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Altering the Energy Consumption Habits of Consumers with Greater Information Accessibility

Digital Pilipinas

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27 February 2023



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Introduction

The Philippine energy sector is no stranger to challenges. Rolling blackouts are especially common in rural areas, and even the nation's capital experiences blackouts from time to time—especially in the midst of typhoons. Hydro plants are already expected to face challenges in keeping up with evolving electric demand, with the Philippine energy minister anticipating that the power situation for 2023 'will be difficult'.¹ The nation's dependence on fossil fuels like coal is expected to only exacerbate the problem.

Electricity rates in the Philippines are also up to 87% higher than its ASEAN neighbors.² These high energy prices are chalked up to an overreliance on imported fossil fuels (particularly coal) and an uncompetitive market structure.

Filipino households contribute widely towards the carbon emissions and greenhouse gas pollution from consuming energy. Yet energy consumers in the Philippines have little to no choice in deciding where their energy consumptions are sourced from. Though there has been a trend of shifting towards using solar panels for solar energy consumption, many still rely on a few oligopolies to supply energy to their homes, which scenario emphasizes the need for more education on energy consumption and renewable energy sources.

Full energy consumption information, including energy sources, is not indicated in most electricity billing. Thus, the challenge is to implement tech solutions such as smart metering that will enable consumers to track where their energy is sourced from, peak hours of energy consumption, and how to best optimize their energy factoring in the appliances they use at home. In the end, giving consumers the right to choose where their energy is sourced from can jumpstart a campaign for renewable energy sources and other waste-to-energy technologies.

By leveraging smart meters and data-driven solutions, the Philippine energy sector can take steps towards creating a more sustainable and efficient energy infrastructure. The data collected through these solutions can be used to inform policy and consumer decisions, enabling better decisions when it comes to energy policy.

¹ Reuters. (2022, October 9). *Philippines energy chief: 2023 power supply conditions look 'difficult'*. Reuters. Retrieved November 17, 2022, from <https://www.reuters.com/business/energy/philippines-energy-chief-2023-power-supply-conditions-look-difficult-2022-10-10/>

² BusinessWorld Online. (2022, July 7). *Businesses concerned over rising electricity rates*. BusinessWorld Online. Retrieved February 1, 2023, from <https://www.bworldonline.com/top-stories/2022/07/07/459723/businesses-concerned-over-rising-electricity-rates/>



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Education on energy consumption and renewable energy sources

Before aspiring to change the nation's energy infrastructure, however, it is crucial that people are aware of their energy consumption habits. Understanding one's own consumption habits helps in becoming more mindful of one's energy usage and making informed decisions to reduce carbon footprint and save money on their energy bills. Understanding energy consumption patterns enables individuals to identify areas where they can make changes to reduce their energy usage and become more energy-efficient. It also helps to raise awareness about the impact of energy consumption on the environment and encourages individuals to adopt more sustainable practices.

There has already been progress made in increasing Filipinos' awareness on energy saving. For example, air conditioner producers such as Daikin noted a sustained growth of 25 percent annually in the Philippine market for its split-type air conditioning units, which are more energy efficient compared to window-type air conditioning.³ This signifies a growing preference for energy-efficient household appliances among consumers.

Yet there is still a long way to go when it comes to educating people on energy consumption and better energy resources. One study by researchers from Japan's Kyoei University found that although 86.2% of Filipinos supported the expansion of renewable energy, 45% still expressed support for continued use of fossil fuels.⁴

It is imperative to develop and implement an energy information campaign, ideally backed by the Department of Energy, which discusses and highlights why it's important to regularly track and cut back on electricity consumption, what renewable energy is, and how people can harness renewable energy to their community's advantage. To cast as wide a scope as possible, this energy information campaign will ideally be spread through official social media accounts and websites of stakeholders such as the Department of Energy and other known energy providers.

An information campaign can help solve the lack of widespread information on renewable energy resources like solar because this lack of awareness makes using renewable energy an intimidating and complex topic to talk about and explore. The act alone of installing

³ Crismundo, K. (2022, May 4). *Filipinos' awareness on energy saving increases: DOE*. Philippine News Agency. Retrieved February 1, 2023, from <https://www.pna.gov.ph/articles/1173675>

⁴ Lloyd, Steven & Nakamura, Tetsuya. (2022). Public Perceptions of Renewable Energy in the Philippines. *Sustainability*. 14. 1-15. 10.3390/su14169906.



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solar panels in communities is seen as complicated and quite expensive. Even using something like smart meters to monitor electricity consumption is a new and novel concept for many.

The transition to mainstreaming renewable energy adoption can start small. Before convincing people to completely switch energy resources, for example, it is best to ask them to practice energy conservation first. This can be as simple as asking people to air dry their clothes in the sun instead of using a drying machine. Eventually, these small steps can move to bigger ones like installing solar panels at home.

Tracking electrical consumption with tech

One way to engage with Filipino consumers is to help them understand their energy consumption habits by creating an easy-to-use app that shows consumers their electric consumption rates.

There is already precedent for such an app. Meralco Online offers features such as 12-month historical data on electricity consumption and notifications on service applications, bills, scheduled outages, and energy efficiency tips.⁵ The problem however is that Meralco only services Metro Manila and some parts of Luzon. Additionally, the Meralco platform only allows users to calculate the energy consumption of individual appliances at a time.

Outside of the Philippines, apps such as Sense, Neurio, and Bidgely connect to smart meters to give consumers a more precise, real-time calculation on energy consumption. The smart meter measures the amount of electricity being used in real-time and sends this data to the app. The app then displays the electricity usage data in a user-friendly format, allowing individuals to monitor and track their energy consumption. Some apps also offer features such as energy usage history, alerts for high usage, and tips for reducing energy consumption. The app can be accessed from a smartphone, tablet, or computer, making it easy for people to monitor their energy consumption from anywhere.

Ideally, energy consumption-tracking apps should leverage tools such as smart meters and prioritize accessibility across platforms. These apps and platforms may be created with the support of relevant government regulators such as the Department of Energy and the Department of Information and Communications Technology.

⁵ Valdez, D. (2020, April). *In This Time Of Social Distancing, Meralco Online Keeps The Lights On*. Meralco Power Club. Retrieved February 1, 2023, from https://www.powerclub.com.ph/news-wire/meralco-online-lets-customers-plug-into-even-more-services-a1-20190221?ref=tag_feed_1



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Getting to the ground

The ideal and more efficient way to launch educational campaigns and any electricity consumption-tracking platform is to partner with local government units (LGUs). Not only will government backing increase credibility and trust in these initiatives, but it will also grant access to real-time data on electricity consumption, allowing for more accurate and up-to-date information on energy usage. LGUs will then be able to use the app's data to make data-driven decisions on energy conservation initiatives.

It is worth noting that considering provisions of the Energy Efficiency and Conservation Law (which aims to institutionalize energy efficiency and conservation, enhance the efficient use of energy, and grant incentives to energy efficiency and conservation projects) and the Local Government Code, entities should conduct periodic consultations with proponents of Renewable Energy projects within the LGU territory. Thus, it is all the more important to explore the possibility of giving incentives and subsidies to those who prioritize conservation and renewable energy sources.

If possible, educational initiatives and electricity consumption-tracking platforms should first target bigger hubs with relatively massive electricity needs such as Cebu City and Davao City. Residents and corporate (industrial and commercial) users in these cities already consume vast amounts of electricity and getting them to be mindful and conservative in their energy use would make a huge difference.

Finally, it is important that fiscal incentives and privileges are made available for renewable energy developers. These include the possible awarding of tax-exempt carbon credits, tax credit on domestic capital equipment and services, tax rebates for purchase of renewable energy component assets, financial assistance, exemption from the universal charge, cash incentive for renewable energy developers for missionary electrification, and payment of transmission charges, and other components which may be examined with the regulators and stakeholders. It should be made clear to LGUs how these incentives and privileges may be available and accessible in order to push them to work with renewable energy developers.



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Conclusion

As the climate crisis intensifies, the need to reshape and improve the Philippine energy sector gets more urgent each day. Not only is energy demand growing and traditional resources like coal dwindling, but the cost of transitioning to better renewable energy sources will only go up from here. Macroeconomic factors such as a stronger dollar, for example, will make creating solar plants in the Philippines increasingly expensive.

Introducing substantial changes into the nation's energy sector will not just happen overnight. Yet there is no denying that this shift will be so much easier once Filipino consumers understand their role in the push towards better energy use—and are given the proper information and tools to take action. The long road towards cleaner, more efficient energy use for all begins with this single step.