

# ***The Way and Necessity of Leadership Promoting the Efficient Operation of Human Resources in Pucheng Power Plant under the Transformation of New Energy***

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**Abstract:** The largest thermal power plant in Shaanxi Province, Dang Pucheng (No. 2) Power Generation Co., Ltd. (hereafter referred to as Pudian business), is situated in Sunzhen Town, Pucheng County. On October 1,2020, Pudian's affiliation with China Huadian Group was terminated and transferred to China Datang Group. They are divided into Datang Pucheng Power Generation Co., Ltd. and Datang Pucheng No. 2 Power Generation Co., Ltd. with two brands and a specific set of organizational operation modes as a result of the various investors. The Pudian Company employs around 1400 people in 15 departments, and Pudian company's main business are: building and running power supply projects; producing and selling electricity; fully using and managing waste generated by power plants; providing consultancy services in the field of power technology; and training professionals in the field of thermal power operation and maintenance. Rapid Transfer of Talents from Thermal Power Plants to New Energy Power Generation Industry under "Double Carbon Goal" The human resource management of Pucheng Power Plant in the new energy power generating industry has not been extensively evaluated in the prior literature. Using Porter's five forces model and Maslow's demand theory. this study analyzes and proposes solutions to the challenges of Pucheng Power Plant in the growth of the new energy power generating industry. A brief introduction to the challenges in human resource management at Pucheng Power Plant Difficulties and Solutions in the Process of Green Transformation of Pucheng Power Plant Application and Suggestions Based on Porter's Five Forces Model and Maslow's Demand Theory.

**Keywords:** Maslow's demand theory, Porter's five forces model, human resource

## **1. Introduction**

The core concept of the "Double carbon aim" is to reach carbon peak by 2030 and carbon neutrality by 2060. The suggestion of the "double carbon" objective underlines China's willingness to aggressively respond to climate change and pursue green and low-carbon development, which will have a major impact on China's future social and economic operation mode, ecological environment quality, industrial structure layout, and lifestyle and consumption mode [1]. Particularly in the sector of energy and electricity, the proposal of this objective will result in systemic changes in numerous

dimensions. China has a solid foundation for achieving carbon peak and carbon neutralization objectives. In the face of enormous obstacles, thermal power companies must plan ahead and deploy scientifically.

China's "double carbon aim" approach is on the verge of achieving its "low carbon energy" objective. As China improves its building of a clean, low-carbon, and efficient energy system, more power production resources, such as nuclear power generation and hydropower generation, will emerge. These new energy power generation methods will gradually diminish or even supplant thermal power generation from coal [2]. In 2030, it is anticipated that wind power generation and solar power generation would be China's primary sources of electricity. Prospect: under the current low-carbon economy, it is inevitable that new energy will transition from supplementary to primary energy sources. The Pucheng firm will make every effort to expedite the development of heating and new energy. It is intended to build 700 MW of new energy projects, actively promote the county-wide rooftop photovoltaic system in the surrounding areas, and expand the flexibility of retrofitting existing units. It also aims to strengthen the capacity for deep peak load regulation and enterprise integration. By 2023, Pudian power company will evolve into a comprehensive energy firm that integrates thermal power, optoelectronics, wind power, domestic heating, industrial gas supply, and fly ash development, initially gaining complementary benefits and taking form in enterprise transformation.

### **1.1. Introduction of New Energy Power Generation Industry, Green Transformation Mode and Transformation Difficulties**

Shaanxi Huadian new energy power generation Co., Ltd. is currently the most well-known new energy power generation firm. It is primarily responsible for the development, building, operation, and administration of wind, light, pumped storage, and other new energy projects. Among these, hydropower generating has an efficiency of at least 90%. Wind power, hydropower, and solar energy cannot pollute the air and do not require any fuel. It is a renewable and environmentally friendly energy source. Next, the author will compare Pucheng Power Plant and Shaanxi Huadian new energy power generation company.

The author utilizes Porter's five forces model to understand transformational challenges. The author will begin by analyzing the threat posed by substitutes. The threat of substitutes is contingent upon the robust growth trend of the new energy power generation industry. The primary challenge faced by Pucheng Power Plant is that the design of wind power production equipment is significantly different from that of thermal power generation equipment, and the conversion is extremely challenging. Competition among existing businesses is also a significant issue. The shift of thermal power firms to new energy sources such as wind, photovoltaic, and pumped storage is rapid, and the pressure of competition is intense. Currently, issues such as the transition of thermal power professionals to new energy professionals, the unbalanced distribution of professional and technical personnel, and difficulties in personnel training and retention have hampered the rapid green transformation of some thermal power enterprises into new energy enterprises. The Pucheng Power Plant is a clear illustration. In the five forces paradigm, buyer and seller problems also exist. For instance, purchasing and selling coal. Coal is extremely popular during the winter and spring since it is the most fundamental energy source for thermal power generation. Both the buyer and seller must submit bids for coal resources. Since 2002, along with the rapid growth of thermal power installed capacity, the growth of fuel demand for coal has also increased simultaneously. Because the overall production capacity release of the coal industry has always lagged behind the thermal power industry, the coal price has been rising all the way through the so-called "golden decade" [3]. In this decade, due to the shortage of supply, the bargaining power of coal suppliers is relatively strong. Coal has been in the seller's market for a long time, and suppliers have strong bargaining power. Because the

cost of coal burning accounts for about 70% of the total cost of thermal power plants. Coal prices remain high and supplies are insufficient. Numerous vendors raise their prices to sell coal at a premium, resulting in a market imbalance and the necessity to purchase at a premium. They frequently incur substantial losses in areas such as transport and storage. But, wind power production, hydropower, solar power generation, and other equipment can continue to meet or even exceed the basic need for electricity in order to provide areas with a power shortage. Therefore, the new energy power generation is more environmentally friendly and safeguards the environment, while also ensuring power generation.

## **2. Pucheng Power Plant Encountered the Transformation of the Plight of Talent Shortage**

The conventional personnel management model of thermal power plants cannot accommodate the current state of affairs. It is essential to strengthen the informatization structure of human resource management and enhance the quality of human resource management. Due to its unique property rights structure, there are few business ventures that deviate from the standard production and distribution model. Against the backdrop of the current economic transition, its single and traditional human resource management mode has been challenging to integrate into the system of the market economy. The cognitive ability of power plant management regarding human resource management has a direct bearing on the deployment of enterprise-related systems in everyday production and operation. Currently, the development of human resources and the building of incentive mechanisms in thermal power plants are somewhat lagging, making it challenging to form a talent echelon with a fair age structure and to motivate staff.

Depending on the installed unit capacity, the personnel quota standard enforced by electric power companies is divided into production type personnel and management type personnel. The average age of production personnel grows from 35 in 2000 to 47 in 2021, from a mean of 35 in 2000 [4]. Due to the superposition of personnel loss and other factors, the production front-line staff demonstrates a clear downward trend, whereas the management personnel continue to increase due to the relatively relaxed working environment and parallel job transfer. This demonstrates an unjustified distribution of personnel structure.

### **2.1. Less Professional and Technical Personnel**

The power generation company is a technology-intensive organization with a refined specialization structure and a high level of professional technology. Currently, employees lack professional technology, as evidenced by three more and three fewer phenomena: a lack of senior management, senior technical, and senior trained professionals. However, there are more general managers, people with lesser skill levels, and general workers. Due to the low competitive pressure in power generation companies, steady income, more repetitive labor, and lack of active learning motivation, there are very few talents who are fluent in business and professional knowledge, and even fewer who can master many post skills. There is a substantial disparity in earnings between the many sorts of energy firms that generate electricity. Some personnel quit their original units as a result of recruiting and transferring to new energy firms with better compensation and benefits.

### **2.2. Employee Incentive Mechanism Failure**

The salary incentive function of the Pudian company is not clear, the salary distribution is not acceptable, the personnel in the production line and key positions are not inclined, and the salaries cannot accurately reflect the professional differences. The incentive mechanism of employee compensation distribution is imperfect, making it difficult to foster an environment conducive to innovation and competitiveness, despite the fact that salaries rise annually. It also has a significant

impact on the psychological state of the workforce. For instance, employees believe that joining a state-owned firm entails eating from an "iron rice bowl," accepting the status quo, and even giving up on advancement. In today's fierce market competition environment, people not only see the present salary and welfare level in career development, but pay more attention to and pursue their own promotion and development in enterprises. Assuming that the enterprise does not give employees a clear career development channel and there is no room for promotion, the growth of employees is not valued, and even if the salary level is improved every year, it will easily lead to burnout [5].

Figure 1 shows in greater depth some of the most prevalent factors that, according to my research, impacted employee enthusiasm ( )

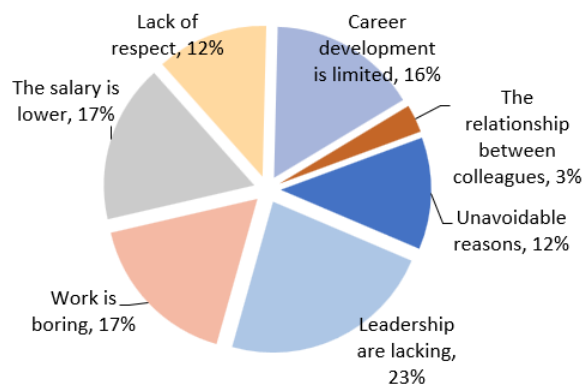


Figure 1: Statistical table of employee resignation rate and reasons.

### 3. Leadership Style Not Good for Development

Authoritarian managers are only interested in the goals, tasks, and output of the organization. It is simple for group members to show frustration and a propensity toward mechanized behavior when they don't care enough about the other team members, the social psychological distance between the leader and the leader is relatively large, the leader lacks sensitivity to the leader, and the leader is wary and hostile towards the leader.

Transformation and growth are not facilitated by the leadership style. Although different industries, enterprises, and jobs have distinct qualification needs for managers, there are parallels and commonalities among the qualification criteria for leadership. The ability to influence others' behavior, to direct or modify their behaviors, can be used to broadly define leadership. In general, the ability to direct and inspire others to "do the right thing" can be viewed as the essence of enterprise managers' leadership. After defining his vision and direction, the first step for a leader is to allocate his own resources through acceptable planning in order to accomplish his vision and direction. However, if leaders just talk about a hollow vision, they will only make their followers resentful. Vision can win over subordinates' approval [5].

The investigation reveals that Pucheng Power Plant has an autocratic management style. The timely and accurate completion of work by employees is positively impacted by authoritarian leadership. Because authoritarian leadership can create a sense of psychological security, that is, a reduction in the individual's perception of risk in the workplace [7]. Individuals with higher senses of security are more likely to show themselves honestly, while those with lower senses of security are more likely to engage in uncontrollable behaviors. Their psychological safety is influenced by interpersonal leadership qualities and organizational situations, especially in terms of self-awareness and evaluation of interpersonal relationships with leading colleagues. The discussion of leadership traits stands out among them as the most comprehensive, inclusive, moral, and ethical leadership, which contributes to the team's increased psychological safety and creativity.

There are advantages to authoritative leadership, but there are also associated drawbacks. Taking mandatory actions, such as ordering and pressing subordinates who are in a weaker position to execute extra role behaviors that are advantageous to the organization, by a leader who has a positional or power advantage. Employees will experience intense pressure and psychological stress, but without the option to refuse, they will inevitably display motivation. However, if you wait too long, your motivation can wane and even result in resignation. Additionally, dynamic psychology holds that the mediating factor between inducement and conduct is an individual's psychological traits. There will be the so-called in every group. This necessitates that leaders divide responsibilities and goals in accordance with the various personalities of each employee, and that those who can work harder for those who can and those who can't work harder for those who can. Incompetent Jerk, Competent Jerk, Lovable Star, and Lovable Fool. A capable leader owes it more to the group to get everyone working together and to foster a cooperative environment. Utilize drivers with high completion rates to move those with poor efficiency levels.

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#### **4. Based on Maslow's Hierarchy of Needs Theory**

Demand-Share Theory of Maslow Physiological Needs Love, respect, and a sense of belonging are all necessary for security. The five categories are arranged in ascending levels from lowest to highest. Maslow's demand-level incentive mechanism is more realistically significant for understanding employee demands, improving compensation distribution, enhancing the role of incentives, and igniting employee enthusiasm [8].

##### **4.1. The Motivation of Maslow Theory to Small and Medium-sized Enterprises**

Start with respect, then instill the need for respect in your workforce. Every employee aspires to achieve social stability and believes that his or her professional accomplishments will be acknowledged by peers and even superiors. The fulfillment of respect demands will provide people with a sense of self-assurance, vigor for work, and passion for society, and will encourage their personal development to a higher level, which will have an impact on the growth of businesses. It also necessitates improved employee trust and a sense of belonging, as well as reciprocal respect between businesses and their workforce.

It's challenging for executives to comprehend the actual needs of today's workforce. Nowadays, performance management and wage management are the main priorities for businesses. Leaders frequently credit pay and performance for the organization's allure, but they do little to further their own personnel policies and organizational culture development. This viewpoint alone is unusual. Few leaders actually take the effort to research and comprehend the needs of their workforce. Despite understanding their needs, employees' needs cannot be met. This is in terms of compensation

This is particularly evident on the. Due to the better compensation offered by competitors, many staff leave. However, wages are only a small part of what businesses offer. The compensation level of Pucheng Power Plant in the early stages of development is easily lower than that of other companies due to the various nature and development paths of enterprises, but this is also the moment when great people are most needed. Additionally, a growing number of workers are interested in

factors other than compensation. Employee needs should be taken into account while designing the personnel system, employee development route, management style, and even corporate culture. For instance, many brilliant young workers "transfer jobs" from state-owned businesses to international ones because they believe that the former lack innovation and offer a limited scope for career advancement. They may "jump" to a foreign company where the pay may not be as great as at state-owned businesses. However, they are drawn to the culture and environment of foreign businesses.

## 4.2. Measures to Retain Talents

1. The organizations attract and retain outstanding talents need. According to Maslow's demand theory, an organization has two responsibilities: first, to thoroughly research and comprehend the needs of its employees; and second, to match the resources that the company can supply with the demands of its people in order to meet those needs. It can be represented by the security of a stable life. The necessities of daily existence make up the first rung of human requirements. The creative potential of individuals can only be fully realized when life is guaranteed. The company should operate within the limits of its expertise. Try to provide solutions for the employees' daily struggles in the neighborhood, such as staff dormitory division and family welfare, to encourage long-term loyalty from their workforce.

2. Create a fair compensation structure. It goes without saying that a fair pay structure can draw workers. A high wage arrangement for exceptional employees is frequently used in various firms.

3. Develop a career development strategy that is unique to you. Enterprises and organizations should give talents more lax growth opportunities by, on the one hand, providing them with educational opportunities. Some employees don't put in as much effort since they feel more out of date due to a lack of training over a lengthy period of time in the rapidly changing culture today. Therefore, organizations must set up a set of institutionalized training mechanisms and a training process that matches organizational goals with employees' career development goals in order to retain talent. On the other hand, in order to develop and inspire talents, the business should present them with fresh challenges, purposefully nurture their potential, and permit them to take on greater duties or higher positions of work.

4. Create a suitable management atmosphere and effective communication channels. The organization's managers need to completely understand that the superb abilities are greatly influenced by the quality of the managers. Everyone wants their contributions to be acknowledged eventually, their opinions to be taken into account, and their involvement in important business decisions. The company can keep up strong communication and quickly settle disputes at the same time. As a result of their natural integration into the company, exceptional employees will develop deep sentiments for it and continue to show high levels of loyalty.

### 4.2.1. Leadership Modification

Currently, democratic leadership has replaced authoritarian leadership at Pucheng Power Plant. Democratic leaders devote close attention to supporting and facilitating the work of group members, caring for and addressing their needs, and fostering a culture of equality and democracy. Leaders and followers have a reasonably close social and psychological bond. Members of the group that follow a democratic leadership style are highly motivated to work hard and have a strong feeling of accountability [9]. Group members independently choose their own work processes, and they are generally quite efficient in their job.

Democratic leaders place a strong emphasis on giving consent, giving employees power, accommodating their needs for decision-making authority at work, paying closer attention to employees' psychological needs, and placing people at the center of all they do. High-level internal

motivation can be effectively sparked by this management approach. According to Maslow's hierarchy of needs theory, after their basic requirements are met, employees would start looking for self-development opportunities to understand the meaning of life. Businesses that follow the democratic leadership style theory encourage employee growth using a variety of human resource management techniques, such as future planning, performance evaluation, recruitment, reward and punishment systems, etc.

Business executives ought to comprehend this better. Learning never comes to an end. Leadership is the process of influencing others, and the process of promoting subordinates to work hard in an effective way to achieve the shared goals of the organization [10]. They ought to regularly evaluate themselves, seek to better themselves, show better leadership to their employees, and fully utilize all of the abilities they have acquired over the course of their employment. If adopting a superior attitude is absolutely impossible, leaders must be able to keep their best managers because they are capable of not only coming up with innovative ideas on their own, but also of assisting other team members in doing the same. Similar to soldiers, employees of businesses require ongoing training in all facets of businesses. Enterprises should also provide ongoing manager training in order to develop managers into sensible generals.

## 5. Conclusion

Pucheng Power Plant still has ways to go before it reaches the level of new energy development that other businesses have achieved. According to me, Pucheng Power Plant needs to concentrate on the following elements: leadership style, employee pay, reward and punishment systems, and the development of a platform with greater possibilities that is conducive to cultivating and admitting better talents. When Pucheng Power Plant possesses these advantages, it will have a significant competitive edge over other groups. It is critical to include new energy machinery assembly in the development of the new energy sector. The second is a shift in leadership emphases. Here, the author advises a democratic leadership approach. The output performance and employee happiness of the group can generally reach their highest state with the proper support of "involution" and democratic leadership. Bring independent creativity skills of employees into play. According to Maslow's requirements theory, after a person's basic needs are met, they will seek out greater life values. To increase employees' organizational performance, business managers should pay attention to it, support it, and comprehend it.

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