Talking Points for the Premier of Sarawak

Officiating Address

Sustainability and Renewable Energy Forum 3.0

6 September 2023

Regional Net Zero & Sustainable Communities Through

Renewable Energy Development and Interconnections

Introduction

1. Good morning.
2. Thank you for inviting me to deliver the officiating address at the Sustainability and Renewable Energy Forum or SAREF 3.0 – powered by Sarawak Energy.
3. I also extend my thanks to the supporting ministries of Utility & Telecommunication as well as Energy and Environmental Sustainability.
4. Congratulations to all parties for bringing us the third edition of SAREF.
5. A special welcome to our international speakers and delegates – Kuching, Sarawak is a very special place, especially if you are from the sustainability and renewable energy sectors.
6. While we look forward to sharing our journey in sustainability and renewable energy development, I hope that our people will also learn from all of you.

History of SAREF

7. SAREF is an important platform to drive regional discourse surrounding renewables and energy transition – bringing together experts from across Southeast Asia and the world at large.
    - We are very proud that Sarawak Energy was the first company in Malaysia to launch Renewable Energy Certificates or RECs at the inaugural SAREF back in 2019, also issuing them to all participants and delegates.
    - Reception has been encouraging since its launch and as of December 2022, around 1.8 million RECs have been sold or committed.
    - I understand and am pleased that each delegate will also receive a Sarawak Energy issued REC today.

Ladies & Gentlemen,

8. It is my firm belief that the sustainability initiatives and conversations as well as aspirations from SAREF 1.0 will continue here at SAREF 3.0, which is themed 'Regional Net Zero and Sustainable Communities, Renewable Energy Development, and Interconnections', which is also the theme of my speech this morning.
9. Through the discussions planned over the next two days, I believe we can find opportunities to chart the path to a shared and more sustainable energy future for the region – so that we achieve prosperity and sustainable living for all, especially those of us in Southeast Asia and Asia Pacific.

10. The discussions that will be held here in Kuching, Sarawak will be amplified by the presence of local, national, and regional media to ensure our messages reach the audiences that must be reached.
11. We are all in this together, and we must all work together.

Introduction to Sarawak

Ladies and gentlemen,

12. For the benefit of our non-Sarawakian attendees, allow me to provide some background on Sarawak.
    - Our population of roughly 2.9 million is very diverse, comprising 27 ethnic groups. Our official languages are English and Bahasa Melayu and both are widely spoken, with Mandarin also commonly used.
    - We also speak about 40 different languages and dialects amongst friends and family - on the whole, we get along very well with each other even across political and other differences.
13. Part of Malaysia, Sarawak is a very large territory, occupying roughly 12.4 million hectares of Borneo with a large network of rivers, marked by a long coastline, mountainous interior landscape, and an extremely rainy climate.
14. We have the highest percentage of forest cover in Malaysia, accounting for 42.4 per cent of the total land area.
15. In addition to being blessed with diversity of people, we have also been blessed with diversity of natural resources such as timber from our forests, oil and gas as well as coal.

Sarawak's Energy Development Journey

16. In developing our natural energy resources to benefit our people, Sarawak's leaders have always had a clear and practical view of our possibilities and limits over the course of our history.
17. Our history of energy development goes back over one hundred years.
    - Under the Brooke administration, Sarawak began upstream petroleum production in 1910.
    - In 1921, we established Sarawak Energy, which is one of the region's oldest electricity utilities tasked with a mission to electrify Sarawak and achieve our vision of becoming a regional powerhouse.
    - Following the discovery of gas offshore Sarawak, we were able to subsequently include indigenous natural gas into our power generation mix.
    - Our coal-fired power plants also use local coal. Despite the availability of local coal, we have committed to building no new coal power plants, with our 600 MW Balingian Coal-Fired Power Plant commissioned in 2021 being the last. Sarawak Energy has commenced the decommissioning the older coal plants, starting with one unit in Sejingkat Coal Fired Power Generation.
18. Recognising that our indigenous petroleum and coal resources were finite, Sarawak's early leaders looked to explore other, more sustainable natural resources.
    - A study commissioned in the 1960s revealed 20,000MW of identified hydro potential.
    - Further studies indicated that there are 12 prospective hydropower sites, with a potential of 8,000MW – ensuring that we would have an abundant supply of reliable and renewable energy for the future to meet domestic and export demand.

- Our natural terrain and rivers are ideal conditions for hydropower development, which has been the foundation for our ongoing socioeconomic transformation and energy transition.

19. Up to the mid-80s, Sarawak was completely dependent on fossil fuels and had distributed grids for different cities.
    - In 1985, we commissioned our first hydroelectric plant – the 108MW Batang Ai Hydroelectric Plant.
20. With a greater understanding of what benefits hydropower could deliver for Sarawak, we launched the Sarawak Corridor of Renewable Energy or SCORE in 2008, to further harness hydropower to drive industrialisation, attract investments and drive job and wealth creation in Sarawak through globally competitive tariffs.
21. Under SCORE, the Murum and Bakun Dams have been developed and together with Batang Ai, total almost 3,500MW of renewable energy.
    - A fourth 1,285MW hydroelectric project in Baleh is currently under construction and is scheduled for completion towards the end of this decade.
    - These plants are a vital part of our efforts to build a modern power system and State Power Grid for Sarawak.
    - We have also developed small hydropower projects that support off-grid communities and rural electrification in Sarawak's many remote villages.
    - Under the Ministry of Utility and Telecommunication, Sarawak Energy has also achieved close to full electrification through grid and off-grid solutions.
22. Hydropower offers a sustainable renewable energy option that can benefit us beyond mere electricity generation.

23. In developing our hydropower plants, less than 1% of Sarawak's total land area has been affected by the formation of reservoirs.
    - Should we develop the remaining 9 sites, we expect only 2% of our total land area will be affected by the resulting reservoirs - Sarawak is quite a large territory.
24. Hydropower has also allowed us to reduce the carbon emission intensity of our power system by 73% between 2010 and 2021 – contributing to our Net Zero and sustainability commitments.
25. We are also exploring the concept of cascading dams construction to produce power modelled on those in Tasmania, the Nordic countries an River Danube in Europe.
26. In addition we also want to explore the use of wood pallets from biomas to produce energy like that in the UK.
27. Renewable hydropower's lower levelised cost of electricity benefits Sarawak's domestic, industrial and export customers by providing them with affordable, reliable, and sustainable electricity, addressing the energy trilemma.
    - Sarawak offers the lowest average unsubsidised tariffs in Southeast Asia with an added competitive advantage: our electricity is primarily green.
    - This has attracted bulk power customers .
28. Sarawak's energy landscape has indeed undergone a significant shift in the past decade.
    - Our generation mix transitioned from being primarily fossil fuel to predominantly renewable hydropower.
    - This is complemented by natural gas, indigenous coal, off grid diesel, off-grid solar with floating solar in the plan.

29. Our balanced approach to energy development has allowed us to address the energy trilemma of sustainability, security and affordability with a good measure of flexibility.
30. For energy security, we will continue to maintain thermal plants in our generation mix although renewable energy will continue to dominate our generation mix.

Post COVID-19 Development Strategy 2030

Distinguished ladies and gentlemen,

31. As part of the global community, Sarawak also suffered from the unprecedented crisis of COVID-19.
32. The pandemic offered mixed blessings. It closed borders, slowed development but also gave us time to rethink and reset our pathways to prosperity for a more just and inclusive future.
33. In 2021, during the crisis, Sarawak launched our own ambitious plan to achieve high income status for our people by 2030: the Post COVID-19 Development Strategy or PCDS powered by renewable energy.
34. Together with my team from both the public and private sectors, I developed the PCDS to restructure and diversify our economy into high value downstream industries with the aim of creating a thriving society that is driven by data and innovation, aligned with the United Nations Sustainable Development Goals or UN SDGs.
35. We believe that this will ensure economic prosperity, social inclusivity, and a sustainable environment for all of Sarawak's people and if we manage interconnections well as a region, for all Southeast Asia.
36. Under this new strategic initiative, renewable energy has been identified as a key enabler for us to achieve our development goals.

37. The electricity sector – led by Sarawak Energy – was tasked with accomplishing the following three targets over the next decade:
    - Maintain at least 60% renewable energy capacity mix by 2030, including solar and other alternative energy sources.
    - Reduce CO2 emissions by 600k tons per annum by electrifying Sarawak's mobility fleet by 2030.
    - Achieve more than 15% income from foreign markets, including the pursuit of power exports.
38. We can also proclaim we are home to Southeast Asia's first integrated hydrogen production plant and refuelling station using predominantly renewable electricity to produce our hydrogen.
39. In progressing Net Zero, our renewable hydropower resources are supplemented by alternative renewables like solar and investments into emission reduction solutions like carbon capture, utilisation, and storage or CCUS.
40. We are also exploring other renewable energy sources, such as green hydrogen and solar enabled by renewable hydropower, and as technology advances, we will see how we can make wind and biomass more mainstream sources of energy.
    - Sarawak Energy is developing its first floating solar farm at the Batang Ai HEP – it is expected to be commissioned in 2024 and will be Sarawak's first major generation hybrid between hydro and solar.
    - Once commissioned it is expected to offset around 52 kilo tonnes of carbon emissions annually – contributing to the further decarbonisation of our grid.
    - Based on our generation and network capacity until 2031, we have the potential to plant up 1,500MW of solar capacity.

41. Sarawak Energy has also embarked on a pilot 60MW Battery Energy Storage System or BESS, which will be located at its Sejingkat Coal Fired Power Plant.
    - The BESS will provide critical grid services, such as peak shaving as well as spinning reserve, and optimise generation assets – minimising the carbon emissions associated with traditional power generation.
    - It will also help mitigate the intermittency issues associated with variable renewable energy such as solar – making them more viable.
42. Sarawak Energy's Hydrogen Production Plant and Refuelling Station services hydrogen buses owned and operated by the Sarawak Economic Development Corporation as well as two of Sarawak Energy's Hyundai Nexo hydrogen fuel cell vehicles.
    - It also conducts research on greening the transportation sector through low carbon fuels.

43. The energy sector can play a significant role in climate action efforts.
44. Under the Paris Agreement, countries agreed to reduce their GHG emissions.
45. Malaysia has pledged net-zero GHG emissions as early as 2050 in the Twelfth Malaysia Plan and in May this year, the Federal Government set out an ambitious target to achieve 70% renewable energy installed capacity by 2050.
46. Malaysia aims to lower its GHG emissions while reducing the country's reliance on carbon fuels to generate energy, as outlined under the National Energy Transition Roadmap or NETR in pursuit of energy

transition, addressing sustainable energy development, and climate change.

47. Sarawak will be instrumental in achieving these goals.

Interconnections

48. The Federal Government also lifted the ban on cross-border trade in renewable energy in May this year.
49. While this did not affect Sarawak's power interconnection with Indonesia which commenced in 2016, we see this as crucial in encouraging cross border electricity trade for the region.
50. Interconnections are one of the primary ways for our region to achieve regional Net Zero and energy transition targets.
51. Our first interconnection with West Kalimantan, Indonesia in 2016 was the first step towards realising the Borneo Power Grid and its success encouraged us to pursue similar bilateral interconnection projects.
    - Building upon this strong relationship established with our Indonesian neighbours, Sarawak Energy is progressing the Mentarang Induk Hydroelectric Project or MIHEP in North Kalimantan via a joint venture company with our Indonesian partners.
52. Discussions and agreements regarding other interconnections are also progressing well. In 2021, we signed power exchange and interconnection agreements with Sabah – this will involve initial export of 30MW to 50MW over a 15-year period.
53. Sarawak is also working on a power exchange agreement with Brunei for electricity export.

54. We are also venturing beyond the Borneo Power Grid as part of the regional ASEAN Power Grid – Sarawak Energy, together with their partners Sembcorp International and Singapore Power Group have completed comprehensive technical studies and are well advanced in the commercial negotiations for an interconnection with Singapore, with direct undersea power cables linking Sarawak and Singapore.
    - At the recent Energy Transition conference in Kuala Lumpur, The Right Honourable Prime Minister of Malaysia said Malaysian utility companies, including Sarawak Energy, are progressing in the cross-border business, leveraging the ASEAN Power Grid. This will improve broader energy security prospects and further enhance economic integration with neighbouring countries.
    - We are grateful for the support of the Federal Government for Sarawak Energy's role in this venture.

55. Sarawak is in a prime central location in Southeast Asia, on Borneo's northeast coast, sharing our borders with Indonesian Kalimantan on the island of Borneo as well as Brunei, and the Malaysian state of Sabah.
56. Sarawak can play a central role in progressing regional energy transition by sharing our hydropower-based resources with regional neighbours via interconnections.
57. Collectively, the projects are vital building blocks for the aforementioned ASEAN Power Grid and in pursuing them, I believe Sarawak can become the battery of ASEAN – helping to link power grids across the region.

<u>Sustainable Communities</u>

58. Through the Post COVID-19 Development Strategy and Sarawak Corridor of Renewable Energy, Sarawak has made great strides towards the creation and cultivation of sustainable cities and communities in the State.
59. In addition to these two strategic initiatives, Sarawak is also developing the Sustainable Sarawak Blueprint which guides all sectors and communities in the State to achieve sustainability goals.
    - We prioritise environmental sustainability – aligning our development path with the UN SDGs – while pursuing balanced economic growth by taking a responsible approach to the development of our natural resources.
60. Our Kuching Smart City Master Plan aims to promote economic growth and improve the quality of life for the city's residents by leveraging data analysis and smart technologies, including low carbon mobility.
61. Under our Green Energy Agenda, we are exploring several ways to decarbonise the State transport system and further transition us towards a low carbon economy, that already has predominantly green electricity as a pillar.
62. Our first electric bus – powered by Sarawak Energy – arrived on Kuching's roads in 2019 and it is still in operation today.
63. Hydrogen has many applications in Sarawak's existing industries and can be exported in various forms via different methods.
64. We have continued to explore hydrogen as a means of accelerating Sarawak towards a low carbon economy, in the belief that it can play a significant role in further greening our industries, transportation sector and healthcare.

65. This is reflected by the ongoing engineering run of our prototype Autonomous Rail Transit or ART under the Sarawak Economic Development Corporation in this Isthmus area.
    - When fully operational, ARTs will allow for an enhanced public transportation system, affording our people greater ease of movement while connecting residential areas, businesses, industrial areas, higher learning institutions, and tourist destinations while also promoting green mobility.[1]
66. This focus on green mobility is further exemplified by our installation of electric vehicle or EV charging stations around Kuching to encourage adoption of green vehicles among citizens.
67. We have plans to extend this programme to other major Sarawakian cities in the future.

Carbon Capture, Utilisation and Storage

68. In our ambition to become a net zero and low carbon economy, Sarawak is also looking at various options in Carbon Capture, Utilisation and Storage or CCUS as well as natural solutions.
69. To better position ourselves to develop CCUS in Sarawak, we passed the Land Code (Amendment) Bill 2022 last year to comply with new practices and strategies for environmental sustainability as well as secure opportunities for new revenue sources by regulating and controlling the use of land for carbon storage.
70. Petroleum Sarawak Bhd or PETROS also received the first license for carbon storage in March of this year, allowing them to begin their strategic

[1] https://www.newsarawaktribune.com.my/autonomous-rail-rapid-transit-art/#:~:text=It%20is%20expected%20to%20create,rolling%20stock%20and%20feeder%20buses.

role as resource manager for CCUS in Sarawak, with support and collaboration from my relevant ministries.

71. Sarawak Energy also recently collaborated with the CHITOSE Group, ENEOS and Sarawak Biodiversity Centre to launch the CHITOSE Carbon Capture Central Sarawak – the State's very first industrial microalgae production facility.
    - Microalgae uses CO2 as part of its food chain and integrates carbon into its biomass.
    - This facility can play a key role in progressing our sustainability and Net Zero goals, to minimise carbon emissions in the atmosphere.
72. Microalgae's ability to capture and clean up carbon makes it a very attractive proposition as we advance on our sustainability journey.
    - In addition to reducing carbon from the environment, the algae biomass that is produced can be used to produce commercial products like sustainable aviation fuels or SAF.
73. Sarawak's exploration of CCUS has been reaffirmed by the launch of Malaysia's National Energy Transition Roadmap which has identified it as one of six energy transition levers.

<u>Partnership for the Goals – Progressing our Regional Renewable Energy Landscape</u>

Ladies and Gentlemen,

74. In summary Sarawak has the following sources of energy:
    1. hydro power
    2. solar power
    3. biomass particulary wood pallet

4.gas turbine

5.wind potential as hybrid (solar)

75. With rising energy demand in Southeast Asia, interconnections and intraregional partnerships will be extremely important moving forward, with some reports indicating energy demand in the region has increased on average by around 3% per year over the past two decades.
76. Accommodating this growing demand while meeting sustainability requirements will require us to work together, even more closely.
77. Each country has their own energy transition plans, tied to their respective needs and circumstances, and within countries, each region, state or province will also have their own pathways.
78. Cooperation, communication and understanding are essential if we are to see collective success for Southeast Asia.
79. As Policymakers, we must do our part, providing the necessary political frameworks and programmes to facilitate public-private partnerships and encourage collective action.
80. In the face of global warming and a growing climate crisis, it is essential for us to align ourselves and make a shared commitment to balancing people, planet and profit to ensure continued and sustainable prosperity for all.
81. No one can or should be left behind.
82. Whether you are from civil society or the public or private sector, whether you are a politician or a normal citizen, we must all demonstrate leadership and a commitment to work together going forward.

83. The decisions we make and actions we take will impact the lives of present and future generations, just as decisions made in the past have led us to our complicated present.
84. As the Premier of Sarawak, Malaysia, I assure all of you that my Government is committed to realising a prosperous and sustainable future that is also inclusive and just.
85. We have reached a crucial point in our ongoing transformation, but I am confident that we will navigate this journey successfully, especially if we maximise the opportunities presented to us through key platforms such as SAREF and as well as the World Hydropower Congress to be held in Bali, Indonesia at the end of October.
86. Sarawak offers sustainability and renewable energy opportunities, and we are interested in working with like-minded countries, organisations or entities that are similarly committed to a sustainable energy future for our region and the world.
87. It is our shared responsibility to work together to balance current and future energy demand with sustainability principles.
88. SAREF is an important platform to progress towards this goal, bringing us together to hold important conversations and explore potential partnerships.
89. Our respective sustainability journeys are far from over. Although we have achieved significant milestones over the past several years, more still needs to be done.
90. We must actively search for new innovations, technologies, and processes to progress even further. It is time for us to empower our people and embrace the challenges ahead.

91. We hope that the dialogue, conversations and networking opportunities at SAREF3.0 will help us to move close towards achieving our aspirations.
92. Thank you again for joining SAREF 3.0 and together, we can shape a sustainable and prosperous future for everyone in the region.