

Working Conditions in PNG's Energy Sector

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Executive Summary

The aim of this research project was to better understand working conditions in PNG's energy sector and provide policy-relevant insights. The data collected demonstrates the country's energy sector workforce is adaptable and committed. However, the sector is failing to provide its workers with the stability, security, and support they need to thrive.

Key recommendations

- **Recommendation 1:** Provide space for labour organizing through trade unions
- **Recommendation 2:** Fund affordable, practical technical training programs
- **Recommendation 3:** Clear government debts to PNG Power
- **Recommendation 4:** Empower National Energy Authority as strategic architect

Context

Working conditions in PNG's energy sector have changed dramatically in recent years, as the sector has undergone partial privatisation, diversification and growth. While the former electricity utility ELCOM held a monopoly over the production, transmission and distribution of electricity in the country, the current state-owned energy utility PNG Power Limited (PPL) operates alongside several private producers. PNG's first power plants were hydro, yet today the country draws on gas, diesel and solar alongside hydro for its energy mix. The country's first power plants were just a few megawatts (MWs) in size, while today PNG's three energy grids have a combined installed capacity of more than 600MWs. This is alongside the emergence of an off-grid subsector, through a rollout of solar home systems and solar and hydro mini- and micro-grids that is gathering momentum. As a result of these processes, the composition of PNG's energy sector workforce has changed considerably. Workers are no longer employed by one organisation, as was the case with ELCOM in the twentieth century. Today, they work across more than a dozen different energy firms focusing on the provision of both grid and off-grid energy from a range of different sources.

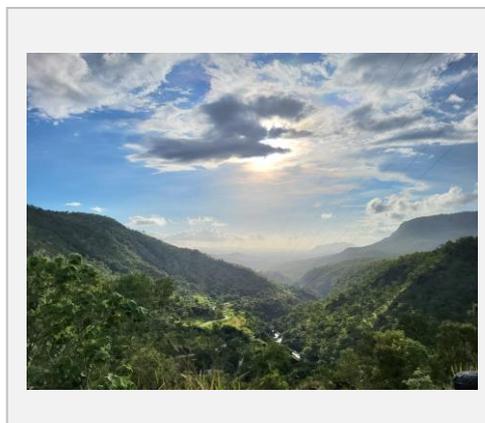
“ I feel like giving up. I have no savings and cannot invest. There are no benefits.” PPL worker, Port Moresby – June 2025

“ Working here is very limiting. I know I'm missing out on the normal employment benefits that are supposed to be protected under our labour laws.” Solar worker, Port Moresby – August 2025

About the study

The study sought to investigate and better understand working conditions and the lived experiences of workers in PNG's energy sector today. For this, fieldwork was undertaken between April and September 2025. During this time period, semi-structured interviews were held with 35 energy sector workers. An additional 17 interviews were conducted with energy sector stakeholders, including representatives from PPL, private sector energy firms, donors, and state ministries and agencies for energy, trade and development. Interview data was combined with 27 documents relating to energy and labour in PNG, from media, government and firm sources. Interview and documentation data was collated and coded using Atlas.ti software.

Of the 35 interviewed workers, 19 were employed by PPL and 16 by private firms in solar or hydro. Twenty-five were employed formally and ten informally. Twenty respondents were male and five were female, reflecting the dominance of male workers in the sector. All interviewees worked in the National Capital District, except one who worked in West New Britain. Forms of employment ranged from linesmen and shop assistants to senior technicians and sales managers.



View from Ramu 2 hydro plant

Key findings and recommendations

Based on an analysis of the data collected, six key findings are highlighted:

1. The Formal and Informal Divide

The vast majority of the country's energy sector workers are employed by the state utility PPL, numbering around 1,800 in 2025. These jobs are characterized by job stability but financial precarity. Workers have contracts, superannuation, and some benefits, but PPL is plagued by financial instability, aging infrastructure, and low morale. Wages in Port Moresby are often described as insufficient against the high cost of living, and career advancement is limited. Alongside PPL sit several large private sector energy firms and several smaller firms and retailers operating in the off-grid solar sector, which is largely informal. Off-grid solar labour is characterized by innovation and flexibility but profound insecurity. Workers are skilled and motivated but usually lack contracts, social security, stable income, or any safety net. Wages and incomes are heavily dependent on unpredictable project flows and customer demand.

Area	Formal Workforce	Informal Workforce
Job Security	High with mostly permanent contracts.	Extremely low with no contracts.
Income Stability	Stable and predictable but stagnant.	Highly unstable, variable, and project dependent.
Benefits	Superannuation some medical yet eroding.	Non-existent with no safety net.
Work Challenges	Budget cuts, outdated equipment.	Finding clients, high costs, no support.
Morale	Proud but stressed by PPL's decline.	Entrepreneurial but precarious.

2. Dissatisfaction with Remuneration

Across all workers, a consistent theme was that remuneration is insufficient to achieve financial security or upward mobility in the face of high living costs, particularly in urban areas. This is true for the K700/month shop assistant and the K2,600/month driver or linesman. This financial pressure undermines morale and prevents workers from investing in their own skills or businesses.

3. Lack of Representation and Nascent Organizing

Unions exist for some formal sector blue-collar workers, yet administrative and technical staff often feel unrepresented. The security guards and accounts clerks, for example, have no clear avenue to collectively address their concerns. Meanwhile, the broader political context is hostile to unions and labour organising. In the informal sector, efforts to organize (like John's attempt to start a union) are isolated and nascent. They lack the resources and support to scale.

4. Desire for Training and Professional Development

From the PNG Power accounts clerk wanting updated software training to the informal technician seeking advanced troubleshooting skills, there is a clear and expressed hunger for knowledge among energy sector workers. They are eager to improve their skills but lack access to affordable, relevant training programs.

5. PNG Power's Financial Crisis

The PNG Government is the largest consumer of electricity in the country. Its unpaid debts to PPL create a cash flow crisis which directly impacts the majority of the country's energy sector workers who are employed by the utility. In the workplace, this manifests as frozen salaries, reduced maintenance (leading to safety concerns), anxiety over job security, and immense pressure to maintain services with dwindling resources.

6. Off-grid Solar Workers Critical yet Vulnerable

Informal technicians and retailers operating in PNG's growing off-grid solar sector are essential for advancing energy access. Yet workers face significant challenges, including highly irregular income, limited access to credit or formal training, and exposure to injury or family crisis due to absent health insurance or social security.

Recommendation 1: Provide space for labour organizing through trade unions

This will address issues around lack of worker representation while also providing an avenue for workers to advocate for improved wages and benefits.

Recommendation 2: Fund affordable, practical technical training programs

PNG's energy workers require and desire training and upskilling to meet the demands of the country's changing energy sectors. There is an opportunity for PPL to invest in the full-scale upskilling of its workforce to meet today's demands.

Recommendation 3: Clear government debts to PNG Power

The government must either pay its debt in full or formally convert the debt into a capital subsidy or grant to PPL, with a legally binding agreement for future timely payments.

Recommendation 4: Empower National Energy Authority as strategic architect

To include working with PPL to develop a realistic business model for the future; creating programs to retrain PPL workers for the new energy landscape, securing their employment; and mandating that a portion of the new revenue from private solar connections or fees is invested back into PPL's grid modernization and workforce development.

Limitations

The study was heavily focused on Port Moresby. Further research is needed to better understand working conditions in PNG's energy sector outside of the capital city.

Acknowledgements

The authors would like to thank all workers and energy sector stakeholders who generously gave their time to this project. The project was funded by the Leverhulme Trust Research Fellowships [RF-2024-066\7].

More information

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Publication details: ©Institute of National Affairs, February 2026.

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