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Senate Standing Committees on Environment and Communications  
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**RE: Submission to the Senate Inquiry into the Middle Arm Industrial Precinct**

To the Senate Standing Committee on Environment and Communications

**Introduction**

This submission is presented on behalf of the members of the Northern Territory Branch of the Australian Education Union (AEU NT) to represent the concerns that have been raised within our membership regarding the proposed Middle Arm Industrial Precinct. It points to the unprecedented harm that will result from this project and implores the Committee to reconsider the Australian Government's \$1.5 Billion subsidy for the Precinct.

**Background: NT Educators' Opposition to the Middle Arm Precinct**

On Friday 27 October 2023, our Union sent a letter to the NT Chief Minister expressing its deep concern about the NT Government's decision to approve fracking in the Beetaloo Basin and the production of petrochemicals at Middle Arm. This letter was undersigned by well over 300 individual NT educators, representing voices from all over the Territory; from Palmerston to Elliot (two of the most affected regions), Alice Springs to Darwin, Borroloola to Nhulunbuy, and many remote communities and homelands in between. Together, they urged the NT Government to reverse its decision to expand the gas industry with the above mega projects. This has been described by some members as the largest grassroots movement that they have witnessed within the union and is testament to the degree of resistance within the community to these projects.

Gas expansion within the Territory is a key concern for teachers because, everyday, we work with the young people whose futures will be seriously compromised by these plans. The direct human health and environmental impacts, plus long-term severe climate change, will severely degrade the health and wellbeing of our students, limit their jobs and livelihoods and will eventually make the NT unlivable. In addition, these projects will undermine the industrial conditions of teachers and the quality of educational outcomes in the NT, which already has some of the poorest educational attainment in the country.

These concerns are outlined here in detail, with particular reference to peer reviewed science which substantiates our view that the Middle Arm project, and related gas mega projects, will have devastating effects on education, our students, and the community more broadly. Lastly, we present a series of recommendations that we urge the Committee to consider, such that the \$1.5 Billion of Australian Government funding will be directed towards industries that build a truly sustainable energy sector, not one that is greenwashed, gas-fueled and carbon-intensive at a scale unprecedented in this country.

### **Connection to the Inquiry's Terms of Reference**

This submission relates primarily to part (c) of the Terms of Reference (*"any climate, environmental, health or cultural heritage impacts as a result of developing the harbour and the industries seeking to establish themselves at Middle Arm"*). It identifies the range of impacts the community can expect from Middle Arm and related industries and the flow on impacts of these to the education sector.

The submission also raises concerns in relation to part (a) of the Terms of Reference (*"the development of Darwin's Middle Arm Industrial Precinct, the role and funding intentions of the Northern Territory and Commonwealth governments"*). It notes that the gas industry produces very few jobs and little to no public revenue. It makes the case that proposed federal funding of the project could be better directed to support a truly sustainable and healthy future for the NT.

### **Climate, environmental and health impacts of the Middle Arm Precinct and their effect on the Education Sector (Refer ToR (c) )**

#### *Duty of care*

As teachers, we have a professional duty of care to our students and their wellbeing. We are required to make mandatory reports when we are concerned for their safety and we are required to evacuate them from buildings that are unsafe. We therefore have a duty to advise the Federal Government that the funding of Middle Arm project will have devastating consequences for their lives.

Climate change is set to make parts of the NT unlivable within just a few decades due to sheer heat and natural disasters.<sup>1</sup> In the 1970s Darwin had an average of 7 days above 35°C per year, while in 2019 we had 45 days above 35°C. By 2070 it is projected to have 275 days above 35°C per year. Scientists agree that this is beyond the livable threshold for humans.<sup>2</sup> Similarly, in Alice Springs, extreme heat days are projected to increase four-fold this century from less than 20 days per year above 40°C now, to over 80 days per year above 40°C by 2090. It is likely that these temperature increases have already killed people here as they have elsewhere,<sup>3</sup> but it is certain that many will die if the Federal Government continues with funding a project that will increase the NT's emissions by 75%<sup>4</sup>. We also note that this project will enable the fracking of the Beetaloo which will increase Australia's net emissions by 22%<sup>5</sup> and that the Government's Independent Oversight Commissioner, Dr David Ritchie, has said the Government has no credible plan offset these emissions<sup>6</sup>. For this reason, we are calling out the Australian Government for its disregard for students and our duty of care to them.

### *There will be no jobs*

The Federal Government claims that Middle Arm will be “a big economic boost for Darwin”<sup>7</sup>, bringing jobs and economic prosperity, but this is precisely what it is destroying. Darwin will have few to no jobs in the heat projections above. The only way the Australian Government can help secure our economic prospects in the face of climate change is by earmarking this funding for visionary climate responsive industrial innovation. We call for the Federal Government to make any funding of Middle Arm subject to a condition that it not be used to directly or indirectly fund gas-related industries. Instead, conditions should be imposed that move the Territory towards a world class renewable energy sector which brings in new industries that will grow our economy on a renewable base (see Appendix A). The Federal Government, in partnership with the Territory Government, has a chance to the world how to build jobs that will last.

### *Teaching conditions and teacher shortages will worsen*

Middle Arm will exacerbate Climate change and will force teachers to work in increasingly inhospitable conditions. This represents an industrial issue and will also worsen the current teacher shortage. Any funding from the Australian Government must help improve the livability of the NT’s communities so as to attract and retain good teachers.

### *Climate change disrupts education*

Globally, the climate crisis disrupts the education of approximately 40 million students each year.<sup>8</sup> Natural disasters force people to leave their homes and schools and are responsible for 75% of displacement worldwide<sup>9</sup>. As these disasters become more frequent and severe, as a result of emissions from fossil fuel projects like Middle Arm, more students will be forced to leave their place of education. Even where schools exist in the evacuation location, continuity of education is disrupted as cultural and language barriers in the new place of education can prevent engagement.<sup>10</sup> Recent flooding throughout the NT has shown that the effects of climate-induced displacement in our community are significant, with many students in remote communities facing the above challenges. The Australian Government’s proposal to fund Middle Arm will make this worse.

### *Climate change puts financial stress on the education sector*

Extreme weather directly destroys schools, meaning education authorities have less money to spend on normal education costs.<sup>11</sup> Furthermore, communities and families which are already under financial strain will have less resources to put towards school due to displacing disasters. These factors expand inequality as many of the most affected communities are also our most vulnerable. They also increase the gender gap as girls are often the first to fall out of education during times of financial strain.<sup>12</sup>

### *Heat reduces educational outcomes*

Extreme heat events and the cumulative impact of prolonged heat exposure reduces educational outcomes.<sup>13</sup> Students find it harder to focus and regulate their behaviour during these events. These effects are exacerbated in vulnerable communities with reduced access to air conditioning in schools.<sup>14</sup> At high school, where students are expected to do upwards of 15 hours of homework each week, students who do not have access to affordable air conditioning will suffer academically.

### *Middle Arm will compromise student health*

In May this year, 45 NT pediatricians wrote a letter to the NT Government imploring them to consider the wealth of peer reviewed research that shows that fracking introduces potent carcinogens and toxins into the air, groundwater and waterways, adversely affecting communities

and children.<sup>15,16</sup> The viability of the Middle Arm development is dependent on the full-scale fracking of the Beetaloo Basin. Therefore, in funding the Precinct, students will have more days off due to ill health and their engagement and wellbeing will be undermined. This will put further pressure on educational attendance, engagement and performance metrics in the NT, especially in vulnerable communities.

Subsequent to the delivery of the pediatricians' letter, over 2,300 doctors across Australia have added their signature and have extended their campaign to now focus on the direct health impacts of the Middle Arm development. The proposal to process Beetaloo gas into advanced petrochemicals at Middle Arm further jeopardizes the health of students and teachers in the Palmerston and Darwin region. An increase in volatile organic compounds and fine particulate matter that would result from the proposed gas processing facilities would see the Top End's already poor air quality further compromised and could increase incidence of industrial cancers by 400%.<sup>17</sup>

### *Recommendation*

Given the range of impacts outlined above, the AEUNT recommends that a Public Inquiry be established into the Middle Arm Precinct under the Environment Protection Act and the EPBC Act. Only through such a mechanism will the full range of impacts be made evident to decision makers and to the NT community more broadly, who to date have not received adequate information or consultation.

### **The role and impacts of Federal Government funding for Middle Arm (refer ToRs a and b)**

The impacts discussed in the section above demonstrate that this Government-funded project will cause considerable harm to NT teachers and students. While many development projects cause some harm, it is usual for there to be consensus within the community that projected benefits will outweigh any projected costs. In the case of Middle Arm, however, it is clear that the community does not consent and, moreover, does not even stand to benefit. The Federal Government's commitment to fund a project that does not generate community benefit, and that is steeped in misinformation, amounts to misappropriation of public funds. Wholesale review of the conditions of these funds needs to be undertaken to ensure they do not cause public detriment.

### *The gas industry generates economic disbenefit for the community*

Recent research released by the Australia Institute demonstrates that Middle Arm will lead to poor economic outcomes for our community. The Institute notes that, contrary to the narrative the NT Government is trying to build, the gas industry here actually only employs only 0.7% of our workforce. Furthermore, it is a low job-intensity industry, meaning that very few people are employed per dollar of output from the industry. Put another way, this means that very few jobs will be generated from any investment in this industry as compared to equal investment in almost any other industry.<sup>18</sup> These two facts demonstrate that NT does not rely on, or significantly benefit from, gas sector jobs and it never will.

Middle Arm, and the gas industries that it is explicitly designed to enable, will also fail to benefit our community because gas companies pay virtually no tax or royalties. The latest ATO data shows that, in 2021, INPEX's Ichthys, and Santos' Darwin LNG paid 0% and 4.6% of their respective incomes in company tax.<sup>19</sup> Further to this, experts say that we could expect the industries that Middle Arm will enable, such as fracking, to add between 1 and 2% to the NT's annual budget at best. Considering the above statistics, experts say that it is impossible that the enormous combined subsidies of the Federal and NT governments to the gas industry will never be recovered.

*Territorians have been misled and do not want gas expansion in the NT.*

The Middle Arm development has been consistently misrepresented by the NT Government, while the community has consistently demonstrated its resistance to the facility and the industries it enables. This adds to the urgent need for a public inquiry which elevates the profile of the development in a factual and balanced setting.

The Australia Institute's report outlines a number of ways in which the NT Government have tried to distort statistics on job creation and economic stimulus in their favour and explains how neither claim is true.<sup>20</sup> In addition to this, significant controversy has surrounded the NT Government's mixed messaging on whether or not the Precinct will contain petrochemicals.<sup>21</sup> This again suggests that the information being provided to the community has been at best confusing and at worst deliberately misleading. This can only be amended through a Public Inquiry.

The Northern Territory community has remained steadfast in its resistance to gas expansion, which the Middle Arm development directly allows. In 2016 the Labor government was elected on a fracking moratorium platform. In 2022, a survey of over 500 households in Alice Springs showed that over 80% did not approve of fracking. Also in 2022 the NT Labor rank and file voted unanimously against fracking. In 2023 the NT Government-commissioned SREBA report noted a "very low trust environment" within the community towards fracking. Later in 2023 a survey of over 100 households in Darwin again showed a strong majority against fracking. While these statistics relate primarily to the fracking industry, the AEUNT considers that they are directly relevant to the Middle Arm development given that it is being built to accommodate fracked gas from the Beetaloo. The enduring resistance of the NT community to this project is clear and is further evidence of the need for the Federal Government's to review its funding commitment and institute a Public Inquiry under relevant environmental legislation.

### *Recommendations*

To amend the misinformation that has prevailed around the Middle Arm inquiry, and in response to the discontent within the community, the AEUNT reinforces its recommendation that a Public Inquiry be held. In addition, to ensure no further public money is granted to the gas industry, the AEUNT also recommends that federal funding be subject to a condition that it not be used to directly or indirectly fund gas-related industries.

### **Summary of Recommendations**

Consistent with the above impacts and evidence, we make the following recommendations to the Committee.

- 1. Federal funding must be subject to a condition that it not be used to directly or indirectly fund gas-related industries** at the Middle Arm Industrial Hub (including LNG processing, petrochemical production, blue hydrogen and carbon capture and storage). This includes the funding of infrastructure to enable supply of renewable energy to gas-based industries at Middle Arm.
- 2. A Public Inquiry must be established** into the Middle Arm Industrial Hub under the Environment Protection Act and the EPBC Act.

## Conclusion

In making this submission we, as the AEUNT in partnership with Northern Territory educators, consider that the Australian Government's proposition to fund Middle Arm poses is a direct threat to the wellbeing of our students, our working conditions, and the outcomes of our sector. In addition, we note the misinformation that the NT Government has generated around the Middle Arm development and the independent analysis that demonstrates that pursuing the gas industry economically reckless. We urge the Committee consider the above evidence and recommendations in conjunction with the similar submissions that you have received from numerous NT industries. We ask that you pass these recommendations to the Australian Government to ensure our safe and healthy future.

Sincerely,

Rachael Metcalfe  
AEU NT Branch Secretary  
On behalf of the AEU NT Branch Executive

## **Appendix A – Outline of possible future opportunities based on renewable energy**

Beyond Zero Emissions, an independent Australian think tank dedicated to research around futures based on renewable energy published a report in 2019 setting out a vision for the NT to reach 100% renewable by 2030, including a suite of new industries or expanded industries based on a large renewable power base.<sup>22</sup> This presents a credible and visionary path forward that would generate jobs and industries that are enduring and do not risk our health or climate.

The main features of a renewable grid would include:

- Solar electric and wind farms
  - This allows capture of energy through the day.
  - The Territory has some of the most intense and regular sunshine in the world and numerous eligible wind farm locations.
  - Even in 2019, these forms of energy were the cheapest method of power generation and remain so today.
- Solar thermal
  - This allows solar energy to be stored as heat to produce electricity at night and during cloudy or windless periods.
  - This is an established and operational technology used in many countries across the world including the USA and China.
- Stored green hydrogen.
  - This involves capturing hydrogen from water during the day with solar, then combusting it to drive turbines during cloudy or windless periods or at night.
- Battery grids
  - This allows additional storage of electricity for use at night and during cloudy or windless periods.

The report proposes that the needs of the NT can be easily met with the above methods and that indeed these could also be used to expand the Territory's industrial base, bringing new industries based on renewable energy as well as other benefits. These could include, but would not be limited to:

- Renewable hydrogen production and export
- Renewable energy exports directly from Solar PV and Solar Thermal
- Renewable powered (and therefore cheaper)
  - Manufacturing
  - Mineral processing
  - Mining
- Other benefits
  - Reduced cost of living
  - Power solutions for remote communities

## References

1. Lenton, T. M., Xu, C., Abrams, J. F., Ghadiali, A., Loriani, S., Sakschewski, B., Zimm, C., Ebi, K. L., Dunn, R. R., Svenning, J., & Scheffer, M. (2023). *Quantifying the human cost of global warming*. Nature Sustainability. <https://doi.org/10.1038/s41893-023-01132-6>
2. Hanna, E., Ogge M., (2018) *Cooked with Gas Extreme Heat in Darwin*. The Australia Institute. <https://australiainstitute.org.au/wp-content/uploads/2020/12/P510-Cooked-with-gas-Darwin-days-over-35C-FINAL.pdf>
3. Niranjana, A. (2023, July 11). *Heatwave last summer killed 61,000 people in Europe, research finds*. The Guardian. <https://www.theguardian.com/environment/2023/jul/10/heatwave-last-summer-killed-61000-people-in-europe-research-finds>
4. Petroni, M. D., (2022). *Expert Opinions Related to Potential Environmental and Human Health Impacts of the Middle Arm Sustainable Development Precinct as well as the Adequacy of the Draft Terms of Reference for Strategic Assessment*. [https://assets.nationbuilder.com/ecnt/pages/652/attachments/original/1660190794/MASDP\\_Expert\\_Report\\_Michael\\_Petroni\\_%28003%29.pdf?1660190794](https://assets.nationbuilder.com/ecnt/pages/652/attachments/original/1660190794/MASDP_Expert_Report_Michael_Petroni_%28003%29.pdf?1660190794)
5. Bardon, J. (2020, February 29). *How the Beetaloo gas field could jeopardise Australia's emissions target*. ABC News. <https://www.abc.net.au/news/2020-02-29/beetaloo-basin-gas-field-could-jeopardise-paris-targets/12002164>
6. Ritchie, Dr D. (10 March 2023). Letter to the Chief Minister of the Northern Territory Re: *Progress on the implementation of the recommendations from the final report of the Hydraulic Fracturing Inquiry – Final Considerations 2023*. [https://hydraulicfracturing.nt.gov.au/\\_data/assets/pdf\\_file/0016/1221181/dr-ritchies-final-letter-may2023.pdf](https://hydraulicfracturing.nt.gov.au/_data/assets/pdf_file/0016/1221181/dr-ritchies-final-letter-may2023.pdf)
7. NT Independent (17 October 2022) *Feds commit \$1.5 billion for Middle Arm precinct, another billion in infrastructure projects*. NT Independent News. <https://ntindependent.com.au/feds-commit-1-5-billion-funding-for-middle-arm-precinct-another-billion-in-infrastructure/> Accessed 31 October 2023.
8. Wood, J., (2023, February 16). *The climate crisis disrupts 40 million children's education every year. Here's how we could fix it*. World Economic Forum. <https://www.weforum.org/agenda/2023/02/girls-education-climate-crisis-educational-disruption-resilience/>
9. UNESCO, (2023). *How climate change and displacement affect the right to education*. UNESCO. <https://www.unesco.org/en/right-education/climate-change-displacement#:~:text=Climate%20directly%20destroys%20schools%20and,to%20even%20more%20barriers%20to>
10. Chiu, B. O. G. a. F. (2022, June 27). *How Climate Change Is Affecting The Right To Education - Australian Institute of International Affairs*. Australian Institute of International Affairs. <https://www.internationalaffairs.org.au/australianoutlook/how-climate-change-is-affecting-the-right-to-education/>
11. UNESCO [Endnote 6]
12. Ibid
13. Stanford University (2020, October 6). *How extreme heat affects learning* <https://fsi.stanford.edu/news/how-extreme-heat-affects-learning>
14. Ibid
15. Dick, S. (2023, June 6). *Pediatricians sign joint letter urging NT government to withdraw Beetaloo Basin fracking support*. ABC News. <https://www.abc.net.au/news/2023-06-07/nt-paediatricians-sign-letter-warning-fracking-health-risks/102440510>



16. Meyer, D. (2016, October 24). *Fracking linked to Cancer-Causing chemicals, new YSPH study finds*. Yale School of Public Health. <https://ysph.yale.edu/news-article/fracking-linked-to-cancer-causing-chemicals-new-ysph-study-finds/>
17. Petroni, M. D., (2022). [Endnote 4]
18. Ogge, M (2023). *The Economic Impacts of Fracking the Northern Territory*. The Australia Institute.
19. ATO (November 2022) Corporate tax transparency: report of entity tax information, <https://www.ato.gov.au/Business/Large-business/In-detail/Tax-transparency/Corporate-tax-transparency-report-for-the-2020-21-income-year/>
20. Ogge, M (2023). [Endnote 18]
21. Gibson, J (26 November, 2022). *NT government deletes references to 'petrochemicals' from Middle Arm website, rejects 'greenwashing' claims*. ABC News. <https://www.abc.net.au/news/2022-11-26/nt-petrochemicals-deleted-middle-arm-website-greenwashing/101700374>
22. *Beyond Zero Emissions (2019). The 10 Gigawatt Vision: How renewable energy can power jobs and investment in the Northern Territory*. <https://www.bze.org.au/research/report/the-10-gigawatt-vision#:~:text=The%2010%20Gigawatt%20Vision%20outlines%20how%20remote%20communities%20can%20participate,to%20power%20small%2Dscale%20businesses.>