

Development, modernity and electricity in the Brazilian Amazon

Fabricio Quadros Borges¹

¹ Professor, Federal Institute of Pará, Brazil Corresponding Author: Fabricio Quadros Borges

Submitted: 15-05-2021	Revised: 26-05-2021	Accepted: 28-05-2021

ABSTRACT: The objective of the study is to systematically analyse the main theoretical contributions of the debate on Development, modernity and electrical energy, from the universe of Social Sciences and Economics, in the Brazilian Amazon. The interpretation of the related authors seeks to understand the construction of capitalist society, the development of rationality and the issues that arise with modernity. Its purposes are to condition the reflection on the dilemmas of current society, in terms of understanding the relationships between society, economy and nature as it contributes to a better understanding of public policy strategies in the Amazonian energy sector in light of the debate. about development. The study finds that the discourse of development through hydroelectricity, recognizing the benefits verified with the socioeconomic profile of the region, is much more committed to a limited vision and in the short term of generating GDP in the short term for the country, than with the improving the quality of life of the population.

KEYWORDS: Development. Modernity. Public policy. Electric sector.

I. INTRODUCTION

Sociology comprises science that systematically studies the organization and functioning of human societies. The analysis of sustainable development, in this social context, suggests the need to understand terms that are indispensable for understanding its dynamics. Development and modernity, as well as their intrinsic relationships, represent two founding constraints to this study. Addressing these terms represents a commitment to analyse a rich and varied set of essays organized in thematic parts, which can also think about the context of the social sciences, their history and the role of these and the social scientist in the construction of a democratic society.

The article aims to review the discussion of authors who interpret the construction of capitalist society, the development of rationality, thinking and the dilemmas that emerge with modernity. Its purposes must also condition the reflection and the interpretation of the dilemmas of the current society, regarding the understanding of the relations between society, economy and nature. Within this scope of approach, the article intends to question what are the connections between public policy strategies in the electricity sector in the Amazon and the socioeconomic development of its population?

The electricity sector is developed based on public policies that aim to demonstrate that investments aim at economic growth and improving the quality of life of the population. Socioeconomic development, in turn, is directly linked to the evolution of the electricity sector, as electricity is the basic input for the improvement of other essential factors such as health, education, food, water and sanitation [1]. However, studies carried out in the Amazon, particularly in the State of Pará, since the 1980s have revealed that the improvements in the quality of life of the population of Pará have not proportionately reflected the large volume of investments in electricity, nor the significant growth in production and electricity consumption recorded in that state. The energy policy supported by the Brazilian Federal Government did not present a direct relationship between the expansion of the electricity sector and the socioeconomic development of the Amazon, and it also relegated matters of importance to broad national development to the background. In this sense, this investigation proposes to answer the following question: how do the dynamics of the effects of investments in electric energy develop in the development process? The purpose of this essay, therefore, is to analyse the functioning dynamics of the relationships between the effects of investments



in the Pará electric sector and the development process through the sectors of economic activity.

The discussion on the relationship between electric energy and socioeconomic development has been promoted by numerous national and international organizations. The discussion on this theme is closely related to the debate regarding methodologies for measuring the level of development of societies and the sustainability of their production systems [24]. In this perspective, it appears that the formulation of public policies for the electricity sector, as one of the driving forces of socioeconomic development, depends on the construction of indicators based on a broad understanding of the dimension of the relationship between investments in electricity and the development process [1]. In most models of building energy sustainability indexes and indicators, several authors point out that it has not vet been considered a representation of the energy evolution that would enable an assessment, in a quantitative and qualitative way, of the results of investment strategies and policies in the electricity sector. promoting the development of regions and countries.

II. METHODOLOGY

The methodology of this investigation was based on a data collection process carried out through bibliographic research. The bibliographic research involved scientific journals, publications from organs in the Brazilian energy sector and works involving the theme of electricity and tariffs for this input between 1990 and 2010. For didactic purposes, the research was carried out in five tasks, namely. In the first, the conceptual relationships between development and modernity were identified, as well as their intrinsic relationships, which will be based on a systematic and didactic review of the literature. Modernity and development comprise elements that are indispensable for a coherent understanding of the realities linked to sustainable development. In the second task, development was treated as a process of structural transformation of society. The theoretical discourse of the authors who study development analyses the environment of the strategies to be adopted for balanced and selfsustained economic growth in a given society. In the third, interpretations of development and the energy sector in the Amazon were analysed. In this task, this literature review was used as a parallel construction subsidy the contextual to understanding of public policies in the energy and development sector in the Amazon. In the last task, the participation of the electric energy sector in the

socioeconomic development of the State of Pará was analysed. The opportunity to discuss the connections between energy and development was built from the impossibility of thinking about development in the State of Pará, unrelated to its energy potential and the perfect use of its resources through the planning, execution and control of public policy actions. In the sixth stage, we discuss the theoretical basis for the analysis of public policies in the electricity sector and the socioeconomic development in the State of Pará, where the Theory of Regulation acquires a prominent role. Finally, the paper presents its inferences in an attempt to understand the connections between public strategies in the electric energy sector in the Amazon and the realities of the problems related to the socioeconomic development of this region.

III. DEVELOPMENT AND MODERNITY

This section will discuss the following topics: nature and conceptual relationships between development and modernity, development as a process of structural transformation of society. Initially, the nature and conceptual relations between development and modernity are analysed. When institutionally analysing modernity, [13], attributes a cultural and epistemological emphasis, in order to inquire about its character and dynamism, calls it a lifestyle or organization, where the advent of industry modelled by the alliance between science and technology indicates a scenario where man no longer organizes his life according to nature, causing impacts of industrialization on the environment, which he calls the consequences of modernity.

According to the author, modernity is constituted through reflexively applied knowledge, that is, a reorganization of reflection. The development would be in this context, formed by specific discontinuities, associated with the modern period. The relationship between modernity and development would take place at the moment when modernity develops through discontinuous processes of development, which, in turn, provide a fuller and more reflective understanding of this modernity.

The composition of the concrete elements of the new information technology paradigm and how they are being incorporated into the work process, comprises the discussion by [2]. Considering that it started from a system based on the manufacture of material goods to another related more centrally to information, causing the disconnection of all traditional types of social order, in an unprecedented way, the author seems



to suggest that this state would characterize modernity.

Development would be the result of networking when it allows information sharing [2]. The diffusion of the logic of networks substantially modifies the operation and the results of the productive processes and of experience, power and culture [2]. The author seems to bring modernity and development closer from the moment when the history of modernity characterized through the information society, is intrinsically linked to the development promoted by networking, when sharing information.

Studies. from a more historical perspective, discusses issues related to the process of secularization and rationalization that occurred in the West between the 18th and 19th centuries, highlighting the theoretical conceptions and the political, social and administrative changes that characterize modernity [31]. According to the author, modernity would be identified as the diffusion of the products of rational, scientific, technological, administrative activity, therefore, the idea of modernity is closely associated with that of rationalization. Modernity would be defined as the attempt to free man from all dualistic thinking. Development would be the product of technical progress and the liberation of needs and a characteristic of the supposed idea of modernity. Thus, the triumph of this progress is due to the opposition to those called anti-social (contrary to modernity and its revolution). For [31], the idea of modernity characterizes the beginning of a development that is produced by technical progress.

Studies, in turn, made an effort to reconstruct, in a lucid and comprehensive way, environmental criticism in the 18th and 19th centuries, practically forgotten in the history of Brazilian social thought [19]. An alert for the environmental issue in Brazil. The author does not propose to define clearly the terms modernity and development, but goes substantially towards the understanding of the environmental scenario. Through the author, relations with Sustainable Development started to take place in a better structured way.

Studies aimed at reflecting between modernity and the environment, together with the ethics that give them meaning, in order to endow the new style of development with basic notions of sustainability. Modernity was understood as a Social Project that seeks to face and respond to processes of profound social exchange, that is, to the relations existing in a global consumer market economy, often uncommitted to ethical issues. Hence the need to establish conceptual relationships with development [14].

The development refers both to the physical basis of the growth process, aiming at maintaining the stock of natural resources incorporating both productive activities and the carrying capacity of ecosystems. According to [14], the relationship between the terms seems to be established through sustainability, where the development paradigm seeks to respond to the dilemmas established by current modernity.

Studies, based on a review of studies on the processes of globalization, seeks to reinterpret contemporary globalization [28]. The author defends the position of the need to pay attention to the social, political and cultural dimensions, in addition to the economic, which has recognized importance. Modernity and development are not central points in his text, however, the need for integration of dimensions represents a significant contribution.

A discussion on the issue of rationality that questions sociology's competences in terms of this analysis comprises the focus of studies [15]. As noted, the author does not clearly work on the development category, but seems to identify himself with the idea of development based on a rationality. Studies, recognizing that the speeches of Sustainability reached the center of international environmental policy, pauses and proposes a more detailed examination of the current political and intellectual agenda [23]. The author supports the thought that the idea of sustainability is still useful, but that it should not be associated solely with the "outside nature". He mentions modernity only when he uses Fair head and Leach who claim that modernity has been progressively destroying the forest, by transforming cultures previously favourable to these forests. The author does not work with a concept of development itself, but constantly relates it to the term Sustainability, which he values for social, economic and environmental balance.

The economic and developmental assumptions that inform the notion of sustainable development, through a discussion of its consequences culminating in the question: who supports the development of whom? This is the problem addressed [3]. The author does not clearly work with the modernity category, however, he moves towards defining development when he observes that sustainable development describes a process of economic growth that does not cause environmental destruction, for this, it seeks to reconcile economic and environmental interests, in



addition to objectifying, simultaneously, maximize economic profits and environmental well-being.

In view of this theoretical review of interpretations, it appears that the definitions and relations between modernity and development are far from being exhausted and limited, however, we can clearly understand consensus towards the idea that modernity would be characterized, in fact, because it is dominated by the idea of the history of thought as a progressive illumination, which develops based on the appropriation and the fuller reappropriation of fundamentals, which are often also thought of as origins, so that theoretical revolutions and practices in Western history are presented and legitimized most of the time as recoveries, rebirths, returns. It is from the notion of modernity legitimizes overcoming that development, which in turn represents a progressive enlightenment of thought, which reappropriates and resignifies its own foundation and origin. This development, inclusive and broadening of well-being, would promote the transition to another social structure.

Next, based on this review of the literature on modernity and development, we seek to feed the debate through an approach to development as a process of structural transformation of society in an attempt to better understand the realities in public actions in the electricity sector in Brazil. Amazon.Development as a process of structural transformation of agrarian (traditional) societies into industrial (modern) societies represented the great theme of political economy. The theoretical discourse of the authors who study development analyses the environment of the strategies, that is, measures to be adopted for a balanced and selfsustained economic growth in a given society.

The discussion about development must be guided by the systematization of the production of knowledge of the founding themes of the current debate on the theme in order to contribute to the reflection and interpretation of society's dilemmas, as well as to better understand the strategies and political actions with which different social actors act and intervene in the solution of problems related to development. More specifically, it should seek, based on the main theoretical matrices in the social sciences and economics environment, to subsidize the understanding of the strategic participation of the electric energy sector in the process of socioeconomic development in the Amazon, and particularly in the State of Pará.

Studies, analysing the historical evolution of developed countries, detected five stages of development: traditional society; prerequisites for grubbing up; yank; self-sustaining growth and age of mass consumption. Traditional society, in general, is predominantly agrarian, with little technology and low per capita income. In the second stage, the preconditions for the take-off are created, based on important economic and noneconomic changes [27]. There is an increase in the rate of capital accumulation, in relation to the rate of demographic growth, and an improvement in the degree of qualification of the skilled labour for specialized production on a large scale. The crucial period is the hitch. At this stage, the process of continuous growth is institutionalized in society. This is because, in the second stage, there is still a certain resistance, since society is still characterized by traditional productive attitudes and techniques.

According to the author, the fourth stage, that of the maturity arch, takes about 40 years. In the course of it, modern technology extends from the leading sectors, which propelled the take-off, to other sectors. The economy shows that it has technological and entrepreneurial ability to produce anything that it decides to produce.Finally, the economy reaches the fifth stage, the era of high mass consumption, when the leading sectors turn to the production of high-tech durable consumer goods and services. In this phase, income rose to levels where the main consumption goals of workers are no longer basic food and housing, but cars, microcomputers, etc. There are some criticisms of the theory formulated by [27]. it was more of an empirical analysis, based on the observation of what happened with developed countries, than a scientific analysis. Many historians do not see a clear distinction between the second and the third stage. However, Studies seems to imply that industrial evolution can only occur after the improvement of agricultural productivity, and does not occur simultaneously. In any case, the essence of Rostow's so-called Step Theory illustrates the fact that economic development is a process that must advance in a certain sequence of clearly defined steps [27].

Studies, in turn, believes that societies change in different trends, moving from traditional to modern. Thus, the author presents a contribution to restructure the extension of evolutionary thinking in sociology [20]. The author presents three stages of development: primitive, advanced primitive and modern. In the primitive, one finds technology, kinship, communication and religion as basic mechanisms. In the advanced primitive, [20] cites stratification and legitimation. And finally, in the modern, there is the bureaucratic organization, money and the market, the universal legal system and the democratic association. It is observed that

DOI: 10.35629/5252-030514291441 Impact Factor value 7.429 | ISO 9001: 2008 Certified Journal Page 1432



the conception of Evolutionary Universes, developed by [20], still provides valuable insight in the interpretation of the complexity and diversity of the historical evolution of many societies. The author was not convinced with evidence that social evolution follows an organic evolution.

When discussing the issue of development x underdevelopment as two faces of a single global process, [8] seeks to clarify some controversial points about the conditions, possibilities and forms of economic development in countries that maintain dependency relations with the hegemonic poles of the capitalist system. The author warns of the need to consider structural and historical specificities when talking about Latin America and presents three stages of the development process: in the first there is the substitution of imports, then the production of capital goods and in the third, the income redistribution. After the first two stages, in the 1960s, there was a period of relative stagnation in Brazil, thus evidencing that the impression that the interpretative scheme and the predictions formulated in the light of purely economic factors were not sufficient for the later course of the studies. events. It would not be enough, replacing the economic interpretation of development with a sociological analysis, but integrating them.

As a proposition, studiespresents the need for anintegrated analysis thatprovideselementstoprovide a broader and more diversifiedanswerto general questionsabout the possibilities of development orstagnation in Latin American countries. and toanswer the decisivequestionsabout its sense and its political and social conditions As for [8]. underdevelopment, [12], that usingstructuralistreasoning, observes it comprises an autonomous historical process, notconstituting a necessarystage in the formation of capitalisteconomies. Accordingto the author, the onlyvisibletrendis for underdeveloped countries to continue tobeso. The development of the 20th centuryhas led toanincreasingconcentration of world income, with a progressivewidening of the gap betweenrichregions and underdeveloped countries. Accordingto[12], underdevelopmentis the manifestation of complexrelationships of domination-dependencybetweenpeoples, tendingto self-perpetuation in changingforms. As for economic development as a dynamic of capitalistaccumulationwithindivergent models after the 2nd World War, there is the strategy of industrializationthrough the substitution of imports previousmodernization and the of agricultureconsidering the promotion of exports, imports and the previous modernization of agriculture considering the promotion of exports.

At the strategicmoment of industrialization, Studiespresents the Theory of Economic Development in the view of ECLAC and the mainaspects of whathasbeengoing on in Brazilbetween CEPAL and opponents [29]. The authorhighlightsPrebisch'sthesis, which, in turn, criticizes the theory of comparativeadvantage of David Ricardo whovalues specialization in productswithlowercostadvantages, thatis, Latin America should, accordingto the theory, specialize in matters -cousin.

Prebisch argued a downwardtrend in agriculturalpricesrelativeto industrial prices. thuscausing a deterioration in exchangerelations. His proposalsawindustrialization as the onlyform of development based on the substitution of exports. He alsoindicatedthat the compression of superfluousconsumption, the incentive to the inflow of foreign capital, the agrarianteform to of increase the supply food and the greaterparticipation the state of in fundraisingwerenecessary. Forstudies, in general, underdevelopmentisnothing more than the absence of capitalism and not its result [17]. However, ECLAC'sideashavebeenwidelycriticized.

Accordingto some authors, there is no empirical verification in which exchange relations would worse nagainst primar yexporting countries. For others, poor countries with cheap labor and an abundance of natural resources would attract for eigninvestment,

butwouldremaindependent on and tiedtointernationalimperialism. As for the model of previousmodernization of agriculture and the promotion of exports, it ischaracterizedby the neoclassical / neoliberal ideas. Countries thathavemodernizedtheiragriculture, such as Australia,

havemanagedtodevelopfromanagricultural base and sustainedby the dynamism of exports.

Through a Neocepalin approach, it appearsthat the consumergoods industries wereinstalled on the periphery, but the capital goods industries remainedat center. the This increased trade interdependence between the economies of the center and those of the periphery, butasymmetrically, since the exchangerelationscontinuedtobeunfavorable for the Accordingto[29], latter. dueto the globalizationprocess, where countries benefitfrominterdependence, Theory the of dependencyhasbecome out of fashion. International data indicate the widedifferences in income betweendeveloping countries. Average income



levels in many of these countries, specifically in Latin America, are similar to the American income levels of the pastcentury. But in otherdeveloping countries, in Asia and Africa, per capita incomes are evenlower and resourceexploitationispredatory. In addition, there are widedisparities in the income distribution of each country, with a smallportion of the population living reallywell, and the majoritywith incomes wellbelow the average income level. In thiscontext, the needtoconsider the dimensionsthat are notonlyeconomic, but social and ecologicalpresents a new normativereference, sustainable development.

Sustainable development wouldbe а qualitativeimprovementthat does notimply а quantitativeincreasegreaterthanthatacceptable for the support capacity, that is, the capacity of the environmenttoregenerateraw material inputs and absorbresidual outputs [23]. In this previous context, studiesdeducesthat the mainchallengetobeabletoeffectivelyimplement sustainable development processes is the needtoseekmethods and wayscapable of measuring proposingchangestoregulate and material energyflowsthrougheconomic systems [10]. However, it isobservedthat the concept of sustainable development hasbeeninterpreted in the mostdiverseways, alwaysdepending on the specificinterests of the user. It isatthis point that the presentarticleacquirespracticalconnotation from the verified in the realities Amazon. The Hydroelectricpotential, expressed in the expansion of the electricity sector, isnotproportionallytranslatedinto development, especially in sustainable development. Finally, reflecting on the interpretations of development and the environment of the energy sector, particularly the electricity sector, in the Amazonrepresents a timelychallenge.

IV. PUBLIC POLICIES OF THE ELECTRICAL SECTOR IN THE BRAZILIAN AMAZON

This section will discuss the following topics: the interpretations of development and the energy sector in the Amazon, the participation of the electric energy sector in the socioeconomic development of the State of Pará, and the reference framework for the analysis of public policies in the electricity sector and socioeconomic development in the State of For. Initially, interpretations of development and the energy sector in the Amazon will be addressed. According to [6], when analysing the analogy and the construction of hypotheses, it is observed that in order to know how to build the object and to know the object that is constructed, it is necessary to be aware that every properly scientific object is consciously and methodically constructed, and it is necessary to know all this to ask ourselves about the techniques of construction of the questions asked to the object. It is at this moment that we notice the opportunity to understand the terms modernity and development, as well as their intrinsic relations to create reasonable conditions for analysing the policies of the energy sector, a strategic segment for development.

Studies, when developing studies on policies, investments and the expansion of energy production in the Amazon and their ability to articulate development and an improvement in the living conditions of the population, observe quite clearly that the electrification of the region was not capable of producing a socioeconomic development compatible with the huge investments made in the energy sector and with its expansion of electricity consumption [10]. It is in this direction that all the effort built from the authors in this discussion, will serve as a basis for reflection to help understand the strategies and public actions with which different social actors act and interfere in the solution of problems pertinent to the development of the energy sector. in the Amazon.

Through a rich and thought-provoking discussion, [13] states that in order to properly understand the nature of modernity we must analyse what are the sources of its dynamics. Therefore, the characteristics of modern institutions considered together may, by virtue of their dynamics, provide the basis for analysing the planning and operationalization of the geopolitical and socioeconomic strategies of the energy sector in the Amazon. The discontinuities mentioned by the author may, when identified, represent conditioning elements in the performance of policies in the region.

There is a study that based on historical foundations, but it does not make predictions of possible consequences resulting from the transformation in which we live [2]. However, his work is so rich that it can serve as a basis for studies that aim to interpret what is to come. In this way, inspired by values of responsible social participation, networks can channel the power of flows cited by the author for the implementation of regional public policies and the strengthening of democracy. This is the challenge that opens up for the energy sector, which will be able to look to the networks for a more effective instrument to promote Amazonian development.

When considering that the Social Contract can create a society as oppressive as Leviathan and



the Enlightenment only criticizes traditional society without clarifying the functioning mechanisms of a new society, [31] collaborates expressively to the critical formation of the idea that modernity is defined by the growing separation between rationalization and subjectification. As the author defends the idea that modernity is defined by the growing separation between rationalization and subjectification, it is observed that in the energy sector, a specific universe of my research work, the inevitable construction of absolute power is faced and repressive through its public policies, in order to lose in the adventure its internal rationality, when in the world of social actors, deprived of their identity in the name of their universal mission.

According to [19], environmental criticism only exists as a result of the object's analytical clipping and treatment, insofar as the author sought to find and locate in the past the signs common to the debate in the present to, from there, resize the meanings to them aggregates, which represents an important reflection exercise. The common denominator for all this critical tradition, as [19] shows very well, is in the essentially political, scientific, anthropocentric and economically progressive character that permeates the vast majority of these speeches. In this sense, the environmental issue comprises a key variable in the energy discussion and the nature of this character can determine the coherence of strategic analyses with public energy policies.

With [14], there is an elucidation of a timely concern with the development paradigm, highlighting the importance of the State and of a social project (as modernity is understood), representing an analysis committed to the purposes of the Doctoral course in clear and targeted manner. The basic notion that seeks to endow the new style of development and the ethical issue in this process combines respectively with the need for proportional development in the Amazon based on the expressiveness of investments in energy and the guarantee of ethics in this process through the sector's regulatory agency: the National Electric Energy Agency - Aneel.

Based on a deep political concern [28] develops a simultaneous analysis of the dimensions of globalization based on a more realistic dynamic of this interpretation, which contributes significantly to the creation of conditions for a more coherent understanding. The analysis of the dimensions: economic, social, cultural and political are related to the points of evaluation of the evolution of the sustainability of the energy sector and its commitment to the proportional development. Studies works on energy together with dimensions, employment, equity, efficiency, among others that are interrelated to the dimensions cited by [28], as a measuring element of regional development [4].

After discussing issues related to modernity and development, there is a need for proximity to what is called rationality. Studies seeks to discuss rationality as a support for the considerations of authors analysed in previous texts [15]. The highlight of sociology's competence in the universe of this challenge represents one of his greatest observations. Studies creates a new paradigm for sociological discussion in which it combines the lived world with the systemic conception, which constitutes a fertile field for reflection when we work on the realities of the energy sector in the Amazon and its systemic character through the energy chain, which it comprises generation, transformation, transmission, storage, distribution and consumption. This understanding provides subsidies for analysing the context of rationality with this follow-up [15].

Studies, in turn, notes that the links between the environment, social justice and governance have become increasingly vague in some sustainability discourses, and that the structural relationships between power, conscience and the environment have been gradually obscured. Energy merchandise, in this context, can be identified as an element to ensure a standard of quality of life, however energy comprises a field of commodity exchange relations with a view to the accumulation of capital, implying a vigorous process of exclusion [23]. Hence the opportunity for analysis from [23] to examine in more detail the dynamics of sustainability and to address the issue of energy sustainability in the Amazon, more specifically.

The issue of development through dimensions that interfere with any more careful assessment of the notion of development [3]. The author notes that current development patterns, known as sustainable, break the relationship between social systems and ecosystems, instead of ensuring that the use of natural resources by communities meets their needs at a level of comfort assessed as satisfactory for these communities, the author demonstrates to have a rich and coherent analysis of the theme.

Understanding the concept of sustainable development, as well as discussing the implications of this concept with contemporary analyses of biodiversity, biotechnology and intellectual property rights naturally stimulate the formulation of sustainable development alternatives and the implications for theory and practice management of



natural resources. It is at this moment that I relate to water resources, which promote energy through hydroelectricity, through the possibility of better articulating the strategies developed by the public policies of the energy sector in the Amazon from the capitalist notions of managerial efficiency.

The following is the participation of the electric energy sector in the socioeconomic development of the State of Pará. The opportunity to discuss the connections between electric energy and development is built from the impossibility of thinking about development in Pará, state of the Region Amazon, disconnected from its energy potential and the perfect use of its resources through the planning, execution and control of public policy actions. The importance of this article is based on three pillars: In the first, the relevance of the immense natural potential of the Amazon and the state of Pará is highlighted, which does not proportionally find а translation into socioeconomic development for the region based on the actions of public policies relevant to the health sector. energy; after all, it is known that the development of a region is closely linked to the potential of the energy sector. The second pillar clarifies the importance of identifying and discussing the difficulties in operationalizing this development based on the public policy strategies used. This discussion gains relevance at the moment when subsidies are created with the potential to contribute to the formulation. implementation and control of policies for the energy sector, in order to represent proportionately and directly the benefits of the growth of that sector with the State of Pará.

The possibility of evaluating and reflecting on the reality of regional development from the energy sector acts as a third pillar in that it serves as a cultural input so that institutions committed to the construction of scientific knowledge and to local realities can start from the results of this research, to be the link between the knowledge produced and its translation, through practical intervention measures that create conditions for the restructuring of public policies in order to contemplate the needs of the region, promoting solid and integrated development between culture, economy, society, politics and technology. The following is a brief analysis of the historical evolution of the electric energy sector, in order to understand its dynamics and its realities within the development process of the country, the Amazon and, above all, the State of Pará.

Energy policy in Brazil started with the presentation to the National Congress, in the late 1940s, of the Salte Plan - Health, Food, Transport and Energy. Thus, planning - whose acronyms belong to the areas to be developed by policies in priority by the Central Government of the time Gaspar Dutra - was the primary concern of the Vargas government, and it was from this that the State started to evolve in its system economic. However, it was really with Kubitschek with his Goals Plan that electric power got a big boost. This fact is due to the need to implement a policy capable of meeting the growing demand for energy, in view of the entry of foreign industries in Brazil, producers of household appliances.

From the 1950s onwards, Brazilian states started to create their own electricity companies, which gradually replaced private companies at the time. Subsequently, the Federal Government created Eletrobrás, in 1963. Since then, the installed capacity of electric generation has grown dramatically, reaching around 64.4 GW, in December 1999, excluding self-producers, with about 4.2 GW the Paraguayan part of Itaipu, almost all destined for the Brazilian market.

The energy policy in the Amazon and specifically in the State of Pará, presented itself until the end of the 1960s, as extremely weak. Power generation was basically thermal, based on heavy oils in medium and large power plants; diesel oil in small plants in the interior; and firewood on locomotives. In December 1968, aiming to minimize the strangulation that slows down the harmonic development of the region, it was created through Decree nº. 63,952 of the Ministry of Mines and Energy, the Coordinating Committee for Energy Studies in the Amazon / Eneram. This Committee would have the competence to supervise the studies and investigations of the hydroelectric use that would be carried out by CentraisElétricas do Pará S.A./Celpa [30]. According to the assessment of the priorities of these studies, the electric energy systems were installed and expanded in Manaus, Amapá, Santarém and Belém. According to [10], in the paraense framework, in particular, an electrification plan was established, basically consisting of the assembly of the Tapanã thermoelectric plant, aiming to provide the area polarized by Belém with energy potential, capable of meeting the requested demand, as well as the expansion of the interconnected system reaching the Bragantina Zone.

The concentration of installed power in the region, according to the Amazon Development Plan / PDA - 1967 to 1971, occurs in the capitals (85% for the States: Amazonas, Pará, Acre, Maranhão and the then Territories of Rondônia and Amapá) in which there are all the Amazon plants



with a nominal power greater than 1MW for public consumption. Absorbing about 78% of all energy produced for this public consumption, the consumption of residential and commercial energy reduces the availability of electricity, forcing some industrial enterprises to produce their own energy and making new industrial projects unfeasible.

According to [16], there were originally three companies in the State of Pará that operated in the electric sector at different times: The Pará Electric Railway Limited operated until 1946; due to the termination of the concession contract of this company, due to the precarious state of the services rendered to the population, the services took over to Força e Luz do Pará S.A. in 1952 at the initiative of the state government, aiming to implant a new system of production, transmission and distribution of electricity for the supply of Belém, Força e Luz operated until 1969, when the company was incorporated into CentraisElétricas do Pará SA / CELPA, created on August 21, 1960. By Law No. 72,548, of 30 July 1973, Eletronorte is created with the objective of continuing Eneram's studies and indications.

Linked to the issue, the exploitation of the hydraulic resources of the Amazon region as a complementary basis to industrial development gains more and more space in the debates on energy. In the Amazon, almost 60% of the country's territorial area is found, comprising several natural and man-made ecosystems of high biological and social diversity. Possessing the largest hydrographic network in the world, the Amazon applied for the position of greatest potential producer of Brazilian hydropower, and Pará, concentrating the largest number of waterfalls not yet explored, presents itself as the state with the greatest export potential. of Hydraulic power in Brazil.

Studies, observe quite clearly that the electrification of the region was not capable of producing а socioeconomic development compatible with the huge investments made in the energy sector and with its expansion of electricity consumption [10]. In the State of Pará, in particular, the fact that both in industry and commerce, energy consumption by sector increases in higher proportions than employment rates and the number of establishments [22] stands out. This represents a significant figure, as observed by [10], because it demonstrates that the increase in energy consumption in these two sectors is not accompanied by a similar growth, and is not basically due to the enormous growth of electrical and electronic equipment used in establishments.

It can be said, therefore, that in general the evolution of the energy sector and the significant increase in the consumption of electricity in the Amazon are unable to bring about a socioeconomic development for this region that is approximately compatible with the enormous volume of resources invested in electrification of the Amazon. Next, the reference framework for the analysis of public policies in the electricity sector adopted in this article is addressed as a strategic element for directing resources in mitigating development problems.

Next, the reference framework for the analysis of public policies for the electricity sector and socioeconomic development in the State of Pará is addressed. from the theoretical basis of development, the need to take as reference categories that clarify the functioning dynamics of the origin of the actions of the Federal Government and its reflexes in the socioeconomic development of the region.

In this sense, any mention made to the study of the evolution of the energy sector, must necessarily emphasize the following categories: a) product; b) demand and; c) investment. This section provides the theoretical framework that should be used to interpret the realities and advances in the energy sector through the perspective of geopolitical and socioeconomic strategies based on public policies. However, it is also observed that the energy sector is inserted in the context of a modern State and must consider these categories linked to the forms of external control that intervene with the basic services of the community through precisely these public policies, that is, it stands out here, the need to use the concept of intervention and, therefore, regulation.

Initially, the theoretical material needed to understand the categories, already mentioned, is defined, which will be used in this research proposal: a) Product: comprises the total value of the final goods and services that the production units choose to launch on the market for a set of circumstances [26]; b) Demand: represents the quantity of a good or service that a consumer wants and is willing to purchase for a certain price and at a given time. It is a measure of the willingness, supported by the purchasing power effect, of people, companies and the government, as a whole, to purchase goods or services [21]; c) Investment: means the application of capital in means that lead to the growth of productive capacity, that is, in capital goods. It is a component of demand and means an addition to the productive capacity of the economy in question [11]. The investment category is linked to productive capacity, which in turn



corresponds to the total stock of assets, capable of producing a flow of economically valued goods and services.

In general, the dynamics of the energy sector are linked to the increase in consumption, production and investments, which, in turn, does not only play a role in creating demand, but also in creating new productive capacity. In this sense, if the investment is made, the productive capacity will expand. The expansion of productive capacity, in turn, allows for the expansion of the product. Product growth, if it occurs, induces an expansion in demand, which should be translated into socioeconomic development. The energy sector, more specifically the electrical system, is formed by generation, transmission and distribution subsystems. This complex requires permanent attention to the three components of this system and the integrated development of these components will be an important precondition for achieving the much-desired socioeconomic development [7].

Development, for the purposes identified here, is defined as an improvement in the living conditions of the population and by fundamental changes in the structure of the economy of the Brazilian Amazon and the state of Pará, in particular. Studies considers development as continuous economic growth that allows for changes in structure and improvement in economic and social indicators, thus understanding a phenomenon of strengthening the economy [29]. The emphasis, therefore, is to verify the Amazonian development through public policies, investments and expansion of production in the energy sector.

Now, the concept of regulation is defined so that the external control of these categories is committed to the interests of this development. The concept of intervention and, therefore, of regulation, is as old as the State itself, and can mean any form of intervention, whether in the public or private sphere. In fact, if regulation is understood as a set of rules established by a State or any other forms of authority, legitimate or illegitimate, public or private, to organize society, then it can be said that regulation goes back to the very beginnings of society itself [18].

The study of regulation coexists with law, economics, political science and sociology, thereby preventing the development of an autonomous theory on the subject. Therefore, you can categorize or define regulation in several ways. Regulation can be understood either as a specific set of rules (in health and safety, for example), as deliberate state influence (such as taxation and subsidies) or finally as any other forms of control and social influence.

The importance of regulation actually has to do with the reasons that justify the adoption of regulatory policies. Studies, when describing Brazil's experience in infrastructure regulation, states that efficient regulation is desirable for three reasons [25]. First, because, by promoting clear and stable rules, particularly in the setting of tariffs, it reduces the uncertainty of investors and encourages the entry of private capital into the country. Second, because it stimulates competitiveness and efficiency within the industry. Third, because, in the presence of natural monopolies, it allows society to benefit from productive efficiency (economies of scale and minimization of costs).

Market regulation is an activity inherent to the modern state, however, the dominant regulatory pattern in national contexts tends to reflect the political-institutional historically designed characteristics. In other words, there is a variation in the specific regulation modalities. According to [5], regulatory standard is understood as the combination or predominance of different regulatory instruments (independent agencies, public ownership of firms or sectors, agency within the executive bureaucracy and self-regulation through corporate arrangements). The politicalinstitutional structure refers to a broader set of schemes and governance that takes into account the dominant political culture, the role of the State in the economy, the nature of political institutions and the formats of intermediation and representation of capital / labour interests.

According to [25], there is a relative balance between independence, flexibility and social control of regulatory agencies. In other words, on the one hand, strict rules, such as the setting of tariffs, for example, limit the possibilities of adaptation to changing conditions of demand and costs. At the other extreme, an excess of flexibility and discretion by regulators can lead to a loss of regulation credibility and inhibit private investment in infrastructure, particularly abroad. This balance would be an essential condition for efficient regulation. However, the problem is to find a way to reach this balance without prejudice to the economic agents involved in the process.

Brazil was one of the last countries in Latin America to adopt a regulatory reform, which in practice resulted in a privatization program, mainly for state-owned providers of public services characterized as natural monopolies, such as Telecommunications and Energy. But according to [5], the regulatory reform consisted of the elimination of state monopolies, the elimination of



consultative bodies within the Executive branch and the creation of independent agencies, without the counterpart of the suppression of all the regulatory instruments previously existing in the Executive.

Regulatory agencies appear in Brazil with the advent of the minimum or regulatory state, whose role involves a new model of public management. In this new conception, the State is no longer the only provider of public services, since with the privatization / privatization, many services have been delegated to the private sector, through concession, permission or authorization. In this sense, regulatory agencies were created with the purpose of standardizing the sectors of delegated public services and seeking balance and harmony between the State, users and delegates [9]; hence the need to consider the product, demand and investment categories when planning, executing and controlling public policy actions. But regardless of whether the public service is provided by the government or the private sector, the sole objective is collective satisfaction, since all services must be provided according to the collectively.

V. CONCLUSIONS

The discussion about development from an energy point of view cannot run the risk of reducing reality to numbers, in a mere quantification of evidence. The energy issue also opens up a field for political debate when considering the procedures that structure and support the decision-making process. It is necessary to open an extremely current and timely discussion on the nature of the decisions of energy projects that are taken, and legitimized, by the criterion of the supposedly democratic majority decision, when the nature of the energy question must necessarily lead to consensus building. The challenge is also the transformation of the academic effort that this work seeks to achieve, in an instrument of contestation and transformation for a more just and sustainable Amazonian society. The ethics of justice, equity and cooperation must override the logic of the market.

Hence the importance of systematically reviewing the main theoretical matrices of the intellectual debate on development in the universe of Social Sciences and Economics, in order to identify continuities and ruptures in the interpreted categories. Modernity develops through discontinuous development processes, which, in turn, provide a fuller and more reflective understanding of itself. It is in this perspective that the interpretations of the construction of capitalist society, the development of rationality and the dilemmas that emerge with modernity contribute to a better understanding of the intricacies of public policies in the Amazonian energy sector through the operationalization and application of its geopolitical and socioeconomic strategies.

Before the rise of capitalism, societies were in comparatively stagnant stages. They were basically agricultural and varied little over the years, with the exception of good or bad harvests, wars and epidemics. Capitalism, bringing about continuous technological changes and capital accumulation, radically accelerated the structures of these societies.

When discussing the Development theme, this article verified, through the analysis of several conceptual interpretations that describe the structural transformation process of traditional (agrarian) societies into modern (industrial) societies, important issues for linking ideas such as economic development. The presentation of the historical evolution of the developed countries of detected five stages of development: [27] traditional society; prerequisites for grubbing up; yank; self-sustaining growth and age of mass consumption. With [20], three stages of development were verified: primitive, advanced primitive and modern. In the primitive, one finds technology, kinship, communication and religion as basic mechanisms. In the advanced primitive, the author mentions stratification and legitimation. And finally, in the modern, there is the bureaucratic organization, money and the market, the universal legal system and the democratic association.

In this discussion on Development, the dual relationship with underdevelopment was found in a single global process. Studies seeks to clarify in the 1990s some controversial points about the conditions, possibilities and forms of economic development in countries that maintain dependency relations with the hegemonic poles of the capitalist system [8]. The author warns of the need to consider structural and historical specificities when talking about Latin America and presents three stages of the development process: in the first there is the substitution of imports, then the production of capital goods and in the third, the income redistribution. Studies observed in the 1960s that it comprises an autonomous historical process, not constituting a necessary stage in the formation of capitalist economies [12]. According to the author, the only visible trend is for underdeveloped countries to continue to be so. According to the author, underdevelopment is the manifestation of complex relations of domination-dependency



between peoples, tending to self-perpetuation in changing forms.

As for economic development, as a dynamic of capitalist accumulation within divergent models after the Second World War, ECLAC's role as an interpreter of a combination of social forces that fight for the consolidation of the leading countries of Latin America is seen. In this sense, ECLAC helped to provide the "national affirmation" ideology and to translate it into development strategies or plans that were practiced by several countries and especially by Brazil.

However, there are widedisparities in the income distribution of each country, with a smallportion of the population living reallywell, and the majoritywith incomes wellbelow the average income level. The concernwith the social scenario and with the capacitytosupportresources and energyhasincreasinglydeterminantdimensions the process of transformingsociety. In in thiscontext, the articleindicates the needto use a normative framework. sustainable new development. In this perspective, [10] observes that the mainchallengetobeabletoeffectivelyimplement sustainable development processes is the needtoseekmethods and wayscapable of measuring and proposingchangestoregulate material energyflowsthrougheconomic systems. It isatthismomentthat it isbelievedthat it isimportanttoreassesspublic policies aimedatsectorsthat are strategicto development, as is the case in the electricenergy sector.

betweenpublicpolicy The connections strategies in the electricpower sector in the Amazon and solution of the problemsrelatedtosocioeconomic development in thisregion do nothave links thatdemonstratestrategicplanning in the short. mediumorlongterm, in favor of the quality of life of the population. The discourse of development throughhydroelectricity, recognizing the benefitsverified with the socioe conomic profile of the region, ismuch more committedto а limitedvision and in the short term of generating GDP in the short term for the country, thanto the improvement of the quality of life. populationlife.

The socioenvironmentaldimensionalsoarousesconcern in the region. In the social aspect, the conditions of accesstoelectricity are linkedto the possibilities of satisfying the basic social demands of the population, which, whennotmet, tendto favor anexclusionprocess. The environmentalaspect, in turn, canbe the object of negative impacts as it impliessignificantchanges in ecosystems. Therefore, the mission of the institutionsthat make up the Brazilian energy sector comprises a strategic role for the socioeconomic development of the Amazon. The Regulation theory gainsimportance in thissense as theyhave the purpose of establishingnorms for the sectors of the delegatedpublicservices and of seeking balance and harmonybetween the State, users and delegates, valuing the commitmentbetween the actions of publicsectors, such as electrical, and the real needs of the populations.

REFERENCES

- [1]. Borges, F. Q.; Alão, A. A. A., 2019, "Estratégias na geração de energia elétrica no Pará e a promoção de estruturas tecnológicas e mecanismos competitivos (2017-2017)". Desenvolvimento em Questão, v. 17, p. 291-308.
- [2]. Castells, M., 2000, "A Sociedade em Rede". São Paulo: Paz e Terra. p. 87-161.
- [3]. Banerjee, S. B., 2013, "Quem sustenta o desenvolvimento de quem? O desenvolvimento sustentável e a reinvenção da natureza". In: Fernandes, M. e Guerra, L. (org) Contra-discurso do desenvolvimento sustentável. Belém: Unamaz, p. 75-130
- [4]. Bermann, C., 2003, "Energia no Brasil: para quê? Para quem?" São Paulo: Livraria da Física.
- [5]. Boschi, R. R.; Lima, M. R. S. de., 2017, "O Executivo e a Construção do Estado no Brasil: do desmonte da Era Vargas ao novo intervencionismoregulatório".Rio de Janeiro: UFPA/IUPERJ, fevereiro.
- [6]. Bourdieu et al., 1999,
 "PreliminaresEpistemológicos". Petrópolis: Vozes. p.9 a 86
- [7]. Buslik, S. A. de., 1994, "EnergiaElétrica: setoremergencial". Rio de Janeiro: IPEA.
- [8]. Cardoso, F. H., 1993, "As ideias e seulugar". Petrópolis: Vozes.
- [9]. Coimbra, M. C., 2018, "O Estado Regulador".Teresina:Jus Navigandi.
- [10]. Fenzl, N. Canto, A. &Vinícius, M., 2000, "A evolução do setorenergético e o desenvolvimentosocioeconômico da Região Norte e no estado do Pará". In: Fenzl, N. Coelho, M. C. N. e Simoniam L. (Org) Belém: Cesupa/UFPa/NAEA.
- [11]. Filellini, A., 2002, "Economia do Setorpúblico". São Paulo: Atlas.
- [12]. Furtado, C., 1964, "Dialética do desenvolvimento". Rio de Janeiro: Fundo de cultura.

DOI: 10.35629/5252-030514291441 Impact Factor value 7.429 | ISO 9001: 2008 Certified Journal Page 1440



International Journal of Advances in Engineering and Management (IJAEM) Volume 3, Issue 5 May 2021, pp: 1429-1441 www.ijaem.net ISSN: 2395-5252

- [13]. Giddens, A., 1991, "As consequências da Modernidade". São Paulo: Unesp, p. 151-177.
- [14]. Guimarães, R., 2018, "Modernidad, meioambiente y ética: um nuevo paradigma de desarrollo". In: RevistaAmbiente de Sociedade, Ano 1, nº 2 Madrid: s/e, 1998, p. 5-24
- [15]. Habermas, J., 1987, "Teoria de la acción comunicativa II". Madrid: Taurus, p. 15-69.
- [16]. INSTITUTO DE DESENVOLVIMENTO ECONÔMICO E SOCIAL DO PARÁ [IDESP], 1984, "Diagnóstico do setorenergético do Estado do Pará". In: Estudosparaenses. nº. 44. Belém: IDESP.
- [17]. Mantega, G., 1995, "A economiapolíticabrasileira". Petrópolis: Vozes.
- [18]. Moura, M. C. de., 2002, "AgênciasReguladoras no Brasil: oscasos dos setores de telecomunicações, eletricidade petróleo/gás natural".I e Congresso Latino Americano de CiênciaPolítica, Salamanca, Espanha, de 9 a 11 de julho.
- [19]. Pádua, J. A., 2015, "Um sopro de Destruição". Rio de Janeiro: Zahar. p. 9-32
- [20]. Parsons, T., 1964, "Evolutionary Universals in Society, in from modernization to globalization". s/l. s/e.
- [21]. Passos, R. C. M.&Nogami, O., 1998, "Princípios de economia". São Paulo: Thomson Laerning.
- [22]. Poole, D. A. et al., 1990, "Energia para o desenvolvimento da Amazônia". São Paulo: Pnud/Sudam/Suframa/Basa.

- [23]. Redclift, M., 2003, "Osnovosdiscursos da Sustentabilidade". In: Fernandes, M. e Guerra, L. (Org) Contra-discurso do desenvolvimentosustentável. Belém: Unamaz. p. 47-74.
- [24]. Reis, L. B., Fadigas, E. A. A., & Carvalho, C. E., 2012, "Energia, recursosnaturais e a prática do desenvolvimentosustentável". Barueri-SP: Manole.
- [25]. Rigolon, F. J. Z., 2003, "Regulação da Infraestrutura: aexperiênciarecente no Brasil". www.finame.com.br/conhecimento/revista/r ev705. Accessed on: August 22, 2020.
- [26]. Rossetti, J. P., 1998, "Contabilidade social". São Paulo: Atlas.
- [27]. Rostow, W., "1961, "Etapas do desenvolvimentoeconômico, um manifesto nãocomunista". Rio de Janeiro: Zahar.
- [28]. Santos, B. de S., 2014, "Globalização: fatalidadeou utopia?" São Paulo: s/e.
- [29]. Souza, N. de., 1996, "Desenvolvimentoeconômico". São Paulo: Atlas.
- [30]. SUPERINTENDÊNCIA DE DESENVOLVIMENTO DA AMAZÔNIA [SUDAM], 1994, "Plano integrado para o atendimentoàsnecessidades de energiaelétrica no do Pará - 1985/94". Belém: Sudam.
- [31]. Touraine, A., 2007, "La parole et le sang: politique et societéenAmériqueLatine". Paris: Odile Jacob.