OF MICROGRIDS AND MEN: DECONSTRUCTING THE SOLAR PARA SA BAYAN FRANCHISE FROM A CONSUMER WELFARE LENS*

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ABSTRACT

The 17th Congress of the Republic of the Philippines approved a bill granting a non-exclusive franchise to Solar Para Sa Bayan ("SPSB") Corporation which was signed into law by President Duterte on July 31, 2019. The Article shows how the SPSB law introduces inefficient competition through its loosely defined area of operation which may disincentivize investment or increase electricity rates for consumers. The Article also discusses solutions which may improve consumer welfare.

I. INTRODUCTION

The 17th Congress of the Republic of the Philippines approved a bill granting a non-exclusive franchise to SPSB Corporation to "construct, install, establish, operate, and maintain [...] Distributed Energy Resources and microgrids utilizing renewable energy technology, or a hybrid thereof to provide electric power to customers and end-users in remote and unviable, unserved, or underserved areas[.]"[1] The bill was signed into law by President Duterte on July

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[1] Rep. Act No. 11357 (2019), § 1.

31, 2019.[2] Given the opposition generated by the SPSB law,[3] this author aims to analyze the legislation with a consumer welfare lens and proffer solutions which may improve consumer welfare.

II. THE NATURAL MONOPOLY RATIONALE OF PUBLIC UTILITY REGULATION

The *raison d'etre* of public utility regulation is to address the harms caused by natural monopolies.[4] This rationale has been reiterated in the deliberations of the 1986 Constitutional Commission, a treatise on public utility law,[5] law dictionaries,[6] academic literature,[7] and jurisprudence of the Philippine Supreme Court.[8] While an industry may initially be considered a natural monopoly, it does not mean that it will remain so. Over time, conditions may change such that a natural monopoly no longer exists.[9]

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[2] Rep. Act No. 11357 (2019); *See* Victor Saulon & Arjay Balinbin, *Solar Para sa Bayan franchise signed,* BUS. WORLD, Aug. 1, 2019, *available at* https://www.bworldonline.com/solar-para-sa-bayan-franchise-signed/.

[3] *See for example* Vanne Elaine Terrazola, *Senate passes bill granting franchise to Solar Para sa Bayan,* MLA. BULLETIN, June 4, 2019, available *at* https://news.mb.com.ph/2019/06/04/senate-passes-bill-granting-franchise-to-solar-para-sa-bayan/; *See also* Bienvenido Oplas, Jr., *Solar para sa politika,* BUS. WORLD, June 17, 2019, *available at* https://www.bworldonline.com/solar-para-sa-politika/.

[4] For a more extensive discussion of the provenance and rationale of public utility regulation, *see* Joseph Emmanuel Angeles, *Revisiting Republic v. Meralco, the Public Utility Definition and the Reasonable Rate of Return*, 92 PHIL. L.J. 214 (2019).

[5] *See* OSCAR POND, A TREATISE ON THE LAW OF PUBLIC UTILITIES: INCLUDING MOTOR VEHICLE TRANSPORTATION 214 (1913).

[6] *See* HENRY CAMPBELL BLACK, BLACK'S LAW DICTIONARY 1233 (6th ed.): "A privately owned and operated business whose services are so essential to the general public as to justify the grant of special franchises for the use of public property or of the right of eminent domain, in consideration of which the owners must serve all persons who apply, without discrimination. It is always a virtual monopoly."

[7] *See for example* Paul Joskow, *Regulation of Natural Monopoly*, 2 HANDBOOK OF LAW AND ECONOMICS 1227, 1264–65 (A. Mitchell Polinsky & Steven Shavell eds., 2007).

[8] *See for example* Batangas Transp. Co. v. Orlanes, 52 Phil. 455, 471 (1928).

[9] *See for example* W. KIP VISCUSI, JOSEPH HARRINGTON JR. & DAVID SAPPINGTON, ECONOMICS OF REGULATION AND ANTITRUST 403 (4th ed. 2005). "[P]ermanent natural monopoly is probably a rare category."; *See for example* SUBHES BHATTACHARYYA, ENERGY ECONOMICS: CONCEPTS, ISSUES, MARKETS AND GOVERNANCE 686 (2011). "The main economic reason behind public sector ownership or government intervention in the energy industry was the existence of natural monopoly in energy industries. However, in certain areas of the industry this assumption started to be questioned. For example, it is customary to consider three components of the electricity industry: generation, transmission and distribution. Generation component came under scrutiny and attack[.]"

Examples of industries that are no longer natural monopolies include cellular telephone networks,[10] toll and local telephone services,[11] land transportation,[12] air transportation,[13] maritime transportation,[14] airports,[15] and supply of electricity.[16] On the other hand, natural gas transmission,[17] electricity

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[10] *See* David Mckenzie & John Small, *Econometric Cost Structure Estimates for Cellular Telephony In The United States*, 12 J. REGUL. ECON. 147, 156 (1997): "This study suggests, therefore, that incumbent firms are generally not experiencing economies of scale, which is the standard argument for restricting entry[.]"

[11] *See* Ramonette Serafica, *Was PLDT a Natural Monopoly?: An Economic Analysis of Pre-reform Philippine Telecoms*, 22 TELECOMM. POLICY 359 (1998). This concludes that natural monopoly properties did not exist in PLDT's provision of toll and local telephone services.

[12] *See* RICHARD POSNER, ECONOMIC ANALYSIS OF LAW 267 (2nd ed. 1977); Philippe Gagnepain, Marc Ivaldi & Catherine Muller-Vibes, *The Industrial Organization of Competition in Local Bus Services*, *in* HANDBOOK OF TRANSPORT ECONOMICS 744, 745 (André de Palma et al. eds., 2011): "[A] significant number of empirical studies are in line with a U-shaped average cost function [...] which become constant and finally decreasing as companies' size increases."

[13] *See* Anming Zhang, Yimin Zhang & Joseph Clougherty, *Competition and Regulation in Air Transport*, *in* HANDBOOK OF TRANSPORT ECONOMICS 797, 808 (André de Palma et al. eds., 2011). "[N]early all economists still agree that deregulation has generally resulted in lower prices for the travelling public."; *See generally* Wilfred Manuela, *Airline Liberalization Effects on Fare: The Case of the Philippines*, 60 J. BUS. RES. 167 (2007).

[14] *See* Mary Brooks, *Competition and Regulation in Maritime Transport*, *in* HANDBOOK OF TRANSPORT ECONOMICS 844, 863 (André de Palma et al. eds., 2011): "While tramp operators have long operated in a freely competitive market, liner companies have, through gradual regulatory reform, moved in that direction."

[15] *See* INTERNATIONAL CIVIL AVIATION ORGANIZATION, WORLDWIDE AIR TRANSPORT CONFERENCE - SIXTH MEETING - AIRPORT COMPETITION 1 (2013). "1.1 Airports used to be considered as natural monopolies. Before deregulation and liberalization of the air transport industry, airports operated in an environment where, with few exceptions, national and State-owned airlines were strictly regulated, with limited freedom to compete across borders. Much has changed in the last twenty years, with the progressive liberalization of aviation markets worldwide."; *See also* David Gillen, *Airport Governance and Regulation: Three Decades of Aviation System Reform*, *in* HANDBOOK OF TRANSPORT ECONOMICS 779, 790 (André de Palma et al. eds., 2011). "There is the emerging view that the airport business has evolved from its public utility beginnings and that now the institutional and market settings are changing to limit the airport's market power and its incentive to abuse that power."

[16] *See* John Kwoka Jr., *Electric Power Distribution: Economies of Scale, Mergers, and Restructuring*, 37 APPL. ECON. 2373, 2385 (2005). "By contrast, supply would appear potentially competitive in that scale effects, while not absent, are much smaller except at very small sizes."; *See also* Claire S. H. Lim & Ali Yurukoglu, *Dynamic Natural Monopoly Regulation: Time Inconsistency, Moral Hazard, and Political Environments*, 126 J. POL. ECON. 263, 267 (2018). It states that generation of electricity has been deregulated in many countries and US states, but distribution is universally considered a natural monopoly.

[17] *See* Daniel Vernon Gordon, Kelly Gunsch, & Clyde Vincent Pawluk, *A Natural Monopoly in Natural Gas Transmission*, 25 ENERGY ECON. 473, 484 (2003). "These results lead to the conclusion that subadditivity is evident in the cost structure for transporting natural gas and that indeed TCPL is a natural monopoly."; *See also* BHATTACHARYYA, *supra* note 9, at 355. "[T]he average cost of transportation tends to fall over a large range of output, indicating that the transmission system has the characteristics of a natural monopoly."

transmission,[18] and electricity distribution[19] remain natural monopolies. Evidence regarding railway transport is mixed.[20]

Ordinarily, economics extols the virtues of competition and free markets. Competitive markets are desirable because the socially optimal amount of output is produced at the minimum cost, and this output is distributed to those who value it most.[21] These outcomes are obtained through the metaphorical "invisible hand," without government intervention.[22] However, the model from which these

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[18] *See* BHATTACHARYYA, *supra* note 9, at 700. "[E]ven now, it is believed that transmission and distribution activities are natural monopolies."; *See also* Joshua Gans & Stephen King, *Options for Electricity Transmission Regulation in Australia*, 33 AUST. ECON. REV. 145, 146 (2000). "Electricity transmission requires regulation because it embodies a natural monopoly technology."

[19] *See* Massimo Filippini, *Are Municipal Electricity Distribution Utilities Natural Monopolies?*, 69 ANN. PUB. COOP. ECON. 157, 169–70 (1998). "The empirical evidence suggest [sic] that franchised monopolies, rather than side-by-side competition, is the most efficient form of production organisation in the electric power distribution industry."; *See also* Kwoka Jr., *supra* note 16, at 2385. "The evidence suggests that wires remains characterized by high scale, consistent with most proposals that it continue as a regulated monopoly[.]"; *See also* Christian Growitsch, Tooraj Jamasb, & Michael Pollitt, *Quality of Service, Efficiency and Scale in Network Industries: An Analysis of European Electricity Distribution*, 41 APPL. ECON. 2555, 2567 (2009). "Our analysis of the relationship between firm size, technical efficiency and QoS for European electricity distribution utilities shows evidence of significant economies of scale in electricity distribution networks. In addition, we found economies of scope between energy delivered and number of customers can be observed among larger firms."; *See also* Lim and Yurukoglu, *supra* note 16, at 267 (stating that generation of electricity has been deregulated in many countries and US states, but distribution is universally considered a natural monopoly); *See finally* Kjell G. Salvanes & Sigve Tjøtta, *A Test for Natural Monopoly with Application to Norwegian Electricity Distribution*, 13 REV. IND. ORGAN. 669, 683 (1998). "In this case competitive forces are clearly absent and without regulation the natural monopoly could charge prices that are higher then socially preferable prices[.]"

[20] *See, by way of comparison,* John D. Bitzan, *Railroad Costs and Competition: The Implications of Introducting Competition to Railroad Networks*, 37 J. TRANSP. ECON. POLI. 201, 222–24 (2003). "In examining the cost implications of railroads competing over one rail network, the study finds: (1) that there are economies associated with vertically integrated roadway maintenance and transport, suggesting that separating the two would result in increased resource costs, and (2) railroads are natural monopolies in providing transport services over their own network, suggesting that multiple-firm competition over such a network would result in increased resource costs. These findings suggest that policies introducing railroad competition through "'open access'" or on bottleneck segments would not be beneficial from a cost perspective."; *See, by way of comparison,* Nick Wills-Johnson, *Separability and Subadditivity in Australian Railways*, 84 ECON. REC. 95, 107 (2008). "[T]his paper finds little evidence to criticise vertical separation."; *See, by way of comparison,* Chris Nash, *Competition and Regulation in Rail Transport*, *in* HANDBOOK OF TRANSPORT ECONOMICS 763, 776 (André de Palma et al. eds., 2011). "[T]he evidence is that all reforms are a compromise between introducing competition and minimizing transaction costs and loss of economies of scale, density, and scope; [...] we are a long way short of being able to provide definitive evidence on what works best in what circumstance in terms of competition and regulation of railways."

[21] *See* JEFFREY R. CHURCH & ROGER WARE, INDUSTRIAL ORGANIZATION: A STRATEGIC APPROACH 25 (2000).

[22] *Id.* at 25.

results are derived makes the following assumptions: 1) economies of scale are small relative to the size of the market;[23] 2) output is homogeneous;[24] 3) information is perfect;[25] and 4) there are no entry or exit barriers.[26] These assumptions are inapplicable where a natural monopoly exists[27] and costs are minimized by concentrating production in a single firm.[28]

Monopolies are problematic from a consumer welfare standpoint. While a competitive firm whose product demand is infinitely elastic will price its product at marginal cost, a monopolist can profitably raise its price above marginal cost. This increased price leads to losses in consumer surplus which are greater than the increases in firm profit (*i.e.* deadweight loss).[29] Moreover, the firm may engage in socially wasteful expenditures of money and effort to retain this monopoly position (*i.e.* rent-seeking behavior).[30] Judge Posner sums up these concerns as follows: 1) *monopoly pricing, i.e.* where the firm has the incentive to increase profits by limiting supply; 2) *encouragement of inefficient entry, i.e.* where another entrant appears and the existing firm reduces price or output. If it reduces output, average cost of production will be higher than necessary; 3) *inefficient price structure, i.e.* where if price is equal to marginal cost, total revenue is less than total cost.[31]

Resolving these concerns is not straightforward. For instance, resorting to marginal cost pricing would prevent a firm from recovering its investment.[32]

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[23] *Id.* at 21. Where "[A]verage costs rise rapidly if a firm expands output beyond a relatively small amount."

[24] *Id.* at 21. Where "[C]onsumers cannot distinguish between products produced by different firms."

[25] *Id.* at 21. Where "[A]ll firms are fully informed about their production possibilities and consumers are fully aware of their alternatives."

[26] *Id.* at 21. Where "[T]he number of firms in the industry adjusts over time so that all firms earn zero economic profits or a competitive rate of return[.]"

[27] *See* Joskow, *supra* note 7, at 1240, 1244–48.

[28] CHURCH & WARE, *supra* note 21, at 752–754. Describing this condition as "subadditivity."; VISCUSI, HARRINGTON JR., & SAPPINGTON, *supra* note 9, at 401–08. "An industry is a natural monopoly if the production of a particular good or service by a single firm minimizes cost [.]"

[29] *See* JEAN TIROLE, THE THEORY OF INDUSTRIAL ORGANIZATION 65–67, 76 (1988).

[30] *Id.* at 76–77.

[31] *See* POSNER, *supra* note 12, at 251–254; *See also* CHURCH & WARE, *supra* note 21, at 32–36; *See also* Joskow, *supra* note 7, at 1248–59; *See also* VISCUSI, HARRINGTON JR., & SAPPINGTON, *supra* note 9, at 426. "In conclusion, an unregulated market results in welfare losses. Either there is allocative inefficiency, with one firm pricing too high, or productive inefficiency, with multiple firms producing so that total industry cost is not minimized[.]"

[32] *See* BHATTACHARYYA, *supra* note 9, at 289. "As the price is less than the average cost of production, the firm incurs a loss[.]"; *See* Ronald R. Braeutigam, *Optimal Policies for Natural Monopolies*, *in* HANDBOOK OF INDUSTRIAL ORGANIZATION 1289, 1309 (R. Schmalensee & R.D. Willig eds., 1989). "[M]arginal cost pricing will lead to a deficit for a firm operating with economies of scale if all units of output are sold at marginal cost."

The traditional solution is rate of return regulation[33] which involves specifying an allowed rate of return for the regulated firm then selecting prices which will generate the set rate of return,[34] while requiring the firm to deal with all customers on reasonable and non-discriminatory terms.[35] This process is generally conducted through a rate case—a public quasi-judicial proceeding in which a regulated firm's prices or "tariffs" may be adjusted by the regulatory agency.[36] Once these are adjudicated, they remain in force until adjusted through a subsequent rate case upon request from the regulated firm, regulators, or third-parties.[37]

The typical rate case consists of two phases. The first phase determines the *total revenue requirement* or *total cost of service* of the public utility.[38] The second phase is the *rate design* or *tariff structure* phase. In this phase, the actual prices that will be charged for different quantities, consumers, or products are determined.[39] The formula for revenue requirement or cost of service is:[40]

$$R_t = OC_t + D_t + r(1+t)RAV + F_t$$

Where:

$R_t \equiv$ Firm's total revenue requirements or cost of service in year t
$OC_t \equiv$ Operating costs (*e.g.* fuel, labor, materials and supplies)
$D_t \equiv$ Annual amount of depreciation on the regulatory rate base
$r \equiv$ Allowed rate of return on the regulatory asset base
$t \equiv$ Income tax rate on the firm's gross profits
$RAV \equiv$ Value of the firm's "regulatory asset base" or its "rate base"
$F_t \equiv$ Other costs (*e.g.* property taxes, franchise fees)

The allowed rate of return on the regulatory rate base is also known as the opportunity cost of capital or the Weighted Average Cost of Capital ("WACC"),

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[33] *See* VISCUSI, HARRINGTON JR., & SAPPINGTON, *supra* note 9, at 429. "[R]ate of return regulation [...] is the traditional method for regulating a natural monopoly."; Joskow, *supra* note 7, at 1286. "[T]raditional 'cost of service' or 'rate of return regulation' [...] has been the basic framework for commission regulation in the U.S. during most of the 20th century[.]"

[34] *See* VISCUSI, HARRINGTON JR., AND SAPPINGTON, *supra* note 9, at 429; *See* Joskow, *supra* note 7, at 1286–88.

[35] *See* Richard A. Epstein, *The History of Public Utility Rate Regulation in the United States Supreme Court: Of Reasonable and Nondiscriminatory Rates*, 38 J. SUPREME COURT HIST. 345, 346–351 (2013). It discusses cost of service regulation; *See also* Joskow, *supra* note 7, at 1285–97.

[36] *See* Joskow, *supra* note 7, at 1287; *See also* VISCUSI, HARRINGTON JR., AND SAPPINGTON, *supra* note 9, at 429, 431–32, 443–47. *See also* REV. ADMIN. CODE, Bk. 7, Ch. 2, § 9.

[37] Joskow, *supra* note 7, at 1287.

[38] *Id.* at 1288.

[39] *Id.*

[40] *Id. See also* Angeles, *supra* note 4, at 234.

and is typically computed using the formula:[41]

$$WACC_{Post\text{-}tax} = r_D(1 - T_C)\frac{D}{V} + r_E\frac{E}{V}$$

Where:

$D \equiv$ Market value of firm's debt
$E \equiv$ Market value of firm's equity
$V = D + E \equiv$ Total market value of the firm
$r_D \equiv$ Cost of debt before taxes
$r_E \equiv$ Cost of equity before taxes
$T_C \equiv$ Marginal corporate tax rate

In the WACC formula, the cost of debt is usually the market interest rate on its existing debt,[42] while the cost of equity is generally computed[43] using the Capital Asset Pricing Model ("CAPM").[44] According to CAPM, the risk premium on firm *i*'s common stock is equal to the product of *beta* and the market risk premium[45] or:

$$r_i - r_f = \beta_i(r_m - r_f)$$

Where:

$r_m \equiv$ expected market return
$r_f \equiv$ risk-free rate
$\beta_i = \frac{\sigma_{im}}{\sigma_m^2}$ where $\sigma_{im} \equiv$ covariance of stock i's return and the market return, and
$\sigma_m^2 \equiv$ variance of market return

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41 RICHARD BREALEY, STEWART MYERS & FRANKLIN ALLEN, PRINCIPLES OF CORPORATE FINANCE 221 (12th ed. 2017). *See also* Angeles, *supra* note 4, at 225.

42 *Id.* at 493.

43 INDEPENDENT PRICING & REGULATORY TRIBUNAL, REVIEW OF METHOD FOR DETERMINING THE WACC 49 (2012). "[T]he approach most commonly used by regulators outside the United States" and, despite its drawbacks "was the most robust methodology available."

44 BREALEY, MYERS, & ALLEN, *supra* note 41, at 225–27.

45 *Id.* at 183, 200, 211, 225–27. *See also* Angeles, *supra* note 4, at 225.

III. VIEWING THE SPSB FRANCHISE THROUGH THE PUBLIC UTILITY AND CONSUMER WELFARE LENS

As defined by Republic Act No. 9136 otherwise known as the "Electric Power Industry Reform Act ("EPIRA"), electricity distribution refers to the conveyance of electric power by a distribution utility through a system of wires and associated facilities belonging to the utility extending between the delivery points on the transmission or sub-transmission system or generator connection and the point of connection to the premises of the end-user,[46] while electricity transmission is the conveyance of electricity through the high voltage backbone system.[47] Transmission[48] and distribution[49] of electricity are textbook cases of natural monopolies. Because SPSB's franchise authorizes it to install, establish, operate, and maintain Distributed Energy Resources and microgrids[50] to provide electric power to customers and end-users, it is a vertically integrated entity engaged in the supply and distribution of electricity, and is a public utility.[51]

It should be stressed that SPSB's area of operation will encroach upon the areas of operation of extant distribution utilities. The law grants SPSB a non-exclusive franchise to "construct, install, establish, operate, and maintain [...] Distributed Energy Resources and microgrids utilizing renewable energy technology, or a hybrid thereof to provide electric power to customers and end-users in remote and unviable, unserved, or underserved areas[.]"[52] Undeserved

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[46] *See* Rep. Act No. 9136 (2001), § 4(n)-(o). Electric Power Industry Reform Act of 2001.

[47] *See* Rep. Act No. 9136 (2001), § 4(ccc). In contrast with supply of electricity to the contestable market, which EPIRA does not consider a public utility.

[48] *See* BHATTACHARYYA, *supra* note 9, at 700. "[E]ven now, it is believed that transmission and distribution activities are natural monopolies."; Gans and King, *supra* note 18, at 146. "Electricity transmission requires regulation because it embodies a natural monopoly technology."

[49] Filippini, *supra* note 19, at 169–70. "The empirical evidence suggest (sic) that franchised monopolies, rather than side-by-side competition, is the most efficient form of production organisation in the electric power distribution industry."; Kwoka Jr., *supra* note 16, at 2385. "The evidence suggests that wires remains characterized by high scale, consistent with most proposals that it continue as a regulated monopoly [...]."; Growitsch, Jamasb, & Pollitt, *supra* note 19, at 2567. "Our analysis of the relationship between firm size, technical efficiency and QoS for European electricity distribution utilities shows evidence of significant economies of scale in electricity distribution networks. In addition, we found economies of scope between energy delivered and number of customers can be observed among larger firms."; Lim and Yurukoglu, *supra* note 16, at 267. It states that generation of electricity has been deregulated in many countries and US states, but distribution is universally considered a natural monopoly; Salvanes and Tjøtta, *supra* note 19, at 683. "In this case competitive forces are clearly absent and without regulation the natural monopoly could charge prices that are higher than socially preferable prices [.]"

[50] Rep. Act No. 11357 (2019), § 1.

[51] *See for example* CONST. art. XII, §§ 11, 17–18.

[52] Rep. Act No. 11357 (2019), § 1.

areas are defined by the SPSB law as:

> [A]n area currently served by individual solar home systems, microgrids, or distribution utilities where electricity services *are less than 24 hours daily*, or are non-compliant with any of the service parameters of the Philippine Distribution Code, *or where electricity services have been interrupted at least twelve (12) times in the twelve (12) months preceding the date of the determination that such area is underserved*, or any other reason resulting in any failing mark based on the latest annual evaluation of actual performance of distribution systems as compared to imposed targets of the Energy Regulatory Commission.[53]

Read collectively, these provisions authorize SPSB to operate in areas where service interruptions occurred at least twelve times in the previous year—a significant deviation from the Energy Regulatory Commission's (ERC) previous stance that target reliability indices are unique to each distribution utility and are initially based on historical performance.[54] It is likewise notable that the interruption standard is not limited to acts attributable to the distribution utility.[55] This is in stark contrast to the ERC Distribution Code which excludes interruption events outside the control of distribution utilities from the calculation of reliability indices.[56] Moreover, in contrast with previous Department of Energy (DOE) regulations,[57] the SPSB law does not require incumbent distribution

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[53] Rep. Act No. 11357 (2019), § 2. (Emphasis supplied.)

[54] Energy Regulatory Comm'n (ERC) Res. 2-2018 (2018), § 3.3.1.2. A Resolution Approving the Philippine Distribution Code (PDC) 2017 Edition. "The same reliability indices shall be imposed on all Distribution Utilities. However, the numerical levels of performance (or targets) shall be unique to each Distribution System and shall be based initially on its historical performance."

[55] Rep. Act No. 11357 (2019), § 2.

[56] *See for example* ERC Res. 2-2018 (2018), § 3.3.3.2. A Resolution Approving the Philippine Distribution Code (PDC) 2017 Edition. "The following Events shall be excluded in the calculation of the reliability indices:

(a) Outages that occur on the secondary lines of the Distribution System;
(b) Outages due to generation, transmission line, or transmission substation failure;
(c) Planned outages where the Customers or Users have been notified at least 3 days prior to the loss of power;
(d) Supply Interruptions made at the request of a customer or authorized customer representative;
(e) Outages that are initiated by the System Operation/Market Operator during the occurrence of Significant Incidents or the failure of their facilities;
(f) Outages caused by Adverse Weather or Major Storm Disasters which result in the declaration by the government of a state of calamity in the Franchise Area of the Distribution Utility; and
(g) Outages due to other events, including Major Events, that the ERC shall approve after due notice and hearing."

[57] *See* Dep't of Energy Dep't Circular No. DC-2005-12-011 (2005). Prescribing the

utilities to execute waivers after the DOE delineates which areas are remote, unviable, unserved, or underserved.[58]

There are two plausible scenarios when this encroachment occurs: 1) the revenue requirement of the existing utility is held constant by the regulator, or 2) the revenue requirement is reduced by the regulator through shrinking the rate base. We assess the consumer welfare implications of these scenarios:

Hypothetical #1: Overlapping SPSB Area of Operation, Revenue Requirement Held Constant

As stated earlier, the typical rate case involves a two-stage process—the revenue requirement (or cost of service) phase and the rate design phase.[59] Assume that: 1) the regulator decides to hold the total revenue requirement constant in the event that a distribution utility's existing area of operation overlaps with that of SPSB; 2) a fraction of the distribution utility's existing consumers switch to SPSB; and 3) the quantity of electricity consumed by each of the distribution utility's existing consumers remains constant. In such a case, the smaller consumer base would force the regulator at the rate design phase to increase the tariff for some or all of the remaining consumers to attain the targeted total revenue requirement—an unwelcome result given that the Philippines' electricity tariffs are among the highest in Asia[60]—and reduce our country's competitiveness.[61]

Hypothetical #2: Overlapping SPSB Area of Operation but Rate Base Reduced

Assume that: 1) the regulator decides to proportionally reduce the total revenue requirement based on the estimated consumers remaining where a distribution utility's existing area of operation overlaps with that of SPSB; 2) the regulator reduces the total revenue requirement by excluding assets from the rate base because they do not serve the distribution utility's remaining consumers; and 3) the quantity of electricity consumed by each of the distribution utility's remaining consumers stays constant. In this case, the lower total revenue requirement results in the distribution utility incurring stranded costs,[62] which are

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Guidelines for Participation of Qualified Third Parties (QTPs) for Provision of Electric Service in Remote and Unviable Areas, Pursuant to Sections 59 and 70 of "The Electric Power Industry Reform Act of 2001," and its Implementing Rules and Regulations (IRR).

[58] Rep. Act No. 11357 (2019), §§ 4 & 12.

[59] *See* Joskow, *supra* note 7, at 1288.

[60] *See* CAYETANO PADERANGA JR., PRIVATE SECTOR ASSESSMENT: PHILIPPINES 25 (2011).

[61] *See* WORLD ECONOMIC FORUM, THE GLOBAL COMPETITIVENESS REPORT (2017–2018) (2017).

[62] *See* BURKHARD PEDELL, REGULATORY RISK AND THE COST OF CAPITAL:

assets that are "prudently acquired but have lost economic value as a direct result of an unforeseeable regulatory or legislative change specific to the industry in question."[63]

As a result, equity and debt holders of distribution utilities will increase their required rates of return because of increased risk. This occurs through the following modes: a) when the probability of obtaining the expected payoff decreases, or future payoffs are truncated, with adverse effects on the firm's equity valuation (*i.e.* "asymmetric regulatory risk");[64] b) when regulatory risk increases the firm's non-diversifiable risk, the required rate of return on equity must increase, with similar adverse effects (*i.e.* "reinforcing regulatory risk");[65] c) since the required rate of return on debt is correlated with default risk—the reduced probability of expected payoffs increases the probability of default and the required rate of return.[66] As a result of this circularity, a regulator may inadvertently raise tariffs for clients of distribution utilities by unwittingly increasing regulatory risk and the resulting required rate of return.[67]

DETERMINANTS AND IMPLICATIONS FOR RATE REGULATION 88 (2006). *See also* ERC Res. No. 25-2016 (2016), § 4.8.8. This is the Resolution Modifying the Rules for Setting Distribution Wheeling Rates (RDWR) for Privately Owned Distribution Utilities Entering Performance Based Regulation (PBR). "The Valuation Report for a Regulated Distribution System *must differentiate between those assets which are to be included in the Regulatory Asset Base for that Regulated Distribution System and those assets which are to be excluded from that Regulatory Asset Base on the basis that the Regulatory Asset Base must only include assets* to the extent that such assets: (a) are *necessary to meet Customer requirements for Regulated Distribution Services in respect of the Regulated Distribution System* within the electricity distribution network planning horizon referred to in the optimization principles *described in RAB Handbook*[.]" (Emphasis supplied.)

[63] *Id.* at 88–89. This definition has several preconditions: 1) investments must have been incurred prudently at the outset; 2) the loss of economic value must be directly attributable to regulatory or legislative activities; and 3) the regulatory modifications must not have been anticipated but must come as a surprise to the regulated firm.

[64] *Id.* at 94. "If not compensated otherwise by the regulatory commission, stranded asset risk requires a higher allowed rate of return on the regulatory rate base for two reasons: Firstly, it reduces the expected rate base and thereby the expected cash flows. This drives the expected rate of return below the allowed rate of return. Secondly, it increases the variability of the expected cash flows and, to the degree that this variability is correlated with the overall market variability, the cost of capital. Without the appropriate increase of the allowed rate of return, incentives for future investment are severely distorted and underinvestment will occur."

[65] *Id.* at 94. *See also* BREALEY, MYERS, & ALLEN, *supra* note 41, at 199–201.

[66] *See* PEDELL, *supra* note 62, at 35–43; *See also* BREALEY, MYERS, AND ALLEN, *supra* note 41, at 597–613.

[67] *See* PEDELL, *supra* note 62, at 27–32. "The rate regulation process is subject to a dual circularity [...]. The outer circularity is well-recognized and runs from regulated rates over expected future cash flows, value of the rate base and finally interest and depreciation back to regulated rates [...]. The inner circularity captures the issue of regulatory risk that, in most instances, is ignored in the discussion of circularity problems. Through its directives, the regulatory commission not only sets prices but also has a significant influence on risk and risk-adjusted cost of capital. The commission exerts this influence directly via the expected distribution of cash flows and the capital

These effects may extend beyond the respondent firm in the above-stated scenarios. Because regulators may find it difficult to commit to a particular course of action or regulatory system,[68] investors may demand higher rates of return for all similarly situated firms[69] because of the increased regulatory risk, thereby increasing tariffs for their clients as well.[70]

Due Process and Judicial Review

ERC[71] and the delineation of a distribution utility's area of operation by the DOE[72] are both quasi-judicial proceedings. The former conclusion is derived from EPIRA as amended, conferring original and exclusive jurisdiction on the ERC over all cases contesting rates imposed by the ERC.[73] The latter is derived from *Sañado v. Court of Appeals*[74] and the Administrative Code's notice and hearing

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structure of the regulated firm, as well as indirectly by determining the regulated firm's freedom of action and flexibility of reaction to moves of competitors (if competition is admitted) and external shocks. The resulting risk-adjusted cost of capital is one of the determinants of asset value, and it is used in the calculation of interest. These interdependencies establish a risk-driven circularity with the rate-setting process. The regulatory commission has to take into account an appropriate risk-adjusted cost of capital when calculating prices, and, at the same time, its directives are one of the major risk drivers or even the most important risk driver for the regulated firm."

[68] *Id.* at 29–31; *See also* Duarte v. Dade, 32 Phil. 36, 49 (1915). "It is fundamental that what legislators have the power to enact they have the power to repeal. A legislature has a plenary law-making power over all subjects, whether pertaining to persons or things, within its territorial jurisdiction, either to introduce new laws or repeal the old, unless prohibited expressly or by implication by the constitution or limited or restrained by its own. It cannot bind itself or its successors by enacting irrepealable laws except when so restrained [...]. This legislature cannot bind a future legislature to a particular mode of repeal. It cannot declare in advance the intent of subsequent legislatures or the effect of subsequent legislation upon existing statutes."

[69] PEDELL, *supra* note 62, at 29–31.

[70] *Id.* at 27–32.; *See also* T. A. Robinson & M. P. Taylor, *The Effects of Regulation and Regulatory Risk in the UK Electricity Distribution Industry*, 69 ANN. PUBLIC COOP. ECON. 331 (1998).

[71] *See* National Power Corp. v. Ct. of Appeals, G.R. 112702, 279 SCRA 506, 529–30 (1997).

[72] *See* Rep. Act No. 11357 (2019), § 4; *See also* National Power Corp. v. Ct. of Appeals, G.R. No. 112702, 279 SCRA 506, 529–30 (1997).

[73] *See* Rep. Act No. 9136 (2001), § 43(u). "The ERC shall have the *original and exclusive jurisdiction over all cases contesting rates*, fees, fines and penalties imposed by the ERC in the exercise of the abovementioned powers, functions and responsibilities and over all cases involving disputes between and among participants or players in the energy sector." (Emphasis supplied.)

[74] Sañado v. Ct. of Appeals, G.R. No. 108338, 356 SCRA 546, 558 (2001). It states that "the action of an administrative agency in granting or denying, or in suspending or revoking a license, permit, franchise or certificate of public convenience and necessity [...] is not purely administrative but quasi-judicial or adjudicatory."; *But see* Securities and Exchange Comm'n v. Universal Rightfield Property Holdings, Inc., G.R. No. 181381, 763 SCRA 197, 218 (2015). It states that "the revocation of registration of securities and permit to sell them to the public is not an exercise of the SEC's quasi-judicial power, but of its regulatory power."

requirement for cancellation of license.[75] These quasi-judicial proceedings must adhere to procedural and substantive due process norms.

Procedural due process mandates that the law hears before it condemns.[76] *Ang Tibay*[77] rules that the procedural due process requirements for administrative proceedings are: 1) the right to a hearing; 2) the tribunal must consider the evidence presented; 3) the decision must have something to support itself; 4) the evidence must be substantial; 5) the decision must be based on the evidence presented at the hearing, or at least contained in the record and disclosed to the parties affected; 6) the tribunal or body or any of its judges must act on its own independent consideration of the law and facts of the controversy, and not simply accept the views of a subordinate; and 7) the Board or body should, in all controversial questions, render its decision in such manner that the parties to the proceeding can know the various issues involved, and the reason for the decision rendered.[78]

In the rate-setting context, the procedural due process criterion requires that the proposed rule or final order be published in a newspaper of general circulation before the first hearing thereon.[79] Where opposed, the rules on contested cases apply.[80] These rules include notice and hearing requirements,[81] five-day minimum notice rule,[82] content requirements,[83] the substantial evidence rule,[84] the right to cross-examine witnesses and present rebuttal evidence,[85] and the form as well as notice of the decision.[86] In the event that the distribution utility

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[75] *See* REV. ADM. CODE, Bk. 7, § 17(2). "Except in cases of willful violation of pertinent laws, rules and regulations or when public security, health, or safety require otherwise, *no license may be withdrawn, suspended, revoked or annulled without notice and hearing.*" (Emphasis supplied.) Note that non-compliance *per se* with the metrics outlined by the "underserved" definition will neither equate to a "willful violation" nor a public security, health, or safety matter. The contraction in the area of operation can be considered analogous to the partial cancellation of license.

[76] *See* JOAQUIN BERNAS, THE 1987 CONSTITUTION OF THE REPUBLIC OF THE PHILIPPINES: A COMMENTARY 113–14 (2009); *See also* REV. ADM. CODE, Bk. 7, § 12(4).

[77] Ang Tibay v. Ct. of Indus. Rel., 37 Phil. 921, 934 (1918).

[78] Ang Tibay v. Ct. of Indus. Rel., 37 Phil. 921, 934 (1918); *See also* BERNAS, *supra* note 76, at 115–16.

[79] *See* REV. ADM. CODE, Bk. 7, § 9(2).

[80] *See* REV. ADM. CODE, Bk. 7, § 9(3).

[81] *See* REV. ADM. CODE, Bk. 7, § 11.

[82] *See* REV. ADM. CODE, Bk. 7, § 11.

[83] *See* REV. ADM. CODE, Bk. 7, § 11.

[84] *See* RULES OF COURT, Rule 133, § 5. "Substantial evidence. — In cases filed before administrative or quasi-judicial bodies, a fact may be deemed established if it is supported by substantial evidence, or that amount of relevant evidence which a reasonable mind might accept as adequate to justify a conclusion."; *See also* REV. ADM. CODE, Bk. 7, § 12(1).

[85] REV. ADM. CODE, Bk. 7, § 12(4).

[86] REV. ADM. CODE, Bk. 7, § 14.

is penalized by a reduction of its area of operation for acts not attributable to it, or worse still, is not given an opportunity to be heard before an adverse ruling, there would be a plausible argument for a procedural due process violation.

On the other hand, substantive due process norms mandate that firms be granted an opportunity to earn a reasonable rate of return. The failure to do so constitutes taking of property without due process of law.[87] A just and reasonable rate should ensure that "the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks" and "sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital."[88] While a regulator need not rigidly hew to a particular formula,[89] it cannot arbitrarily switch between methodologies such that investors bear the risk of bad investments and are denied the benefit of good

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[87] *See* Epstein, *supra* note 35, at 358–59. "The Smyth approach also came under attack from Justice Louis Brandeis in Southwestern Bell Telephone Co. v. Pub. Serv. Comm'n, on the ground that '[u]pon the capital so invested the federal Constitution guarantees to the utility the opportunity to earn a fair return.' That suggestion was in turn taken to heart by Justice William O. Douglas in the canonical 1944 decision of Federal Power Commission v. Hope Natural Gas Co. [.]"; *See also* Duquesne Light Co. v. Barasch, 488 U.S. 299, 307–308 (1989). "The guiding principle has been that the Constitution protects utilities from being limited to a charge for their property serving the public which is so 'unjust' as to be confiscatory. Covington & Lexington Turnpike Road Co. v. Sandford, 164 U.S. 578, 597 (1896) (A rate is too low if it is 'so unjust as to destroy the value of [the] property for all the purposes for which it was acquired,' and in so doing 'practically [488 U.S. 299, 308] deprive[s] the owner of property without due process of law'); FPC v. Natural Gas Pipeline Co., 315 U.S. 575, 585 (1942) ('By long standing usage in the field of rate regulation, the 'lowest reasonable rate' is one which is not confiscatory in the constitutional sense'); FPC v. Texaco Inc., 417 U.S. 380, 391–392 (1974) ('All that is protected against, in a constitutional sense, is that the rates fixed by the Commission be higher than a confiscatory level'). If the rate does not afford sufficient compensation, the State has taken the use of utility property without paying just compensation and so violated the Fifth and Fourteenth Amendments."

[88] Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591, 603 (1944); *See also* Manila Electric Company v. Pub. Serv. Comm'n, G.R. No. L-24762, 18 SCRA 651, 665–666 (1966).

[89] *See* Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591, 602 (1944). "We held in Federal Power Commission v. Natural Gas Pipeline Co. [...] that the Commission was not bound to the use of any single formula or combination of formulae in determining rates. Its rate-making function, moreover, involves the making of 'pragmatic adjustments' [...]. And when the Commission's order is challenged in the courts, the question is whether that order 'viewed in its entirety' meets the requirements of the Act [...]. Under the statutory standard of 'just and reasonable' it is the result reached not the method employed which is controlling [...]. It is not theory but the impact of the rate order which counts. If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry under the Act is at an end. The fact that the method employed to reach that result may contain infirmities is not then important. Moreover, the Commission's order does not become suspect by reason of the fact that it is challenged. It is the product of expert judgment which carries a presumption of validity. And he who would upset the rate order under the Act carries the heavy burden of making a convincing showing that it is invalid because it is unjust and unreasonable in its consequences."

investments.[90] This may ensue where a regulator arbitrarily permits encroachment upon an incumbent distribution utility's area of operation where extant law provides otherwise.[91] In such a case, there may be a credible argument for a substantive due process violation.

In theory, distribution utilities may resort to judicial review to vindicate these rights. However, whether or not judicial review provides a speedy and adequate remedy is open to question. Courts employ a bifurcated test as regards judicial review of an administrative agency's actions: 1) where questions of fact are propounded, the agency's findings of fact are respected if supported by substantial evidence,[92] or such relevant evidence which a reasonable mind might accept as adequate to justify a conclusion;[93] and 2) where questions of law are concerned, courts are the final arbiters of what the law means and can overrule the interpretation of administrative agencies.[94] A court will not substitute its judgment for that of an administrative agency unless the latter has acted with grave abuse of discretion.[95] The arbitrary and whimsical acts required by this grave abuse of

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[90] *See* Duquesne Light Co. v. Barasch, 488 U.S. 299, 315 (1989). "The risks a utility faces are in large part defined by the rate methodology because utilities are virtually always public monopolies dealing in an essential service, and so relatively immune to the usual market risks. Consequently, a State's decision to arbitrarily switch back and forth between methodologies in a way which required investors to bear the risk of bad investments at some times while denying them the benefit of good investments at others would raise serious constitutional questions."

[91] *See* Rep. Act No. 9136 (2001), § 22. Electric Power Industry Reform Act of 2001. "Distribution utilities shall provide universal service within their franchise, over a reasonable time from the requirement thereof, including unviable areas, as part of their social obligations, in a manner that shall sustain the economic viability of the utility, subject to the approval by the ERC in the case of private or government-owned utilities. To this end, distribution utilities shall submit to the DOE their plans for serving such areas as part of their distribution development plans. *Areas which a franchised distribution utility cannot or does not find viable may be transferred to another distribution utility, if any is available, who will provide the service, subject approval by ERC. In cases where franchise holders fail and/or refuse to service any area within their franchise territory and allowed another utility to service the same, then the status quo shall be respected*[.]" (Emphasis supplied.)

[92] *See* CARLO CRUZ, PHILIPPINE ADMINISTRATIVE LAW 300 (2016); *See also* HECTOR DE LEON & HECTOR DE LEON, JR., ADMINISTRATIVE LAW: TEXT AND CASES 374 (7th ed. 2016).; *See also* Amigo Mfg., Inc. v. Cluett Peabody Co., Inc., G.R. No. 139300, 354 SCRA 434, 444–45 (2001).

[93] RULES OF COURT, Rule 133, § 5. "*Substantial evidence.* — In cases filed before administrative or quasi-judicial bodies, a fact may be deemed established if it is supported by substantial evidence, or that amount of relevant evidence which a reasonable mind might accept as adequate to justify a conclusion."

[94] *See* CRUZ, *supra* note 93, at 313–16; *See also* Energy Regulatory Board v. Ct. of Appeals, G.R. No. 113079, 357 SCRA 30, 40–41 (2001).

[95] RULES OF COURT, Rule 65, § 1. "*Petition for certiorari.* — When any tribunal, board or officer exercising judicial or quasi-judicial functions has acted without or in excess of its or his jurisdiction, or with grave abuse of discretion amounting to lack or excess of jurisdiction, and there is no appeal, or any plain, speedy, and adequate remedy in the ordinary course of law, a person aggrieved thereby may file a verified petition in the proper court, alleging the facts with certainty and praying that judgment be rendered annulling or modifying the proceedings of such tribunal,

discretion standard are difficult to substantiate. Mere errors of law or judgment are not considered arbitrary or whimsical acts.[96] An appeal raising errors of fact and/or law to the Court of Appeals is unfeasible as the DOE is not among the enumerated agencies for which that remedy is available.[97]

On the other hand, if DOE's delineation of underserved areas[98] is treated as an exercise of quasi-legislative power, it would be unlikely for a non-delegation

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board or officer, and granting such incidental reliefs as law and justice may require."; *See also* University of Santo Tomas (UST) v. Samahang Manggagawa ng UST, G.R. No. 184262, 824 SCRA 52, 61 (2017). "Case law states that grave abuse of discretion connotes a capricious and whimsical exercise of judgment, done in a despotic manner by reason of passion or personal hostility, the character of which being so patent and gross as to amount to an evasion of positive duty or to a virtual refusal to perform the duty enjoined by or to act at all in contemplation of law."

[96] *See* Madrigal Transport, Inc. v. Lapanday Holdings Corp., G.R. No. 156067, 436 SCRA 123, 134 (2004). "The supervisory jurisdiction of a court over the issuance of a writ of certiorari cannot be exercised for the purpose of reviewing the intrinsic correctness of a judgment of the lower court — on the basis either of the law or the facts of the case, or of the wisdom or legal soundness of the decision. Even if the findings of the court are incorrect, as long as it has jurisdiction over the case, such correction is normally beyond the province of certiorari. Where the error is not one of jurisdiction, but of an error of law or fact — a mistake of judgment — appeal is the remedy."; *See also* Southern Cross Cement Corp. v. Philippine Cement Mfrs. Corp., G.R. No. 158540, 434 SCRA 65, 90 (2004). "While an appeal may be predicated on errors of fact or errors of law, a special civil action for certiorari is grounded on grave abuse of discretion or lack of or excess of jurisdiction on the part of the decider. For a special civil action for certiorari to succeed, it is not enough that the questioned act of the respondent is wrong. As the Court clarified in Sempio v. Court of Appeals: 'A tribunal, board or officer acts without jurisdiction if it/he does not have the legal power to determine the case. There is excess of jurisdiction where, being clothed with the power to determine the case, the tribunal, board or officer oversteps its/his authority as determined by law. And there is grave abuse of discretion where the tribunal, board or officer acts in a capricious, whimsical, arbitrary or despotic manner in the exercise of his judgment as to be said to be equivalent to lack of jurisdiction. Certiorari is often resorted to in order to correct errors of jurisdiction. Where the error is one of law or of fact, which is a mistake of judgment, appeal is the remedy.'"

[97] *See* RULES OF COURT, Rule 43, § 1. "*Scope.* — This Rule shall apply to appeals from judgments or final orders of the Court of Tax Appeals and from awards, judgments, final orders or resolutions of or authorized by any quasi-judicial agency in the exercise of its quasi-judicial functions. Among these agencies are the Civil Service Commission, Central Board of Assessment Appeals, Securities and Exchange Commission, Office of the President, Land Registration Authority, Social Security Commission, Civil Aeronautics Board, Bureau of Patents, Trademarks and Technology Transfer, National Electrification Administration, Energy Regulatory Board, National Telecommunications Commission, Department of Agrarian Reform under Republic Act No. 6657, Government Service Insurance System, Employees Compensation Commission, Agricultural Inventions Board, Insurance Commission, Philippine Atomic Energy Commission, Board of Investments, Construction Industry Arbitration Commission, and voluntary arbitrators authorized by law;" *See also* Rule 43, § 3. "*Where to appeal.* — An appeal under this Rule may be taken to the Court of Appeals within the period and in the manner herein provided, *whether the appeal involves questions of fact, of law, or mixed questions of fact and law.*" (Emphasis supplied.)

[98] Rep. Act No. 11357 (2019), §§ 1, 2, and 4.

challenge[99] to prosper since broad "public interest" standards have been upheld by the Court,[100] and the SPSB law ostensibly canalizes the DOE's discretion with area and service provision metrics.[101]

An equal protection challenge would likely falter. Classifications based on gender or illegitimacy are considered "quasi-suspect" and subject to the intermediate scrutiny test, while those interfering with fundamental rights such as privacy, or based on "suspect" classes such as alienage, are subject to the strict scrutiny test.[102] The deferential rational basis test applies where the classification is not based on a suspect or quasi-suspect class and does not involve fundamental rights.[103] This test only demands that the challenged classification is rationally related to serving a legitimate state interest.[104] As the grant of authority to SPSB is not based on suspect or quasi-suspect classifications, and does not concern fundamental rights, the rational basis test is applicable. Moreover, the grant of authority to operate in remote, unviable, unserved, or underserved areas is undoubtedly rationally related to the ostensible intent to "improve access to sustainable energy."

Consider the following hypothetical for tractability: ILAW Distribution Utility's (ILAW) area of operation covers City A, B, and C. Invoking its mandate under Republic Act No. 11357,[105] the DOE determines that the area of City C is an "underserved area" because electricity services have been interrupted at least 12 times in the preceding 12 months.[106] In doing so, the DOE reduces ILAW's area of operation and does not accord ILAW an opportunity to be heard. ILAW may file a petition for certiorari challenging the DOE's exercise of quasi-judicial powers on the ground that procedural due process requires notice and hearing before a decision is rendered[107] and the exercise of DOE's power is inconsistent

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[99] *See* BERNAS, *supra* note 76, at 685–87.

[100] *Id.* at 689–90.

[101] Rep. Act No. 11357 (2019), §§ 1–2.

[102] *See* Mosqueda v. Pilipino Banana Growers & Exps. Ass'n, Inc., G.R. No. 189185, 800 SCRA 313 (2016); *See also* Central Bank Emps. Ass'n v. Bangko Sentral Ng Pilipinas, G.R. No. 148208, 446 SCRA 299 (2004).

[103] *See* BERNAS, *supra* note 76, at 139–40; *See also* Mosqueda v. Pilipino Banana Growers & Exps. Ass'n, Inc., G.R. No. 189185, 800 SCRA 313 (2016); *See also* Central Bank Emps. Ass'n v. Bangko Sentral Ng Pilipinas, G.R. No. 148208, 446 SCRA 299 (2004).

[104] *See* BERNAS, *supra* note 76, at 40.

[105] *See* Rep. Act No. 11357 (2019), § 4.

[106] *See* Rep. Act No. 11357 (2019), § 2(e).

[107] *See* Sañado v. Ct. of Appeals, G.R. No. 108338, 356 SCRA 546, 558, (2001). It states that "the action of an administrative agency in granting or denying, or in suspending or revoking a license, permit, franchise or certificate of public convenience and necessity [...] is not purely administrative but quasi-judicial or adjudicatory."; *But see* Securities and Exchange Commission v. Universal Rightfield Property Holdings, Inc., G.R. No. 181381, 763 SCRA 197, 218, (2015). It states

with the notice and hearing requirement imposed by the Administrative Code of 1987 for withdrawal, suspension, revocation, or annulment of licenses.[108] Thereafter, at the commencement of the succeeding Regulatory Period, the ERC invokes this reduced area of operation to deem ILAW's assets with respect to the area of City C as not "necessary to meet Customer requirements for Regulated Distribution Services."[109] As such, the ERC excludes these assets from the Regulatory Asset Base for purposes of computing the Annual Revenue Requirement[110] and reduces ILAW's authorized tariffs accordingly.[111] ILAW may file a petition for review under Rule 43 invoking errors of fact and law on the part of the ERC.[112] In both scenarios, ILAW may also quote *Duquesne*, contending that

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that "the revocation of registration of securities and permit to sell them to the public is not an exercise of the SEC's quasi-judicial power, but of its regulatory power."

[108] *See* REV. ADM. CODE, Bk. 7, § 17(2). "Except in cases of willful violation of pertinent laws, rules and regulations or when public security, health, or safety require otherwise, *no license may be withdrawn, suspended, revoked or annulled without notice and hearing.*" (Emphasis supplied.) Note that non-compliance *per se* with the metrics outlined by the "underserved" definition will neither equate to a "willful violation" nor a public security, health, or safety matter. The contraction in the area of operation can be considered analogous to the partial cancellation of license.

[109] *See also* ERC Res. No. 25-2016, § 4.8.8 (July 12, 2016). This is the Resolution Modifying the Rules for Setting Distribution Wheeling Rates (RDWR) for Privately Owned Distribution Utilities Entering Performance Based Regulation (PBR). "The Valuation Report for a Regulated Distribution System *must differentiate between those assets which are to be included in the Regulatory Asset Base for that Regulated Distribution System and those assets which are to be excluded from that Regulatory Asset Base on the basis that the Regulatory Asset Base must only include assets* to the extent that such assets: (a) are *necessary to meet Customer requirements for Regulated Distribution Services in respect of the Regulated Distribution System* within the electricity distribution network planning horizon referred to in the optimization principles *described in RAB Handbook* [.]" (Emphasis supplied.)

[110] *See also* ERC Res. No. 25-2016, §§ 4.7.1 & 4.7.5 (July 12, 2016).

"4.7.1 The financial Building Blocks which will form the basis of calculating the ARRt for a Regulated Distribution System are as follows: [...] *return 'on' capital*;

4.7.5 The *return 'on' capital* for Regulatory Year *is the Regulatory Asset Base* for the relevant Regulated Distribution System for that Regulatory Year (RABt), as determined by the ERC on the basis of the methodology for its determination set out in Section 4.9, increased by an allowance for working capital in accordance with Section 4.7.7, *multiplied by the classical weighted average cost of capital (*WACC), as determined by the ERC in accordance with Section 4.11." (Emphasis supplied.)

[111] *See also* ERC Res. No. 25-2016, § 4.1.1 (July 12, 2016). "Subject to Section 6.2.1(f) and (g), *the maximum distribution wheeling rates that a Regulated Entity is permitted to charge* for the provision by it, during each Regulatory Year that occurs in the Subsequent Regulatory Period, of Regulated Distribution Services in respect of a Regulated Distribution System *will be set under a Maximum Annual Price cap* for that Regulated Distribution System that is determined in accordance with this Article IV and the Regulatory Reset Process for the Subsequent Regulatory Period under Article VII." (Emphasis supplied.)

[112] *See* RULES OF COURT, Rule 43, § 1. "*Scope.* — This Rule shall apply to appeals from judgments or final orders of the Court of Tax Appeals and from awards, judgments, final orders or resolutions of or authorized by any quasi-judicial agency in the exercise of its quasi-judicial functions. Among these agencies are the Civil Service Commission, Central Board of Assessment Appeals, Securities and Exchange Commission, Office of the President, Land Registration

this arbitrary reduction in area of operation without notice and hearing, and subsequent reduction in area of operation is a violation of its right to substantive due process as it will prevent it from obtaining a reasonable rate of return.[113] ILAW must substantiate this argument with projections indicating its inability to meet the required rate of return demanded by investors for similarly situated investments, thereby impacting its ability to raise future capital and/or to pay for debts as they fall due because of the reduced tariffs.[114]

Authority, Social Security Commission, Civil Aeronautics Board, Bureau of Patents, Trademarks and Technology Transfer, National Electrification Administration, Energy Regulatory Board, National Telecommunications Commission, Department of Agrarian Reform under Republic Act No. 6657, Government Service Insurance System, Employees Compensation Commission, Agricultural Inventions Board, Insurance Commission, Philippine Atomic Energy Commission, Board of Investments, Construction Industry Arbitration Commission, and voluntary arbitrators authorized by law."; *See also* Rule 43, § 3. "*Where to appeal.* — An appeal under this Rule may be taken to the Court of Appeals within the period and in the manner herein provided, *whether the appeal involves questions of fact, of law, or mixed questions of fact and law.*" (Emphasis supplied.)

[113] *See* Duquesne Light Co. v. Barasch, 488 U.S. 299, 307–308 (1989). "The guiding principle has been that the Constitution protects utilities from being limited to a charge for their property serving the public which is so 'unjust' as to be confiscatory [...] *If the rate does not afford sufficient compensation, the State has taken the use of utility property without paying just compensation and so violated the Fifth and Fourteenth Amendments.*" (Emphasis supplied.); *See also* Duquesne Light Co. v. Barasch, 488 U.S. 299, 315 (1989). "The risks a utility faces are in large part defined by the rate methodology because utilities are virtually always public monopolies dealing in an essential service, and so relatively immune to the usual market risks. Consequently, *a State's decision to arbitrarily switch back and forth between methodologies in a way which required investors to bear the risk of bad investments at some times while denying them the benefit of good investments at others would raise serious constitutional questions.*" (Emphasis supplied.)

[114] *See* Duquesne Light Co. v. Barasch, 488 U.S. 299, 314 (1989). "*Similarly, an otherwise reasonable rate is not subject to constitutional attack by questioning the theoretical consistency of the method that produced it.* [...] The economic judgments required in rate proceedings are often hopelessly complex and do not admit of a single correct result. The Constitution is not designed to arbitrate these economic niceties. *Errors to the detriment of one party may well be canceled out by countervailing errors or allowances in another part of the rate proceeding.* The Constitution protects the utility from the net effect of the rate order on its property. *Inconsistencies in one aspect of the methodology have no constitutional effect on the utility's property if they are compensated by countervailing factors in some other aspect.* Admittedly, the impact of certain rates can only be evaluated in the context of the system under which they are imposed. One of the elements always relevant to setting the rate under Hope is the return investors expect given the risk of the enterprise [...]." (Emphasis supplied.); *See also* Duquesne Light Co. v. Barasch, 488 U.S. 299, 312 (1989). "[I]t appears that the PUC would have acted within the constitutional range of reasonableness if it had allowed amortization of the CAPCO costs but set a lower rate of return on equity with the result that Duquesne and Penn Power received the same revenue they will under the instant orders on remand. *The overall impact of the rate orders, then, is not constitutionally objectionable. No argument has been made that these slightly reduced rates jeopardize the financial integrity of the companies, either by leaving them insufficient operating capital or by impeding their ability to raise future capital. Nor has it been demonstrated that these rates are inadequate to compensate current equity holders for the risk associated with their investments under a modified prudent investment scheme.*" (Emphasis supplied.)

IV. RECOMMENDATIONS

Electricity is strongly associated with consumer welfare, with adequate provision of electricity leading to increased GDP, productivity, and employment, and reduced poverty.[115] According to Brenneman and Kerf:

> A lack of adequate energy services in a country has a strong and negative impact on that country's economy. Many businesses will not locate in areas without adequate energy services for reasons including an inability to use electric machinery or technology, the lower education and health levels of workers in unelectrified areas, and the poor standard of living associated with areas lacking electricity. Likewise, businesses that already exist need energy to grow and expand beyond local customer bases. Agricultural output is significantly impacted by a lack of electrification and the depletion of wood and other resources to be used as fuel has a negative impact on agricultural output as well. As a result of lowered non-agricultural and agricultural output, GDP's growth potential remains unrealized, which impacts the poor by decreasing business opportunities and employment. Providing adequate electricity and energy services can help raise GDP, productivity and employment, all of which create a positive environment for reducing poverty.[116]

The consumer welfare benefits of authorizing operation of microgrids like SPSB are clearer for unserved areas[117] which are unviable for existing electricity distribution utilities. Limiting SPSB's area of operation to these "unserved areas" would mitigate regulatory risk which can ensue from misguided enthusiasm and can result in higher electricity rates for consumers. Errant franchisees may also be disciplined for non-performance, and their franchises expropriated and re-auctioned in egregious cases.[118] Competition for the market may also be considered ("Demsetz competition")[119] given the substantial interest in microgrid investment in the Philippines,[120] with the franchise going to the bidder that offers

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[115] *See* ADAM BRENNEMAN & MICHEL KERF, INFRASTRUCTURE & POVERTY LINKAGES: A LITERATURE REVIEW (2002).

[116] *Id.*

[117] Rep. Act No. 11357 (2019), § 2(d). "*Unserved Area* refers to an area with no electricity access, no distribution system lines, no solar PV home systems, or no connection to any microgrid."

[118] *See* Rep. Act No. 9136 (2001), §§ 22, 43(a), (b), (e), (l), (p), & 46. This is the Electric Power Industry Reform Act of 2001; *See also* CONST. art. XII, § 11. "*Neither shall any such franchise or right be granted except under the condition that it shall be subject to amendment, alteration, or repeal by the Congress when the common good so requires*[.]" (Emphasis supplied.)

[119] *See* Joskow, *supra* note 7, at 1267–69; *See also* Braeutigam, *supra* note 32, at 1301–02; *See also* VISCUSI, HARRINGTON JR., & SAPPINGTON, *supra* note 9, at 421.

[120] *See* Diarmaid Williams, SHELL MAKES BIG MICROGRID PLAY IN PHILIPPINES POWER ENGINEERING INTERNATIONAL (2018) *available at* https://www.powerengineeringint.com/

to supply the service at the lowest price or the most efficient price structure.[121] However, Joskow cautions that for Demsetz competition to be effective, it is essential that there be an adequate number of *ex ante* competitors acting independently.[122]

These ideas are not novel—DOE has already provided a Solomonic remedy. DOE Department Circular 2005-12-011[123] ("DOE Circular") provides that when distribution utilities ("DUs") fail to serve remote and unviable areas within its franchise area, it may be opened for private sector participation through the Qualified Third Party ("QTP") program.[124] After publication of the list of unviable areas,[125] interested parties may submit an expression of intent to the DOE.[126] Qualified parties are recommended to the DOE Secretary as candidates.[127] Requests for Proposals are issued to all candidate QTPs. Thereafter, the QTPs name their proposed service areas and outline their proposals for servicing the area, including the electrification solution to be applied, the target connections, the proposed commercial arrangements, expected date of commission, proposed charges, and proof of capacity to provide efficient and

articles/decentralized-energy/2018/05/shell-makes-big-microgrid-play-in-philippines.html; *See also* Andrew Burger, SOLAR-STORAGE MICROGRIDS POISED TO SURGE AMID PHILIPPINES' RURAL ELECTRIFICATION DRIVE MICROGRID KNOWLEDGE (2018) *at* https://microgridknowledge.com/philippines-microgrid-market/%0D; *See also* Danessa Rivera, MERALCO SWITCHES ON FIRST SOLAR MICROGRID PHILSTAR GLOBAL (2019) *at* https://www.msn.com/en-ph/money/other/meralco-switches-on-first-solar-microgrid/ar-BBTG3OU.

[121] *See also* Joskow, *supra* note 7, at 1257. "While 'competition within the market' may lead to these types of inefficiencies, Harold Demsetz (1968) suggested that 'competition for the market' could rely on competitive market processes, rather than regulation, to select the most efficient supplier and (perhaps) a second-best break-even price structure. The essence of the Demsetz proposal is to use competitive bidding to award monopoly franchise contracts between a government entity and the supplier, effectively to try to replicate the outcomes that would emerge in a perfectly contestable market. The franchise could go to the bidder that offers to supply the service at the lowest price (for a single product monopoly) or the most efficient (second-best) price structure. The franchising authority can add additional normative criteria to the bidding process. Whatever the criteria, the idea is that the power of competitive markets can still be harnessed at the ex ante franchise contract execution stage even though ex post there is only a single firm in the market. Ex post, regulation effectively takes place via the terms and conditions of the contract which are, in turn, determined by competitive bidding ex ante."

[122] *Id.* at 1267.

[123] *See* Department of Energy (DOE) Department Circ. No. DC-2005-12-011 (Dec. 12, 2005). Prescribing the Guidelines for Participation of Qualified Third Parties (QTPs) for Provision of Electric Service in Remote and Unviable Areas, Pursuant to Sections 59 and 70 of "The Electric Power Industry Reform Act of 2001," and its Implementing Rules and Regulations (IRR).

[124] DOE Circ. No. DC-2005-12-011, § 2(a) and (b).

[125] DOE Circ. No. DC-2005-12-011, § 3(c) and (d).

[126] DOE Circ. No. DC-2005-12-011, § 4(a)–(c).

[127] DOE Circ. No. DC-2005-12-011, § 4(f).

reliable service.[128] The DOE then notifies each QTP of their service areas and advises them to proceed with negotiations and signing of service contracts with the National Power Corporation - Small Power Utilities Group (NPC-SPUG).[129] The DOE also facilitates the signing of the waiver contract between the candidate QTP and the concerned DU.[130]

V. CONCLUSION

The SPSB law introduces inefficient competition through SPSB's loosely defined area of operation. This may disincentivize investment or increase electricity rates for consumers. These outcomes are problematic because of the acute need for infrastructure investments in general, and cheaper electricity in particular, in the Philippines.[131] The following solutions may improve consumer welfare: 1) amend the SPSB law to limit SPSB's area of operation to unserved areas which are unviable for existing electricity distribution utilities; and 2) introduce competition for the market (*i.e.* the Demsetz competition), with the franchise going to the bidder that offers to supply the service at the lowest price or the most efficient price structure.

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[128] DOE Circ. No. DC-2005-12-011, § 5(a) and (b).

[129] DOE Circ. No. DC-2005-12-011, § 5(e).

[130] DOE Circ. No. DC-2005-12-011, § 5(e) and § 8.

[131] *See* Asian Development Bank, ASIA INFRASTRUCTURE NEEDS EXCEED $1.7 TRILLION PER YEAR, DOUBLE PREVIOUS ESTIMATES (2017), *available at* https://www.adb.org/news/asia-infrastructure-needs-exceed-17-trillion-year-double-previous-estimates; *See also* Naveen Tahilyani, Toshan Tamhane & Jessica Tan, ASIA'S $1 TRILLION INFRASTRUCTURE OPPORTUNITY MCKINSEY & COMPANY (2011), *available at* https://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/asias-1-trillion-infrastructure-opportunity.