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THE INFLUENCE OF WORKPLACE SAFETY CULTURE, REWARD SYSTEMS, AND WORK-LIFE BALANCE ON EMPLOYEE PERFORMANCE AT PT. PLN NUSANTARA POWER UP BELAWAN

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Abstract

This study aims to analyze the effect of safety culture, reward system, and work-life balance on employee performance at PT PLN Nusantara Power UP Belawan. A quantitative associative method was employed with 98 employees from the Operations division as respondents through saturated sampling. Data were analyzed using multiple linear regression, t-test, F-test, and coefficient of determination. The results show that partially, safety culture (sig. 0.044), reward system (sig. 0.017), and work-life balance (sig. 0.004) have a positive and significant effect on employee performance, with work-life balance as the most dominant variable (contribution 13.4%). Simultaneously, the three variables significantly affect performance (F=13.111; sig. 0.000) with a contribution of 29.5%. The lowest indicators are availability of PPE for safety culture, objectivity of assessment for reward system, and satisfaction with balance for work-life balance. These findings support Social Exchange Theory. Thus, integrated HR management is needed to improve sustainable performance. The company is advised to prioritize improvements in work-life balance, a fair reward system, and strengthening safety culture.

Keywords: Safety Culture, Reward System, Work-Life Balance, Employee Performance

INTRODUCTION

Human resources (HR) serve as a company's primary asset and play a strategic role in determining organizational success. HR represents not merely a workforce, but individuals possessing abilities, skills, knowledge, and potential that can be cultivated to achieve corporate objectives. From a modern management perspective, HR is a key factor in building sustainable competitive advantage; therefore, its management requires a planned and systematic approach to maximize contribution (Ansory & Indrasari, 2018). Furthermore, a human capital-based approach emphasizes that investing in HR through education, training, and development generates long-term value for the company, manifesting as both increased productivity and innovation. In the context of modern enterprise, the scope of human resource management extends beyond administrative functions to encompass competency development, employee well-being, and adaptability. This scope includes training, career development, and the provision of motivation and rewards to enhance employee performance. HR also acts as an agent of change, driving innovation and assisting the company in navigating the dynamics of the business environment. Consequently, effective HR management is pivotal to creating an adaptive, productive, and sustainable company (Zulkifli, 2022).

Reflecting the importance of effective human resource management in modern enterprises, the application of this concept is evident at PT PLN (Persero), a company characterized by high operational complexity. As a State-Owned Enterprise (SOE), PLN plays a strategic role in the national electricity supply. In carrying out its functions, PLN manages an integrated electricity system that encompasses generation, transmission, and distribution, as well as customer service. The high level of service complexity demands a workforce that is not only technically competent but also adaptable, disciplined, and mindful of operational standards and workplace safety. Consequently, the quality of human resource management is a crucial factor in maintaining the reliability of the electricity supply, minimizing operational disruptions, and supporting economic stability and sustainable national development. Furthermore,

amidst global competition and the demands of digitalization, PLN is required to continuously enhance its workforce capabilities to foster innovation and adapt to rapid technological changes, including the utilization of digital systems and automation within the electricity sector. One of PLN Nusantara Power's operational units is UP Belawan, which plays a vital role in the Northern Sumatra electricity system. This unit makes a significant contribution to meeting the electricity needs of both the public and industries in the region. UP Belawan manages various types of power plants—such as combined-cycle (PLTGU) and steam (PLTU) power plants—that operate continuously. The work environment at these generation facilities entails high-risk factors, including exposure to heat, high pressure, and high-voltage electrical installations, necessitating the implementation of strict workplace safety standards. Furthermore, shift-based work schedules and heavy workloads present distinct challenges for employees in maintaining a work-life balance. These conditions require the company to look beyond merely achieving operational targets and to also prioritize employee well-being, occupational health, and long-term performance sustainability.

According to Mangkunegara (2017), employee performance refers to the qualitative and quantitative work results achieved by an employee while carrying out tasks in accordance with their assigned responsibilities. Consequently, every employee is expected to meet work targets effectively and efficiently while adhering to applicable workplace safety procedures to ensure organizational goals are optimally achieved. Furthermore, factors such as reward systems, leadership, the work environment, and work-life balance influence employee motivation and performance. An imbalance between work and personal life can lead to reduced performance, increased fatigue, and a higher risk of operational errors. Therefore, PT PLN Nusantara Power UP Belawan was selected as a relevant research subject to examine the factors influencing employee performance, with the aim of supporting more effective human resource management and fostering a balance between employee performance and well-being. Employee performance assessments at PT PLN Nusantara Power UP Belawan for the second semester of 2025 categorized staff into structural and functional roles. Among the 30 structural employees, 9 received a grade of B and 21 received a grade of C. Meanwhile, among the 183 functional employees, 55 received a grade of B and 128 received a grade of C. This indicates that the majority of employees in both groups received a grade of C. When analyzed by work unit, the Operations division had the largest workforce, comprising 12 structural employees (4 with grade B and 8 with grade C) and 91 functional employees (27 with grade B and 64 with grade C). The Maintenance unit was also dominated by employees with a grade of C.

KPI results for PT PLN Nusantara Power UP Belawan indicate a lingering gap between targets and actual performance regarding the organizational aspect. The Organization Capital Readiness (OCR) score was recorded at 2.88 against a target of 2.92, representing a gap of 0.04 points or approximately 1.50%. The OCR assessment encompasses alignment, leadership, the Bipartite Cooperation Institution (LKS Bipartit), industrial relations management, workforce management optimization, organizational culture, and knowledge assets. These findings suggest that organizational readiness to support the achievement of corporate performance goals is not yet fully optimal. Meanwhile, Human Capital Readiness (HCR) achieved a score of 3.21, meeting the corporate target. However, when OCR and HCR scores are combined, the result is 3.05 against a target of 3.07, leaving a gap of 0.02 points or approximately 0.67%. This situation indicates that, despite strong employee competencies, the lack of fully supportive organizational systems prevents human resources from realizing their full potential to drive optimal organizational performance. Based on performance assessment data, KPIs, a pre-survey, and interviews, it can be concluded that employee performance at PT PLN Nusantara Power UP Belawan is not yet optimal. This is evident from the performance target gap: no employees achieved an 'A' rating, and the majority fell into the 'C' category (meeting targets). This situation is further corroborated by pre-survey and interview results indicating persistent obstacles—such as workload, staffing limitations, and material delays—that could potentially hinder performance achievement.

Overall, the root causes of the findings are dominated by three primary factors: a lack of discipline in individual worker behavior, weak managerial oversight systems, and constraints regarding the availability and distribution of Personal Protective Equipment (PPE). These conditions confirm that the implementation of workplace safety remains procedural and reactive rather than an ingrained culture. Consequently, workplace safety is a highly relevant variable for further study—a point reinforced by the pre-survey results involving employees, which will be discussed in the subsequent section. Based on data regarding unsafe conditions, pre-survey results, and employee interviews, it can be concluded that the workplace safety culture at PT PLN Nusantara Power UP Belawan has been implemented reasonably well but has not yet reached an optimal level. The identified gap lies in the discrepancy between the expected state—a safety culture ingrained in every employee, in line with Cooper's (2000) concept—and the actual conditions on the ground, which still reveal violations regarding PPE usage, inconsistent enforcement of safety rules, and uneven levels of employee awareness. Furthermore, challenges persist regarding the provision

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of specialized PPE, and safety implementation tends to rely heavily on individual awareness. These conditions indicate a need to strengthen the psychological, behavioral, and situational aspects of the safety culture to ensure more consistent implementation. Thus, workplace safety culture is a relevant variable for analysis, as it is believed to influence employee performance at PT PLN Nusantara Power UP Belawan.

At PT PLN Nusantara Power UP Belawan, the reward system encompasses both financial compensation (salary, incentives, bonuses, and allowances) and non-financial rewards (performance recognition, competency development, and career progression); these elements complement one another to foster a sense of appreciation and drive optimal work performance. Conversely, a misalignment between rewards and employee contributions can diminish motivation and loyalty, or even trigger a desire to leave the organization, thereby disrupting operational stability. The reward system at PT PLN Nusantara Power UP Belawan is considered relatively comprehensive and well-structured, as it incorporates both financial and non-financial components. Regarding the financial dimension, the company provides fixed compensation—such as "Pay for Person" (P1), which is based on competency and performance—along with adjustments via Cost of Living Adjustments (COLA) and merit increments. Additionally, there is variable compensation in the form of "Pay for Position" (P2) and "Pay for Performance" (P3), with allocations determined by the employee's role and work outcomes. The company also offers various supplementary benefits—including social security, operational facilities, and loan assistance—to support employee well-being. Based on data regarding the reward system, pre-survey results, and interviews, it can be concluded that the reward system at PT PLN Nusantara Power UP Belawan is comprehensively structured, encompassing both financial and non-financial rewards. However, its implementation is not yet perceived as entirely fair or optimal by all employees. This indicates a gap between the company's designed reward system and its actual execution; this is evidenced by lingering perceptions that rewards, recognition of contributions, allowances, and incentives do not fully align with workloads, as well as the use of a forced distribution system that potentially limits the granting of rewards based on individual performance.

However, at PT PLN Nusantara Power UP Belawan, conditions persist that potentially disrupt employees' work-life balance, including heavy workloads, shift work systems, overtime, and the demands of 24-hour operations. These conditions can curtail rest and personal time, thereby potentially affecting employee well-being and performance. Based on the company's situation, pre-survey results, and interviews, it can be concluded that the work-life balance of PT PLN Nusantara Power UP Belawan employees is not yet fully optimal. This is evident from the fact that some employees experience an imbalance between work and personal life, reduced engagement in family and social activities, and a lack of perceived ideal balance. Interview results further indicate that heavy workloads, shift work, overtime, and on-call requirements limit time for rest and family interaction, and even lead to physical fatigue and emotional stress. These conditions suggest that work-life balance requires attention to enhance well-being and optimally support employee performance. Based on the preceding background discussion, the issues in this study can be identified as follows:

1. The performance appraisal system does not yet fully reflect individual achievements objectively due to the continued use of a forced distribution approach; consequently, appraisal results are concentrated in categories B and C, with no employees reaching category A.
2. The implementation of workplace safety culture remains suboptimal, evidenced by persistent violations regarding the use of Personal Protective Equipment (PPE) and inconsistencies in adhering to Standard Operating Procedures (SOPs) during field operations.
3. The implementation of the reward system is not yet fully effective, particularly regarding fairness, transparency, and the equitable distribution of rewards based on employee contributions.
4. Employee work-life balance is not yet optimal, especially for those facing heavy workloads, shift-based schedules, and intensive operational demands.

Referring to the background of the problem, research formulation, and objectives, the researcher can state the following hypotheses:

H1 : Workplace safety culture has a positive and significant partial effect on employee performance at PT. PLN Nusantara Power UP Belawan.

H2 : Reward system has a positive and significant partial effect on employee performance at PT. PLN Nusantara Power UP Belawan.

H3 : Work-life balance has a positive and significant partial effect on employee performance at PT. PLN Nusantara Power UP Belawan.

H4 : Workplace safety culture, reward system, and work-life balance have a positive and significant simultaneous effect on employee performance at PT. PLN Nusantara Power UP Belawan.

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METHOD

This study employed an associative approach, which aims to identify the relationship or connection between one variable and another (Sugiyono, 2021). The method employed was quantitative. The data used in this study included both primary and secondary data. This research was conducted at PT PLN Nusantara Power UP Belawan, located at Jl. Pulau Sicanang No. 1, Belawan Pulau Sicanang, Medan Belawan District, Medan City, North Sumatra. The research was scheduled to take place from late March 2026 to July 2026. The population for this study consisted of all 98 employees in the Operations Department of PT PLN Nusantara Power UP Belawan. A saturated sampling technique was employed; consequently, all 98 employees from the Operations Department were designated as research respondents. The analysis tool used is SPSS version 25.

RESULTS AND DISCUSSION

Results

Validity and Reliability Test Results

Table 1. Results of the Validity Test of Workplace Safety Culture, Reward System, Work Life Balance, Employee Performance

Statement Item	r-count	r-table	Description
WSC1	0,478	0,361	Valid
WSC2	0,564	0,361	Valid
WSC3	0,809	0,361	Valid
WSC4	0,747	0,361	Valid
WSC5	0,768	0,361	Valid
WSC6	0,782	0,361	Valid
RS1	0,394	0,361	Valid
RS2	0,395	0,361	Valid
RS3	0,470	0,361	Valid
RS4	0,538	0,361	Valid
RS5	0,797	0,361	Valid
RS6	0,601	0,361	Valid
RS7	0,567	0,361	Valid
RS8	0,575	0,361	Valid
RS9	0,750	0,361	Valid
RS10	0,804	0,361	Valid
WLB1	0,720	0,361	Valid
WLB2	0,794	0,361	Valid
WLB3	0,837	0,361	Valid
WLB4	0,728	0,361	Valid
WLB5	0,629	0,361	Valid
WLB6	0,629	0,361	Valid
EP1	0,790	0,361	Valid
EP2	0,813	0,361	Valid
EP3	0,776	0,361	Valid
EP4	0,733	0,361	Valid
EP5	0,783	0,361	Valid
EP6	0,726	0,361	Valid
EP7	0,753	0,361	Valid
EP8	0,659	0,361	Valid
EP9	0,735	0,361	Valid
EP10	0,745	0,361	Valid

Source: SPSS version 25 (2026)

Referring to Table 1, it is known that the corrected item total correlation value is > 0.361, so all statement items are stated to be valid/legitimate.

Table 2. Results of the Reliability Test of Workplace Safety Culture, Reward System, Work Life Balance, Employee Performance

Variable	*Cronbach Alpha*	Description
Workplace Safety Culture	0,789	Reliable
Reward System	0,789	Reliable
Work Life Balance	0,818	Reliable
Employee Performance	0,914	Reliable

Source: SPSS version 25 (2026)

Referring to Table 2, it is known that the Cronbach's alpha value for all variables is workplace safety culture, reward system, and work-life balance > 0.60, so all variables are stated to be reliable.

Normality Test Results

Table 3. Kolmogorov-Smirnov Test Results

		Unstandardized Residual
N		98
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	3.44064830
Most Extreme Differences	Absolute	.087
	Positive	.087
	Negative	-.054
Test Statistic		.087
Asymp. Sig. (2-tailed)		.064[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

Source: SPSS version 25 (2026)

Referring to Table 3. above, it is known that the results of the Kolmogorov-Smirnov test have a significance value of 0.064 > 0.05 so it can be concluded that the data tested is normally distributed.

Multicollinearity Test Results (Tolerance and VIF)

Table 4. Multicollinearity Test Results

Coefficients[a]							
	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	**Tolerance**	**VIF**
1 (Constant)	18.373	4.660		3.943	.000		
Workplace Safety Culture	.301	.147	.182	2.043	.044	.946	1.058
Reward System	.221	.091	.247	2.424	.017	.721	1.387
Work Life Balance	.344	.117	.296	2.938	.004	.783	1.356

a. Dependent Variable: Employee Performance

Source: SPSS version 25 (2026)

Referring to Table 4, it is known that the results of the multicollinearity test for the variables workplace safety culture, reward system, and work-life balance have a tolerance value > 0.10 and VIF < 10, so this study is declared free from multicollinearity problems.

Heteroscedasticity Test Results (Glejser)

Table 5. Glejser Heteroscedasticity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	**t**	**Sig.**
1	(Constant)	5.083	2.458		2.068	.041
	Workplace Safety Culture	.145	.078	.186	1.865	.065
	Reward System	-.094	.048	-.224	-1.963	.053
	Work Life Balance	-.088	.062	-.161	-1.426	.158

a. Dependent Variable: Abs_res

Source: SPSS version 25 (2026)

Referring to Table 5. above, the results of the Glejser test above, the significance value of the three independent variables is workplace safety culture, reward system, and work-life balance > 0.05, so it can be concluded that there is no heteroscedasticity.

Multiple Linear Regression Test Results

Table 6. Multiple Linear Regression Test Results

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	18.373	4.660		3.943	.000
	Workplace Safety Culture	.301	.147	.182	2.043	.044
	Reward System	.221	.091	.247	2.424	.017
	Work Life Balance	.344	.117	.296	2.938	.004

Source: SPSS version 25 (2026)

Referring to Table 6, the regression equation for the above values is:

Y = 18,373 + 0,301 X1 + 0,221 X2 + 0,344 X3+ e

1. The constant of 18.373 indicates that if the variables of workplace safety culture (X1), reward system (X2), and work-life balance (X3) are zero, employee performance (Y) is predicted to be 18.373. This figure represents the baseline employee performance prior to the influence of the three independent variables.
2. The regression coefficient for X1 is 0.301 with a positive direction, meaning that every one-unit increase in workplace safety culture will increase employee performance by 0.301 units, assuming other variables remain constant. The calculated t-value is 2.043 with a significance level of 0.044 (< 0.05); thus, the influence of X1 on Y is statistically significant. Based on the Standardized Coefficient Beta of 0.182, this variable makes the smallest contribution compared to the other two variables, yet it still exerts a tangible influence on performance improvement.
3. The regression coefficient for X2 is 0.221 with a positive direction, indicating that every one-unit increase in the reward system will increase employee performance by 0.221 units, assuming other variables remain constant. The calculated t-value is 2.424 with a significance level of 0.017 (< 0.05); thus, the influence of X2 on Y is statistically significant. The Standardized Coefficient Beta of 0.247 indicates that the reward system makes the second-largest contribution to the influence, following work-life balance.
4. The regression coefficient for X3 is 0.344 with a positive direction, meaning that every one-unit increase in work-life balance will increase employee performance by 0.344 units, assuming other variables remain constant. The calculated t-value is 2.938 with a significance level of 0.004 (< 0.05); thus, the influence of X3 on Y is statistically significant. The standardized beta coefficient of 0.296 is the highest among the three variables, making work-life balance the most dominant factor influencing employee performance.

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Hypothesis Testing

Partial Test Results (t-Test)

Table 7. Partial Test Results (t-Test)

Coefficients[a]								
	Unstandardized Coefficients		Standardized Coefficients			Correlations		
Model	B	Std. Error	Beta	**t**	**Sig.**	Zero-order	Partial	Part
1 (Constant)	18.373	4.660		3.943	.000			
Workplace Safety Culture	.301	.147	.182	2.043	.044	.287	.206	.177
Reward System	.221	.091	.247	2.424	.017	.439	.243	.210
Work Life Balance	.344	.117	.296	2.938	.004	.453	.290	.254

a. Dependent Variable: Employee Performance

Source: SPSS version 25 (2026)

Referring to Table 7, it is known that the independent variables influence each other on the dependent variable.

1. The workplace safety culture variable has a regression coefficient (B) of 0.301 with a positive direction. The Standardized Coefficient Beta is 0.182, the calculated t-value is 2.043, and the significance value is 0.044. Since the significance value of 0.044 is less than 0.05, the workplace safety culture variable has a positive and significant partial effect on employee performance. This means that every one-unit increase in workplace safety culture will increase employee performance by 0.301 units. The unique contribution of this variable to employee performance is reflected in the Part Correlation value of 0.177, indicating that approximately 17.7% of the variance in employee performance is uniquely explained by workplace safety culture.
2. The reward system variable has a regression coefficient (B) of 0.221 with a positive direction. The Standardized Coefficient Beta is 0.247, the calculated t-value is 2.424, and the significance value is 0.017. Since the significance value of 0.017 is less than 0.05, the reward system variable has a positive and significant partial effect on employee performance. This means that every one-unit increase in the reward system will increase employee performance by 0.221 units. The Part Correlation value of 0.210 indicates that approximately 21.0% of the variance in employee performance is uniquely explained by the reward system, meaning the unique contribution of this variable is greater than that of workplace safety culture.
3. The work-life balance variable has a regression coefficient (B) of 0.344 with a positive direction. The Standardized Coefficient Beta is 0.296, the calculated t-value is 2.938, and the significance value is 0.004. Since the significance value of 0.004 is less than 0.05, the work-life balance variable has a positive and significant partial effect on employee performance. Consequently, a one-unit increase in work-life balance results in a 0.344-unit increase in employee performance. The part correlation value of 0.254 indicates that approximately 25.4% of the variance in employee performance is uniquely explained by work-life balance, making it the variable with the largest unique contribution among the three independent variables.

Simultaneous Test Results (F-Test)

Table 8. Simultaneous Test Results (F-Test)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	**F**	**Sig.**
1	Regression	480.484	3	160.161	13.111	.000[b]
	Residual	1148.292	94	12.216		
	Total	1628.778	97			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Workplace safety culture, reward system, and work-life balance

Source: SPSS version 25 (2026)

Referring to Table 8. it is known that F-test results show a calculated F-value of 13.111, which exceeds the F-table value of 2.70, with a significance level of 0.000 (less than 0.05). Since the significance level is below 0.05,

it can be concluded that Occupational Safety Culture (X1), Reward Systems (X2), and Work-Life Balance (X3) simultaneously have a significant effect on Employee Performance (Y). This indicates that the regression model employed is suitable for explaining the relationship between the independent and dependent variables.

Determination Test Results

Table 9. Determination Test Results

Model Summary				
Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate
1	.543[a]	.295	.272	3.495

a. Predictors: (Constant), Workplace safety culture, reward system, and work-life balance

Source: SPSS version 25 (2026)

Referring to Table 9, The Adjusted R-squared value of 0.272—slightly lower than the R-squared value—indicates a more accurate estimate when the model is applied to the population, representing a contribution of approximately 27.2%. Meanwhile, the Standard Error of the Estimate of 3.495 reflects the average deviation between predicted and actual employee performance values. Overall, although factors outside the model also influence employee performance, the three variables examined were shown to make a significant contribution to enhancing employee performance.

Discussion

The Influence of Workplace Safety Culture on the Employee Performance

The results of the first hypothesis test indicate that workplace safety culture (X_1) has a positive and significant partial effect on employee performance (Y) at PT PLN Nusantara Power UP Belawan. This conclusion is based on a calculated t-value of 2.043, which exceeds the t-table value of 1.986 (df=94; α=0.05), with a significance level of 0.044—falling below the 0.05 threshold. Consequently, the null hypothesis (H_0), stating the absence of an effect, is rejected, while the alternative hypothesis (H_1), positing a positive effect, is accepted. The positive direction of the effect is demonstrated by a regression coefficient (B) of 0.301 with a standard error of 0.147; quantitatively, this means that every one-unit increase in the workplace safety culture score drives a 0.301-unit increase in employee performance. Furthermore, the standardized Beta coefficient is 0.182 with a part correlation value of 0.177, indicating that this variable makes a unique contribution of approximately 17.7% to performance variation after controlling for the effects of the other two variables. These research findings align with those of Nasution & Ichsan (2020) at PT PLN (Persero) Unit Induk Pembangunan II Medan, Budhiartini (2022) at PT XL Axiata Medan, as well as Pratama & Hidayat (2023) and Siregar (2022), all of whom concluded that workplace safety culture has a positive and significant impact on performance in high-risk sectors. This consistency reinforces the argument that safety compliance serves as a foundation for productivity. However, these findings contrast with the research of Lestari & Wijaya (2022) and Firmansyah (2024), which stated that safety culture does not have a significant effect. This discrepancy in results can be explained by three key factors. First, this study specifically targets Operations personnel directly exposed to high risks (such as extreme voltage and steam pressure); consequently, safety compliance has tangible implications for personal safety—unlike in studies involving low-risk sectors or administrative staff. Second, the level of cultural internalization at UP Belawan has reached the "value" stage (reflected by 60.2% "Strongly Agree" responses regarding safety priority), transcending mere formal compliance driven by the fear of sanctions. Third, support from integrated management systems—such as ISO 45001 certification and the iZAt reporting application—creates an ecosystem that reinforces the link between OHS culture and performance, a connection that may not yet be optimally established in other organizations.

The Influence of Reward System on the Employee Performance

The results of this study align with the findings of Purnomo (2021), Firnanda & Baskoro (2025), Tindaon & Subagyo (2025), Saputra & Rahmawati (2021), Kurniawan (2023), and Dewi & Prasetyo (2024), all of which concluded that reward systems have a positive and significant impact on performance. This consistency reinforces the argument that rewards are a crucial determinant of performance improvement, particularly when they are fair and transparent. However, these findings contrast with those of Yuliana & Putri (2022) and Hakim (2025), who stated that rewards are not always significant if they are not perceived as fair or aligned with expectations. Three factors explain these differing results. First, the characteristics of the research subjects—operations employees facing

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high risks and workloads—make rewards highly critical, thereby intensifying their impact. Second, although the average perception of the reward system was very high (4.21), there were variations across aspects indicating that employees still perceived a lack of clarity regarding career paths and assessment objectivity; this differs from studies where perceived unfairness was more dominant. Third, while the reward system at UP Belawan is substantively comprehensive, its implementation is hindered by a forced distribution system and a misalignment between incentives and job risks, preventing a full sense of fairness from being established. However, these findings contrast with those of Yuliana & Putri (2022) and Hakim (2025), who stated that rewards are not always significant unless perceived as fair and aligned with expectations. This discrepancy in results can be explained by three factors. First, the characteristics of the research subjects—operations employees facing high risks and heavy workloads—make rewards crucial, thereby amplifying their impact. Second, although the average perception of the reward system is very high (4.21), there is variation across aspects; employees still perceive ambiguity regarding career progression and assessment objectivity—unlike in studies where perceived unfairness was the dominant issue. Third, while the reward system at UP Belawan is substantively comprehensive, its implementation is constrained by a forced distribution system and a misalignment between incentives and job risks, preventing a fully formed perception of fairness.

The Influence of Work Life Balance on the Employee Performance

The results of the third hypothesis test indicate that work-life balance (X_3) has a positive and significant partial effect on employee performance (Y) at PT PLN Nusantara Power UP Belawan. This conclusion is based on a calculated t-value of 2.938, which exceeds the t-table value of 1.986 (df=94; α=0.05), with a significance level of 0.004—falling below the 0.05 threshold. Consequently, the null hypothesis (H_0), stating the absence of an effect, is rejected, while the alternative hypothesis (H_1), positing a positive effect, is accepted. The positive direction of this influence is indicated by a regression coefficient (B) of 0.344 (standard error 0.117); quantitatively, this means that for every one-unit increase in the work-life balance score, employee performance increases by 0.344 units. Furthermore, the standardized Beta coefficient is 0.296 with a part correlation value of 0.254, indicating that this variable makes a unique contribution of approximately 25.4% to performance variation after controlling for the effects of the other two variables. The Beta value of 0.296 is the highest among the three independent variables—surpassing the reward system (0.247) and workplace safety culture (0.182)—thereby demonstrating that work-life balance is the most dominant factor influencing employee performance. These findings align with the research of Pramanda, Lamsah, & Ariefahnoor (2025), Putri (2025), Adhitarma & Adnyani (2023), Amri & Akhmad (2021), Fadhli & Mahendra (2024), and Budiman (2025), all of which conclude that work-life balance has a positive and significant impact on performance. This consistency reinforces the argument that work-life balance is a crucial determinant in sectors characterized by high operational demands. However, these findings contrast with those of Yuni Agusti & Subarjo (2025) and Kenelak (2022), who found work-life balance to be insignificant, noting that work pressure played a more dominant role. Three factors explain these differing results. First, the characteristics of the study subjects—operational staff working a 24-hour shift system—make the impact of work-life balance on performance more palpable and measurable. Second, the presence of welfare programs, such as PLN's well-being initiatives and sports facilities, signals corporate care that elicits a positive response—unlike in studies where such support was absent. Third, in the studies reporting insignificant results, work pressure was so dominant that it negated the effects of work-life balance; conversely, at UP Belawan, the company provides support that helps employees maintain balance, even though implementation remains suboptimal, resulting in continued low levels of subjective satisfaction.

The Simultaneous Influence of Workplace Safety Culture, Reward System and Work Life Balance on the Employee Performance

The results of the fourth hypothesis test demonstrate that occupational safety culture (X_1), the reward system (X_2), and work-life balance (X_3) simultaneously exert a positive and significant influence on employee performance (Y) at PT PLN Nusantara Power UP Belawan. This conclusion is based on a calculated F-value of 13.111—far exceeding the F-table value of 2.70 (df_1=3; df_2=94; α=0.05)—and a significance level of 0.000, which is well below the 0.05 threshold. Consequently, the null hypothesis (H_0), positing the absence of a simultaneous effect, is rejected, while the alternative hypothesis (H_4), positing the existence of such an effect, is accepted. The coefficient of determination (R^2) of 0.295 indicates that the three independent variables collectively explain 29.5% of the variation in employee performance, whereas the Adjusted R^2 value of 0.272 suggests a more accurate estimate—reflecting a contribution of approximately 27.2%—should the model be applied to the broader population. An R-value of 0.543

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signifies a moderate relationship between the combined independent variables and employee performance. These findings align with those of Putri (2025), who demonstrated the simultaneous impact of work-life balance, motivation, and team collaboration on performance at PT PLN Nusantara Power Unit Pembangkitan Belawan, as well as studies by Firnanda & Baskoro (2025) and Tindaon & Subagyo (2025), which identified a positive simultaneous influence of training, rewards, and the work environment on performance. Gulo & Pohan (2025) similarly confirmed the significant simultaneous impact of work discipline, compensation, and motivation. This consistency reinforces the argument that performance is a multidimensional phenomenon requiring a holistic approach. However, the simultaneous contribution of the three variables (29.5%) leaves 70.5% of the variation in performance to be explained by factors outside the model—such as job satisfaction, motivation, leadership style, organizational culture, or non-financial compensation. This indicates that, although the three variables proved significant, further research is needed to identify other determinants that influence performance in a more comprehensive manner.

CONCLUSION

Based on the research results, it can be concluded that:

1. Workplace safety culture has a positive and significant influence on employee performance.
2. The reward system has a positive and significant influence on employee performance.
3. Work-life balance has a positive and significant influence on employee performance and is the most dominant variable affecting it.
4. 4.Simultaneously, workplace safety culture, the reward system, and work-life balance have a positive and significant influence on employee performance. These three variables account for a portion of the variation in employee performance, while the remainder is explained by factors outside the model, such as job satisfaction, motivation, leadership, organizational culture, or non-financial compensation.

The recommendations that can be offered are as follows:

1. Workplace Safety Culture
   The company is advised to maintain indicators that are already performing well—such as the recognition of safety as a top priority and strong management support—through continuous OHS (Occupational Health and Safety) campaigns, leadership by example, and the strengthening of safety leadership. However, primary attention must be directed toward the lowest-performing indicators: the availability of safety facilities and equipment, and adherence to procedures. Measures to address this include evaluating the PPE supply chain, implementing safety stock for critical PPE, accelerating replacement processes, providing specialized PPE based on divisional risk analyses, conducting simulation-based training, strengthening procedural oversight, and optimizing the iZAt application and real-time OHS dashboard for reporting and addressing unsafe conditions. The company also needs to establish early detection mechanisms through routine inspections and "hazard hunting," consistently apply reward and consequence policies, involve employees in OHS policy design, and strengthen OHS clauses for outsourced personnel and external partners. Leaders should set an example in PPE usage, actively conduct safety walkthroughs, provide constructive feedback, ensure PPE availability for their teams, and promptly report distribution issues. All OHS programs should be periodically evaluated using the PDCA (Plan-Do-Check-Act) approach and measurable indicators—such as reductions in unsafe conditions, response times, and PPE compliance rates—to ensure the continuous improvement of the safety culture.
2. Reward System
   The company needs to maintain the facilities and benefits that enhance work comfort and serve as fundamental motivators, while simultaneously improving areas that remain weak points: the objectivity of performance appraisals and performance-based salary progression. Improvements can be achieved by evaluating the forced distribution system, eliminating unrealistic "A-grade" standards, refining assessment indicators to ensure they are measurable and transparent, enhancing communication regarding the reward system, ensuring equitable non-financial recognition, and considering job rotations to prevent burnout and career stagnation. Supervisors or leaders need to provide direct, fair, and equitable recognition to high-performing team members while fostering transparent communication regarding performance criteria, career progression, and salary increment mechanisms. Evaluations should be conducted objectively based on actual achievements rather than mere unit quotas; this preserves perceptions of fairness, motivation, and loyalty among team members, ultimately driving sustained improvements in employee performance.

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3. Work-Life Balance
   Companies are advised to enable employees to fulfill their responsibilities without compromising personal engagement, while also addressing the need to improve satisfaction regarding work-life balance—an area often identified as a low-scoring indicator. Recommended measures include: evaluating workloads and shift systems; increasing staffing in understaffed units; restructuring on-call arrangements to include recovery periods; expanding employee well-being programs; providing psychological counseling; guaranteeing unhindered access to leave; and ensuring safe transportation for overtime or night shifts. Companies should also organize more family gatherings, employee events, family outings, group sports activities, and social-religious events that include families. Supervisors are expected to manage shifts and overtime fairly and humanely, ensure recovery periods following on-call duty or extended overtime, support leave entitlements, and maintain open communication about workload and work-life balance; they should act as good listeners and proactively seek collaborative solutions to ensure both well-being and performance remain optimal.

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