

SIEW Episode 4 – Sembcorp - Transcript



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SIEWCast w/ **Koh Chiap Khiong**

CEO, Singapore and Southeast Asia
Sembcorp Industries

Episode / **04**



Rachel Kelly (Money FM 89.3) 00:03

This SIEWCast is brought to you by Singapore International Energy Week and Money FM 89.3, in partnership with ExxonMobil. SIEW is a platform for energy professionals, policymakers and commentators to share best practices and solutions with the global energy space. Now by 2025, ASEAN aims to generate up to 23% of its energy through renewable sources. Southeast Asia is already home to several large-scale renewable power projects. Over the past few years, Singapore has increased its solar energy capacity exponentially, and is now one of the most solar dense cities in the world. But this is only one part of the renewable energy mix. To get the bigger picture, we are joined now by Mr Koh Chiap Khiong, who is the CEO, Singapore and Southeast Asia, Sembcorp Industries. Mr. Koh, thank you so much for joining us today.

Mr Koh Chiap Khiong (Sembcorp)

Hi Rachel, thank you very much for inviting me.

Rachel Kelly (Money FM 89.3) 00:57

It's a pleasure to be speaking with you today. Mr. Koh, perhaps we can start off and you can share with us how Sembcorp is supporting Singapore's aim of reaching net zero by 2050.

Mr Koh Chiap Khiong (Sembcorp)

For Sembcorp sustainability is our business. We have unveiled our strategic plan in May 2021. What we want to do is to transform our portfolio from brown to green. By 2025, we want to double four times growth our renewable four times to 10 gigawatts. Actually, we have now achieved 7.1 gigawatts, which is a great achievement considering we just implemented our strategy in one year. We also want to reduce our carbon intensity emission by 25%. By 2050, we want to achieve net zero emission target and we have really good traction now in renewable growth in all our key segments: Singapore, Southeast Asia, UK, China and India. Let's go into Singapore. Sembcorp currently is the largest solar developer in Singapore. We have nearly 1/3 of Singapore's 2025 target of 1.5 gigawatts we're now about 400 megawatts peak and we intend to continue to grow in this aspect. With this solar implementation, we are now covering about 2500 sites and have about 100 customers. We also pioneered interesting projects with PUB and JTC, we are the first one to implement the solar floating solar in Tengeh. This is one of the largest inland floating solar PV system in the world. We also have a solar farm at Tuas, and this is a first solar with an integrated rainwater harvesting system. Solar itself will not be able to solve our net zero problem in our journey to achieve net zero. We have also implemented and now implementing a battery solution. We are working with EMA to develop a 200 megawatts of energy storage system in Jurong Island. This will be online by the end of this year. We are also using our leverage in the UK because we're the largest operator of battery in UK. And from there we are learning how to operate batteries and also replicating this in Singapore. Hydrogen as well, we are looking at up and coming technologies to help decarbonise in a bigger way, especially green hydrogen. We are working with tech partners to explore the flexibility, visibility and implementation of commercial scale supply chain to deliver decarbonise hydrogen solution into Singapore. Besides hydrogen, we're also looking at carbon capture, utilisation and storage technology. We are working with some partners to see how we can actually bring this technology into Singapore

Rachel Kelly (Money FM 89.3) 03:50

You've touched on what is happening here in Singapore. There I ask Southeast Asia I mean, Sembcorp has more than two decades of experience in Southeast Asia. Could you share more about the opportunities that you see in the region.

Mr Koh Chiap Khiong (Sembcorp)

Vietnam, for example, we have been operating for over 25 years. We have 11 industrial parks under the brand name of VSIP and we have been working in Vietnam for a very long time. Similarly, for Indonesia, as well, we have 20 years of partnership. We were the first to bring natural gas from pipe natural gas from Indonesia to Singapore. And we also have our urban development business in Indonesia. So with this experience and also having the proximity and cultural advantages, we intend to export our Sembcorp capabilities in Southeast Asia. Especially in Vietnam and Indonesia, we are trying to continue to grow our renewable assets to actually meet our 10 gigawatts target. In addition to that, because of our positions in the park industrial park, we would also like to see how we can aim to achieve net zero for the industrial park itself. So two fronts, one is the renewable angle and the second part is really the urban development in the cities, how we actually can pick up a nice in some of these urban cities.

Rachel Kelly (Money FM 89.3) 05:05

We've been speaking with Mr. Koh Chiap Khiong, who is the CEO, Singapore, Southeast Asia Sembcorp Industries, as part of a special series of SIEWCast, brought to you by Singapore International Energy Week and Money FM 89.3, in partnership with ExxonMobil. I just want to rewind to something that you mentioned earlier, you spoke about going from brown to green, what do you think can be done to ensure a smooth energy transition for countries in the region?

Mr Koh Chiap Khiong (Sembcorp)

I would like to say that the demand for energy growth in Southeast Asia is very huge, 70% increase from 2015 to 2040. So with this change, there's also a big change in the energy mix itself. Currently, most of in Southeast Asia is still a lot of gas, coal plants in the mix will change over time. So to meet this rising demand in a very sustainable way, the energy transition must take into account a few things: reliability, energy security, and affordability. To improve these indicators, we need to have clear approaches for funding, energy infrastructure upgrades, reforming regulatory frameworks, developing green energy skill sets. Let me touch each points further. For funding itself, I think according to IRENA, more than 5 trillion investments will have to be deployed by 2050 in Southeast Asia to actually change the profile. To do this commercial structure to support financing is very important to make sure that we have enough support from the banks and real estate holders to make financing a viable option for developing such projects. The second part of upgrading infrastructure, this need to be modernised as well, because most grids are actually built for thermal plants, which is a 24/7 kind of a plant load factor. Moving into renewables moving into the new technologies, it's totally different. So grids has to be upgraded to make sure that we can actually accept some of this renewable interruptible loads. Besides upgrading the infrastructure, we also need to look at regulatory frameworks as well. Most regulatory frameworks needs to be upgraded to take into account such new technologies, and I think in Sembcorp, we've been working quite a lot with regulators like EVN and EMA, to make sure that we propose to them what we think some of the changes should be, and also to see how we can upgrade some of these regulatory frameworks. Besides this, I think we also need to make sure that we develop the green skill sets, manpower, very key, manpower is very key. In all the changes itself, we need to take people along. So I think if we look from Sembcorp's point of view, we have actually worked quite closely with our partners. We also have worked quite closely with higher learning schools to try to level up skill sets to be able to bridge this gap.

Rachel Kelly (Money FM 89.3) 07:48

So you've spoken a lot about the energy transition and energy sources. And I want to get your perspective on what technologies and solutions you see as potentially being the next transition after natural gas because at the end of the day, natural gas is a fossil fuel as well, isn't it?

Mr Koh Chiap Khiong (Sembcorp)

Yeah, I think the next big technology in transition that can move the needle, after considering existing renewable tax, will be like energy storage, hydrogen, carbon capture, utilisation and storage. Especially in Singapore, the lack of natural resources and land scarcity makes such solution even more critical to achieve our energy transition goals. We have actually now worked on our energy storage, we are deploying 200 megawatts of energy storage and this will support the increase deployment of solar because as we know, solar has intermittent sources for hydrogen itself. EMA Energy 2050 Committee Report, projected low carbon hydrogen as the main energy source, accounting for up to 60% of Singapore energy mix in all the major scenarios. This has some parallel to natural gas and hydrogen. I think I will

explain a little bit more because for natural gas, it first started as LNG. And for this source of gas to be a dominant fuel, the infrastructure and changes have to happen before you can actually introduce such gas into the country. Both of these are very key to decarbonise the energy system, and safeguarding our national security in different stages. Hydrogen will also play a similar role in replacing fossil fuels as I mentioned earlier, just like natural gas. Carbon capture utilisation and storage I think this must also come in. IEA has also suggested that in order to meet Paris Agreement targets for SEA, Southeast Asia, about 1 billion per year investment from 2025 to 2030 is needed. Developing carbon capture potential from zero today to 200 million tonnes in Southeast Asia by 2050. At Sembcorp, we are proud to say that we have met Singapore 200 megawatts ESS target with Jurong Island BSS implementation. We are also collaborating with partners on the low carbon hydrogen technology and also partners to work on the CCUS as well.

Rachel Kelly (Money FM 89.3) 10:03

Okay, so lastly, perhaps to summarise, you could share with us how Sembcorp is helping to shape a resilient and sustainable energy future.

Mr Koh Chiap Khiong (Sembcorp)

We're actively involved in all four energy switches of Singapore energy future story. Natural gas, solar, regional import, and low carbon alternatives. I think best combination of solution to achieve both resilience and sustainability in safeguarding Singapore energy future. I have spoken at length just now about how we were involved with the three switches and how we're involved in the solar will involve regional imports, and also low carbon alternatives. Now, I would like to share a little bit more about the first switch, which is gas, which is a very important switch in making sure that the resilience and sustainable energy future as well. Sembcorp is the first to bring import pipe nature gas 20 years ago and this is a first transition, replacing fuel oil with imported pipe natural gas, which helped drastically bring down Singapore CO2 emission without compromising economic growth. Looking forward, we want to replicate in this current era of energy transition, which focuses on moving from high carbon to a low carbon generation assets. Besides transiting from the supply source, I think we also need to build a robust ecosystem. What I mean is that we need to work with schools to train up people. We also need to work with research centers to actually build up the R&D. We also need to work with regulators and hosts all the stakeholders, a sustainable, resilient energy future. We need to work with many stakeholders to make sure that the whole ecosystem can actually support the change.

Rachel Kelly (Money FM 89.3) 11:42

All the pieces of the puzzle need to come together. That's right. Great. Well, thank you so much for taking the time to speak with us today. Mr. Koh.

Mr Koh Chiap Khiong (Sembcorp)

Thank you very much.

Rachel Kelly (Money FM 89.3) 11:49

Thank you. We've been speaking with Mr Koh Chiap Khiong, who is the CEO Singapore, Southeast Asia, Sembcorp Industries, as part of a special series of SIEWCast brought to you by Singapore International Energy Week and Money FM 89.3 in partnership with ExxonMobil.