

Cover Letter

To: Committee Secretary
Joint Standing Committee on Foreign Affairs, Defence and Trade
Parliament House
Canberra ACT 2600

Dear Committee Secretary,

Please find enclosed my complete submission for the Inquiry into Preventing Conflict.

You have permission to leave my details when published.

Yours Sincerely



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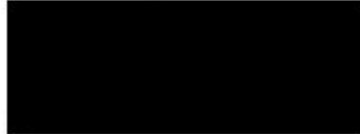
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Submission to the Joint Standing Committee on Foreign Affairs, Defence and Trade

Inquiry into Preventing Conflict

Submitted by: John Crookston. JP (Qual.) QLD

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Main Submission

1. Executive Summary

Preventing conflict requires addressing root drivers of instability, including energy scarcity, water insecurity, climate pressure, weak governance, and unequal access to essential services. Fusion energy offers a transformative peacebuilding tool because it produces no long-lived waste, uses no fissile material, and cannot support a chain reaction (ARPANSA, 2023; IAEA, 2023a). It is therefore inherently non-weaponisable, aligning fully with regional and global non-proliferation frameworks.

Australia is positioned to strengthen peace and resilience by deploying fusion-powered micro-grids, desalination, communications, and humanitarian logistics throughout fragile regions of the Indo-Pacific. These capabilities build institutional trust, human capital, and economic inclusion (DFAT, 2024; UNDP, 2023).

This submission draws from and complements earlier analyses (Crookston, 2025a, 2025b, 2025c), demonstrating how fusion energy could be strategically integrated into Australia's international development program to prevent conflict.

2. Alignment with the Terms of Reference

2.1 Building resilience in fragile states

Fusion-powered micro-grids provide continuous energy to clinics, schools, water systems, and community infrastructure. Because fusion machines require no imported fuel, they support local energy sovereignty and insulate communities from volatile international markets (EUROfusion, 2024).

Stable access to energy enhances civic participation, public trust, and human-capital development—core drivers of durable peace (DFAT, 2024; UNDP, 2023).

2.2 Strategic use in the Indo-Pacific

The Indo-Pacific faces significant vulnerability to climate disasters, supply-chain fragility, and energy insecurity. Portable fusion units—aligned with ARPANSA and IAEA safety standards—could support:

- disaster response
- emergency desalination

- remote communications
- climate resilience infrastructure
- humanitarian operations

Regional cooperation through a Fusion for Peace Indo-Pacific Partnership would reinforce non-proliferation norms while advancing Australia's diplomatic and humanitarian objectives (GO4FUSION, 2024; UKAEA, 2022).

2.3 Support in pre- and post-conflict zones

Fusion systems can be deployed quickly in reconstruction environments because they:

- cannot produce fissile material
- carry no weapons-use potential
- require minimal fuel logistics
- restore critical services immediately

This makes them ideal for stabilisation, governance restoration, and humanitarian support (IAEA, 2023b; Helion Energy, 2025).

2.4 Maintenance of peace and conflict prevention

Reliable, clean energy supports economic recovery, food security, digital connectivity, and water stability—conditions that reduce the risk of conflict (World Bank, 2024).

Shared fusion-based projects can also promote cross-border cooperation and transparency under IAEA verification, helping reduce resource-based tensions (ITER Organization, 2024).

3. International Legal and Regulatory Context

3.1 Distinction between fusion and fission

ARPANSA and the IAEA define fusion as the joining of light nuclei without a self-sustaining chain reaction (ARPANSA, 2023; IAEA, 2023b). Fusion systems therefore fall outside EPBC Act s.140A prohibitions, which apply exclusively to fission reactors using fissile fuels (DCCEEW, 2023).

Global regulators, including OECD-NEA and UKAEA, increasingly classify fusion machines under distinct regulatory pathways that treat them as non-fissile technologies (OECD-NEA, 2024).

3.2 Treaty of Rarotonga and Non-Proliferation Obligations

The Treaty of Rarotonga prohibits nuclear explosive devices, the stationing or testing of nuclear weapons, and activities involving fissile materials capable of producing a nuclear explosion.

Fusion machines do not use fissile materials, do not produce weapons-usable isotopes, and cannot create a nuclear explosive event. International scientific authorities affirm that fusion does not generate a chain reaction and cannot be weaponised (IAEA, 2023a; OECD-NEA, 2024).

Therefore, civilian or humanitarian fusion systems:

- are not prohibited by the Treaty of Rarotonga
- do not impact Australia's or Pacific partners' treaty obligations
- do not require modification or exemption
- do not undermine regional nuclear-free norms
- can be deployed safely under IAEA-aligned safety frameworks

Australia can thus integrate fusion energy into its international development and humanitarian missions without affecting commitments under the Treaty of Rarotonga, NPT, or other regional non-proliferation arrangements.

4. Policy Recommendations

1. Integrate fusion energy into Australia's international development program as a conflict-prevention and resilience-building tool.
2. Establish a Fusion for Peace Initiative under DFAT and Defence to deploy micro-grids, communications modules, and desalination units across the Indo-Pacific.
3. Develop an ARPANSA-IAEA aligned regulatory and certification pathway for humanitarian fusion systems.
4. Promote regional cooperation through ASEAN, APEC, and IORA frameworks on sustainable energy and peacebuilding.
5. Support joint R&D with ANU, CSIRO, UKAEA, EUROfusion, and IAEA partners to design safe, export-ready fusion modules.
6. Embed fusion in climate-finance and resilience mechanisms for concessional deployment in fragile states.
7. Expand workforce training and education initiatives for Indo-Pacific partners in fusion safety, governance, and maintenance.

5. Conclusion

Fusion energy provides a unique opportunity to export abundance, not dependency; stability, not volatility; and cooperation, not competition. Its non-fissile, inherently safe nature supports peacebuilding goals while respecting Australia's domestic legislation and regional treaty obligations, including the Treaty of Rarotonga.

Embedding fusion within Australia's development and foreign policy portfolio aligns with national interests in security, diplomacy, humanitarian leadership, and non-proliferation (Crookston, 2025a, 2025b, 2025c). Fusion is an instrument of peace whose time has arrived.

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