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Press Release

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CALL TO HALT HASTY PASSING OF CARBON CAPTURE BILL IN PARLIAMENT

Sahabat Alam Malaysia (SAM) calls upon the federal government and the Minister of Economy in particular, **to not rush the passing of the Carbon Capture, Utilisation and Storage (CCUS) Bill, without more thorough and informed debate and consultations among Parliamentarians, including with environmental and public interest groups.**

SAM questions why such haste and rush when **CCUS technology is controversial, and its implementation entails serious economic, environmental and social risks with grave consequences.**

Good governance and transparency in the process would entail at the very least, an opportunity for proper debate and meaningful consultations on the Bill, so as to provide the ability to make improvements and assess the overall direction and substance of the Bill, whilst obtaining further clarity.

The CCUS Bill was tabled in Parliament for first reading yesterday, 4th March, by the Minister of Economy, Dato' Seri Mohd Rafizi bin Ramli. Indications are that the second and third reading of the bill will take place today, 5th March, which will also see a vote being held on whether the Bill will be passed.

Proper public consultation on the full Bill has not taken place, despite the raising of many concerns by civil society organisations [CSOs]. One consultation with the Ministry of Economy was held last year, and that was limited to a vague and rudimentary framework of the Bill without further details.

This rush and haste to approve the Bill is completely unacceptable, given the critical concerns that have been raised on the risks and dangers of CCUS implementation.

The Bill tabled yesterday raises many questions that need to be addressed. It is mainly focused on the setting up of an agency, provides for licensing/permits and deals with setting up a fund post-closure of a facility. The Bill alludes to the issues of carbon dioxide (CO₂) leakage and risks to the environment, but does not adequately provide for how these matters will be dealt with, including the issue of who will bear the liability for any accidents that will result, since the lifetime of the CO₂ gas is at least hundreds to 1000 years. There is no provision for detailed environmental and social impact assessments and for public participation prior to approvals, despite the risks involved.

SAM has done a study on the technology which reveals many concerns, which we are forwarding to the Ministry of Economy, the Natural Resources and Environment Ministry and the Department of Environment. Among the risks of carbon capture raised include:

i) Hazard to the Public and Environment

A UN report on the toxic impacts of some proposed climate change solutions emphasised that the carbon capture process relies on large amounts of chemicals and can release significant quantities of highly toxic ammonia into surrounding communities. At high concentrations, CO₂ is a toxic gas and an asphyxiant which can cause

circulatory insufficiency, coma and death. There are also risks relating to leakage where leakage to adjacent geological formations may cause geochemical reactions, including stimulation of seismic activity, and mobilisation of potentially polluting elements, such as heavy metals, which can contaminate drinking water and underground water.

ii) Integrity and Permanence of Disposed Carbon

There are huge concerns regarding integrity and permanence of disposed carbon. Instances of leakage occurred at a carbon storage facility in Illinois, United States, in September 2024 that resulted in 8,000 metric tons of CO₂ escaping the underground rock formation where it was supposed to be stored, affecting groundwater area to the extent that it violated safe drinking water rules. In the Cogdell oil field in Texas, ever since it started the injection of CO₂ into the subsurface, eighteen (18) earthquakes of 3.0 magnitude upwards have occurred in the vicinity over the span of five years, with one almost reaching 5.0 magnitude. The area had faced no earthquakes in the 20 years prior to CO₂ injection in its subsurface.

iii) Project Failure and Cancellation Risks

Carbon capture projects are considered as high risk and of low return, with projects larger than 1 Mt CO₂ per year being very likely to fail within the first 10 years. As a consequence of the high risks and failure rates, it is difficult to attract financing, which makes them heavily reliant on public funding.

Other critiques of carbon capture include:

i) Overpromising and Underperforming

Despite the ambitious promise of a 90% capture rate by proponents, the global average capture rate of carbon capture projects is around 49%, with rates even going as low as 10%.

ii) Most Expensive Yet Least Effective

According to the Intergovernmental Panel on Climate Change (IPCC), when compared to the adoption of more proven climate change mitigation measures such as the mass adoption of renewables like wind and solar, carbon capture is the most expensive, yet delivers the least reduction of CO₂ emissions. Carbon capture is expected to reduce a total of just 1.1% of current global annual emissions from fuel combustion and industrial processes. Despite this meagre sum, it is projected that dependence on carbon capture to reach net zero targets would be “highly economically damaging”, costing at least USD30 trillion (RM133.2 trillion) more than a route based primarily on renewable energy, energy efficiency and electrification.

iii) No Evidence of Technological Learning or Associated Cost Reductions

Despite over 40 years of significant effort and investment in research and development programmes, carbon capture technology has not been improving, in the sense that costs have not declined at all and there is also no evidence to suggest that costs will likely fall in the future to a level that allows for carbon capture to contribute seriously to emissions mitigation. Instead, it is forecasted that carbon capture will get even more expensive

iv) Capital, Energy and Water Intensive, Potentially Exacerbating Costs of Electricity Generation and Transport

According to the IPCC, carbon capture cost presents a key challenge, remaining higher than USD50 (RM219.75) per ton of CO₂ for most technologies and regions, with the capital cost of coal or gas electricity generation facilities with CCS being almost double that of facilities without CCS. The high use of capital, energy and water from the implementation of carbon capture can have environmental implications and potentially exacerbate the cost of electricity and oil and gas production, which would be later passed down to consumers or subsidised by the government using taxpayer money.

We believe that these concerns have not been adequately addressed by the Ministry of Economy, and the passing of this Bill should be halted until and unless such concerns have been adequately considered and clarified.

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