be shown.

The next 2 charts show the generation mix. In 1992, we generated about 26 Billion kWh, 7% of which came from coal and 54% from oil-based generation. You will also recall that 1992 was the height of the power supply crisis of the 90s. In 2011, we generated 69 Billion kWh, 37% came from coal, 5% from oil and 30% from natural gas. Renewable generation from geothermal and hydro contributed 39% in 1992 and 28% in 2011.

In the same period, we saw coal prices increase by about 200% and oil prices by about 400%. Given the relative percentage share in the generation mix, the significant increase of exchange rate increasing during the same period, and further considering that the natural gas price is indexed to oil by 50%, just the sheer fuel cost of generating from coal, oil and natural gas, expressed in Pesos per kWh, almost tripled during the same period.

In middle 90s, the government already adopted the policy of reflecting the true cost of generation in the power rates. The government chose not to subsidize power consumption and to direct its meager resources in investing in education, health, and housing - priorities of high social impact.

Midway through 1992 and 2011, we got EPIRA and added Universal Charges for Missionary Electrification and recovery of stranded NPC costs and debt in our power cost. Shortly after, we also added VAT in the power cost.

And then we ask ourselves, “Why do we pay the highest power rate in the regions?”

There are ways to reduce power rates. But the key question is **by how much and why**? I hope to give you the answer in the next few slides.

Slide 4

These charts which show the per capita GDP and per capita kWh consumption convey a lackluster performance of the Philippines.

However, when these data are shown as a ratio of how much GDP is made for each kWh of electricity consumed – which is a measure of productivity - we are better than most of our neighbors. We are midway between them – that is, Vietnam, China, Malaysia, and Thailand, including South Korea and Taiwan and the first world economies of Japan, Singapore and Hong Kong.

In power rates, however, we are second highest after Japan and only slightly higher than Singapore. There is another way of appreciating these data points so that we can answer the key question we raised earlier. I will show this in the next slides.

Slide 5

We can place the data points in a 2 dimensional chart. We can locate these data points on an X axis using the per capita kWh consumption and on a Y axis using the per capita GDP.

A country with high per capita GDP and higher per capita kWh consumption like Singapore will be located somewhere at the top right corner. A country with a low per capita GDP and low per capita kWh consumption will be located in the bottom left corner of the chart.

Slide 6

Now, this chart shows where the countries are located relative to each other in terms of per capita GDP and per capita kWh consumption. Note, we are joined in the bottom left corner by Indonesia and Vietnam. Singapore, Japan and Hong Kong comprise a cluster in the top right corner. And the manufacturing countries like Korea and Taiwan comprise another cluster.

Slide 7

Using the same chart, we can add another layer of information by depicting a country's GDP productivity with the size of the bubble. Bigger bubble means higher GDP per kWh.

No need to belabor the point that Singapore, Japan and Hong Kong have the biggest bubbles. What is interesting is that Indonesia and the Philippines stand out among the remaining countries. We are better than all of them. ᵛ

Slide 8

The bubble size can also depict power rates, and color-coded to show blue for the privatized power sector and orange for the government-owned or government-subsidized power sectors.

Countries with privatized power sector have high rates. Countries whose power sector is government-owned have lower rates. One is thus easily drawn to the specious conclusion that to have low power rates, the power sector should be government-owned, if not government-subsidized. I will only go so far as to say that government can do a lot to reduce power rates.

Slide 9

We can also locate the data points along an X axis based on power rates and a Y axis based on per capita GDP. A country with a high per capita GDP and a high per kWh rate, like Japan, will be located in the top right corner. A country with a low per capita GDP and low power rates, like Vietnam, will be located in the bottom left.

Slide 10

This chart shows where the countries are located with respect to each other in terms of power rates and per capita GDP.

A circle can be drawn and call that the neighborhood. We are the odd-man which cannot also belong to the likes of Japan, Singapore and Hong Kong. While they have high power rates we have low GDP per capita.

Slide 11

Using the same data point location and adding another layer of information gives an interesting picture of the neighborhood. We can use the bubble size to depict productivity – the bigger the bubble, the higher US$ GDP is generated for each unit of kWh use of electricity.

We are competitive – we make more US$ of GDP for the same unit of kWh use of electricity than all our 3rd world neighbors, except for Indonesia.

Slide 12

But when GDP productivity however is expressed in term of how much US$ GDP we make for every US$ paid for the kWh use, the picture drastically changes. Note how small the Philippine bubble shrinks when productivity is expressed in terms of every dollar paid for power.

That is what we must address ourselves to – how much should power rates be reduced to keep our competitiveness in GDP/kWh productivity.

Slide 13

It's not about reducing power rates per se. It's about reducing rates with the purpose of making the Philippines competitive when compared to its neighbors.

We need to be at par with Malaysia, Thailand and Vietnam in terms of GDP productivity for every dollar paid in power. We need to target a reduction in power rates by 20%.

Having defined the quantum and rationale in answer to the first 2 questions, we can now address ourselves to the last 2 questions, "**From where will the power rate reduction come**?" and "**To whom will the power rate reduction be given**?"

Slide 14

Just like the saying "all roads lead to Rome", there is not one path that leads to lower power rates. There is not one silver bullet to bring down power rates.

There is the path of "**Supply Management**" which gives expression to the purview that "market share is the reward for low price". Note the many other paths from where this path originates. It is quite obvious that we won't enjoy low power rates if the method of procurement and contracting does not engender low prices either from competition or the length of the term of contract. Neither should we expect low power rates if we do not have adequate and reliable supply.

This is also the path which explains that because of our archipelagic geography we are constrained to have a transmission system with a North to South layout and with island grids that cannot share reserves or generation diversity. All of these just make generation and transmission more costly. There

is the path of "**Wires Management**". We will obviously get high rates if we keep mediocre performance standards. Our 2011 losses and own-use is 19%. To be globally competitive, we should have a single digit loss percentage. Each percentage point reduction in system loss would translate to about P 0.07/kwh reduction in rate. Most ECs set their productivity target of 300 to 350 connection per employee. To be globally competitive, our target should be at least 700 connections per employee.

There is a path for "**Taxes and Subsidies**". Twenty years ago we were already complaining that we have the second highest rates in Asia. With EPIRA, the Government has also imposed a tax called by another name – Universal Charges - purportedly for Missionary Electrification and recovery of stranded cost and stranded debts of NPC. Today these total about P 0.31/kWh. We also managed to add VAT to our power costs. The removal of BOI income tax holidays and related investment incentives for the power sector would prevent end-users from enjoying about P 0.30/kwh, which they would otherwise enjoy with a 6-year income tax holiday on all energy sales of new plants. Note that this is not tax exemption forever but just a limited tax holiday.

There is the path for "**Demand Management**". The pay-out of savings from energy efficiency and conservation at today's power prices should be a compelling reason to further strengthen the government's initiatives towards energy efficiency and conservation. The government should consider enactment of laws or executive issuances for policies and standards for energy-conserving designs for buildings and efficiency benchmarks for equipment, as well as tax incentives on energy-efficient motors and electrical equipment.

There is the path for "**Preventing Abuse of Market Power**". Regrettably, there may be tremendous single-mindedness on reducing power rates per se that misdirects the regulatory attention which should be more focused on preventing abuse of market power.

In sum, the paths that lead to lower power rates are many. We need to determine which ones we can do soon because if we fail to do this we will lose whatever competitive edge we have against our neighboring countries.

Slide 15

Here are the specific areas where we can reduce power rates.

Slide 16

As previously explained, we need to bring down our rates by about 20% to be at par with our neighbours' GDP productivity in terms of unit cost of power. Here are some specific recommendations from where power rate reduction may come. And, it can be done in stages.

There are near-term fixes which could bring results in the next 3 years. The government can stop charging consumers the EPIRA-mandated Universal Charges which now total about P 0.31/kWh. After all, government makes about P 0.40/kWh from VAT from which consumers were originally spared when EPIRA was enacted.

Each percentage point reduction in system losses translate to about P 0.07/kWh reduction in end-user rate. With an 18% system loss in 2011, there's a lot of potential rate reduction by simply imposing higher efficiency standards and a more stringent effort against pilferage.

New power plants would be able to sell for about P 0.30/kWh less than what it would otherwise cost if BOI incentives are discontinued or removed.

Long-term PSAs are key in under-writing the long-term investments in generation. Coupled with an auction system of aggregating demand, this will reduce the investment risk and will reflect in a lower capital cost. Each percentage point reduction in the risk factors translates to about P 0.10/kwh in generation rates.

Permitting the direct connection of host DUs will not only directly benefit the communities who bear the inconvenience of hosting a power facility but the whole country from the reduction of development cost in surmounting the difficulty of finding a suitable plant site with a welcoming community.

Note that most of these require action from the government and would translate to a reduction in the power rates by P 0.75 to P 1.00 per kWh.

In the medium term, the government should study harmonizing the taxes in the power sector. Perhaps, there is merit of adopting a Gross Receipt Tax in lieu of all taxes to be paid by the power industry participants. NGCP already enjoys this structure. This may be replicated in the generation, distribution and RES sectors, as well.

A study can be made on how to use the government royalties such as the Malampaya funds. This can be used to reduce the power rates but perhaps not for everyone but to directly subsidize the power rates of certain key strategic industries.

There are other solutions we have identified and these are elaborated in the annexes. For lack of time to undertake more detailed studies, however, we are unable at this time to provide an estimated quantum of reduction.

There are other areas from where we can get reduction in power rates. However, we will defer to the transmission and distribution sectors to bring these to the fore and we will not speak for them. We believe in partnership and everybody should share their expertise to the challenge of identifying from where power rate reduction may come.

Slide 17

We can now address the second question, "**To who should the power rate reduction be directed?**"

We do not subscribe to the idea of a peanut butter approach of simply applying the reduction equally to all end-users. We think that there are instances where the reduction will be targeted to specific users for strategic reasons.

While the proposed removal of Universal Charges should be enjoyed by all users, a rate reduction from the use of Malampaya funds should be targeted to specific users, such as special industries, whose global competitiveness because of lower power rates will not only sustain it but also align it with government's strategic objectives such as in employment generation.

We also see rate reduction that are local in impact such as a policy permitting the direct connection to the generation facilities of host community DUs, or even key industries which the LGUs deem to have strategic impact to their communities.

We cite these as examples to highlight the idea that, because there is a cost as well, upon reducing power rates, we must endeavour to get the maximum benefit from it and to direct it to where the strategic returns are multiples of the costs.