

SPEECH BY MR LIM HNG KIANG, MINISTER FOR TRADE & INDUSTRY (TRADE), AT CHEMEX 2017 AND LAUNCH OF THE ENERGY & CHEMICALS INDUSTRY TRANSFORMATION MAP AND SKILLS FRAMEWORK ON 21 OCTOBER 2017, 12:00PM, AT OASIS, SAKRA, JURONG ISLAND

Ms Suiniaty Basirun, Chairperson, Singapore Chemicals Industry Council Limited,

Mr James Tan, Supervising Lead of OPEC Cluster and Executive Secretary of Chemical Industries Employees' Union,

Students, Teachers,

Distinguished Guests,

Ladies and Gentlemen.

Introduction

1. It is my pleasure to be here with you today at ChemEx 2017. ChemEx provides valuable opportunities for our students to engage the industry, and help them better appreciate how classroom learnings are put into practice. I would like to commend the Singapore Chemical Industry Council (SCIC) for taking on the lead on this initiative, and thank all participating companies for their support.

The Energy & Chemicals industry is a key pillar of Singapore's economy

2. The Energy & Chemicals (E&C) industry has been a mainstay of Singapore's economy, dating back to pre-independence. Over the years, we have developed an extensive chemicals

value chain spanning from refining to olefins production, to chemicals manufacturing supported by innovation and research – all without producing a single drop of oil. Today, Singapore is the world’s 5th-largest refinery export hub¹ and ranks within the top 10 globally by chemical exports volume².

Singapore remains committed to positioning our Energy & Chemicals industry well for the future through the Industry Transformation Map.

3. While we have done well to get to where we are, we face new challenges in the road ahead. Rapid technology advancements are disrupting value chains across industries, while creating new possibilities and opportunities. At the same time, the global operating environment remains uncertain. In addition to the uncertainty over oil prices, we are also seeing a rise of advantaged feedstock options such as shale, tightening of emissions regulations, as well as increasing demand for cleaner fuels and lubricants.

4. Singapore’s E&C industry is no stranger to changes and uncertainties. While our industry has seen its fair share of churn over the last decades, many companies have also partnered Singapore to move up the value chain and seize new opportunities, such as in high-value derivatives and specialty chemicals. In 2010, we also launched Jurong Island v2.0, a strategic blueprint with the aim of improving Jurong Island’s cost competitiveness through a series of systems level upgrades. For instance, we have implemented various projects to reduce

¹ Source: BP World Statistical Review 2017

² Source: World Trade Statistical Review 2017

utilities cost, improve feedstock options, enhance logistic capabilities, and increase productivity in supporting sectors such as the process, construction and maintenance sector.

5. We remain committed to positioning our E&C industry well for the future. This will require the collective effort of the government, companies, trade associations and chambers like SCIC and the union, as well as our workers. On this note, I am pleased to launch the E&C Industry Transformation Map (ITM), which has been jointly developed by the key stakeholders.
6. The E&C ITM encompasses key strategies in innovation, productivity as well as jobs and skills development. **Through the efforts of the ITM, we aim for our E&C industry to achieve a manufacturing value-added of S\$12.7 billion and create 1,400 new good jobs by 2025.** Let me elaborate on some of these strategies.

Innovation will be a key driver of Singapore's E&C Strategy

7. Innovation will be a key driver of the E&C ITM, be it in the transformation of existing manufacturing operations to drive productivity, or in the development of new chemical products and solutions for new growth markets.
8. The first prong of our innovation efforts is drive the adoption of advanced manufacturing technologies among our E&C industry. Advanced manufacturing technologies such as robotics, industrial internet-of-things, are changing the way products are created, supply chains are managed and value chains are defined globally. In Singapore's context, advanced

manufacturing technologies will enable our companies to be more competitive by overcoming land, labour and carbon constraints as well as raising productivity. **By 2020, we aim to have 20 E&C plants, including all refineries and crackers, adopt advanced manufacturing technologies.** This will provide a strong foundation for our effort to be scaled to the rest of the industry.

9. The second prong is to focus on building capabilities such as applied research or novel platform strategies to accelerate innovation and shorten the go-to-market process. This will help our companies better tailor our products and solutions to customers and capture growth in the region. To this end, the Economic Development Board (EDB) and A*STAR have embarked on a joint technology road mapping exercise to identify the technology needs of our companies, and invest in the relevant technologies and capabilities.

Singapore Will Enable Our Workforce to Meet the Industry's Evolving Needs

10. Talent remains at the heart of our strategies. We will continue to equip Singaporeans with the necessary skills to stay relevant and benefit from the growth opportunities.
11. **As part of the ITM, we have launched the Skills Framework for the E&C industry.** Developed by SkillsFuture Singapore (SSG), Workforce Singapore (WSG) and EDB with inputs from industry stakeholders and unions, the Skills Framework provides valuable information about career pathways, occupations and job roles for this industry. To support our

workers to be future-ready, the Skills Framework also highlights emerging skillsets in areas such as robotics and internet-of-things.

12. For students looking to join the E&C industry, SSG has launched four SkillsFuture Earn and Learn Programmes (ELP) for job roles such as process technicians and laboratory analysts. The ELP is a work-learn programme that provides fresh Polytechnic and ITE graduates opportunities to build on the skills and knowledge that they have acquired in school. Through the ELP, 91 graduates have been placed in 31 E&C companies. Another two ELPs catering for ITE graduates will be rolled out by 2018.
13. Mid-career workers who are interested to enter the E&C industry can also take advantage of the various Professional Conversion Programmes (PCPs) to be reskilled and placed into suitable job roles. Examples of these PCPs include the PCPs for Chemicals Manufacturing, Technical Sales Manager, and Associate Research for Consumer Chemicals.
14. Mr Raymond Ee is one of the beneficiaries from the PCPs. Raymond was previously working in the construction sector as a project coordinator. By participating in the PCP for Chemicals Manufacturing and undergoing on-the-job training with ExxonMobil, he has successfully made a career switch and joined ExxonMobil as an Operations Technician. Today, Raymond oversees the loading and unloading operations between the storage tanks and ships at ExxonMobil's refinery.

SCIC as a Key Partner for Industry Transformation

15. Partnership among the government, companies, trade associations and chambers, union and our workers is key to the implementation of ITM. I am encouraged that SCIC is playing an active role in supporting the development of our E&C industry. The Chemical Industry Manpower Advisory Committee (CHIMAC), which is co-chaired by SCIC and EDB, looks into present and future industry manpower issues such as labour supply, training and hiring practices. We look forward to working more closely with our partners in supporting the transformation of our E&C industry.

Conclusion

16. Singapore's ability to adapt and evolve to stay ahead is the bedrock of our success; being able to move nimbly to meet the shifting landscapes is what underpins this tiny country's determination to not simply survive but prosper.
17. The E&C industry is a key pillar of Singapore's economy, and we remain committed to positioning this industry well for the future through the ITM. With everyone playing their part, I am confident of the continued growth and success of our E&C industry.
18. Thank you.