

ANGVA2U Info 8/2018. 28th September 2018. (for ANGVA members only)

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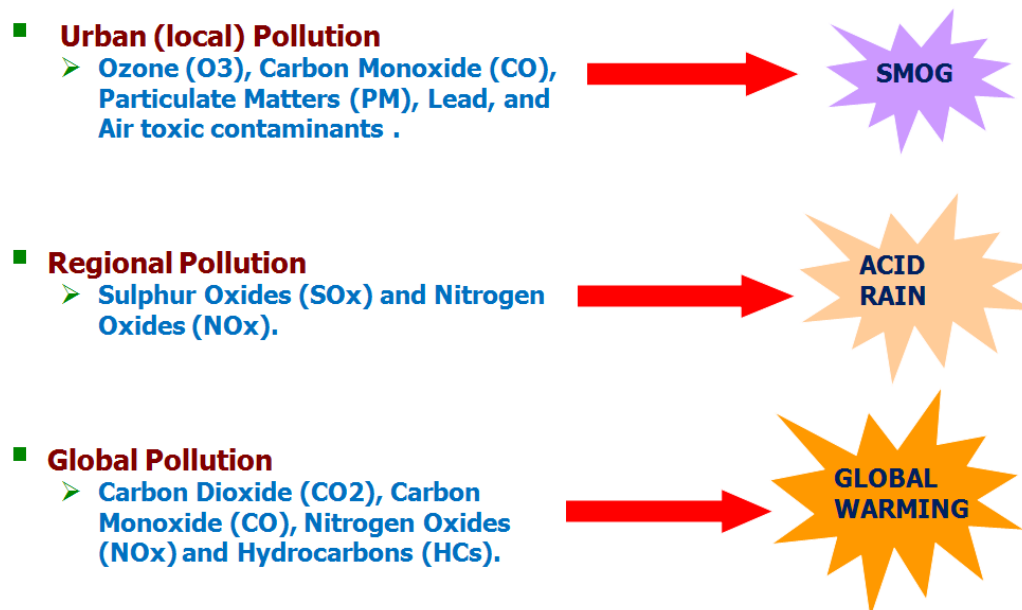
1.0 Natural Gas Vehicles and the Environment

Natural Gas burns cleaner than gasoline and diesel, thus there is significant benefits to be achieved through the use of natural gas as fuel for vehicles especially in urban areas. Natural Gas reduces all harmful emissions from vehicles as compared to gasoline and diesel. Many countries have develop, promote and expand the use of natural gas for their transport sector to mitigate the problem of air pollution besides reducing the heavy dependence of their transport sector on petroleum fuels.

The causes of air pollution are many and complex. In urban areas, vehicle exhaust emissions are identified as the major source of air pollution. Vehicle emissions can be reduced by establishing strict emissions standards and making sure that vehicle continues to meet these standards throughout their useful life. To meet these stricter emissions standards, more advance emission control devices have to be incorporated into the vehicle or another option is to use cleaner burning fuels such as Natural Gas either in the form of Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG).

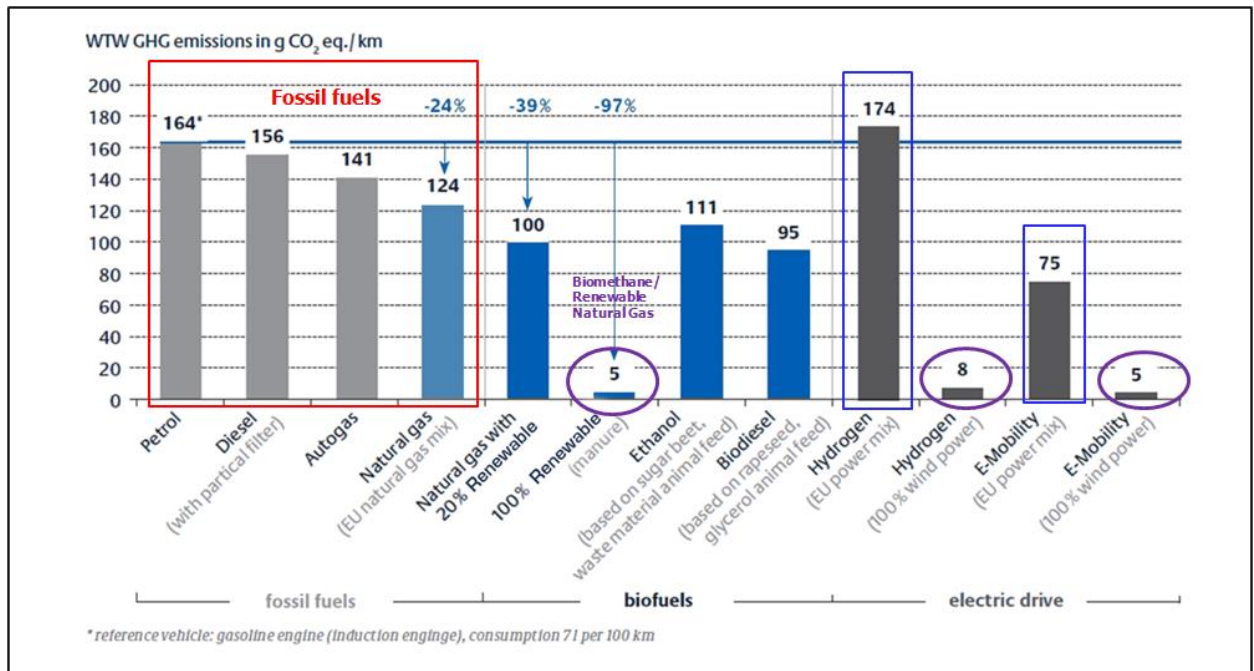
Vehicle emissions can affect the environment in three ways:

Fig.1: Effects of vehicle emissions on the environment



There is no doubt about the important role that NGV can play in reducing air pollution locally, regionally and globally. NGV produces substantially less harmful emissions as can be seen in the chart below:

Fig 2: Well-to-Wheel (WTW) GreenHouse Gas (GHG) Emissions of various fuels



Eventhough Natural Gas is still a fossil fuel, it is currently the cleanest commercially available fuel for the transport sector. The introduction of Renewable Natural Gas (also known as Biomethane) either in the form of BioCNG or BioLNG as fuel for the transport sector will provide opportunity for the NGV industry to be green and sustainable. Renewable Natural Gas is biogas that has been upgraded to similar composition and quality as fossil natural gas.

Renewable Natural Gas / Biomethane is commercially available and extensively promoted in Europe and North America. In the Asia Pacific region, commercial deployment of Renewable Natural Gas / Biomethane is still at an early stage. Countries in the region that have some programmes on Renewable Natural Gas for vehicles are: Japan, Korea, China, Thailand, India, and Malaysia.

Widespread use of electric vehicles and hydrogen fuel cell vehicles are still a long way to go, thus in the immediate and intermediate period, the use of natural gas vehicles offer the best solution for the transport sector to reduce its harmful exhaust emissions to mitigate urban air pollution (smog), regional air pollution (acid rain), and global air pollution (global warming). In the fight against global warming, scientists have warned that more concerted actions are needed now to reduce GHGs to keep global temperature rise below the 2 °C target, before it reach the point of no return.

2.0 Selected News

2.1 World 'nowhere near on track' to avoid warming beyond 1.5C target

Exclusive: Author of key UN climate report says limiting temperature rise would require enormous, immediate transformation in human activity. by **Oliver Milman** 27th September 2018.



*Avoiding a temperature increase of more than 1.5C will be 'extraordinarily challenging', says the report's author.
Photograph: Matt Brown/AP*

The world's governments are "nowhere near on track" to meet their commitment to avoid global warming of more than 1.5C above the pre-industrial period, according to an author of a key UN report that will outline the dangers of breaching this limit.

A massive, immediate transformation in the way the world's population generates energy, uses transportation and grows food will be required to limit the global temperature rise to 1.5C and the forthcoming analysis is set to lay bare how remote this possibility is.

"It's extraordinarily challenging to get to the 1.5C target and we are nowhere near on track to doing that," said Drew Shindell, a Duke University climate scientist and a co-author of the Intergovernmental Panel on Climate Change report, which will be [unveiled in South Korea next month](#).

"While it's technically possible, it's extremely improbable, absent a real sea change in the way we evaluate risk. We are nowhere near that."

In the 2015 Paris climate pact, international leaders [agreed](#) to curb the global temperature rise to 2C above the era prior to mass industrialization, with an aspiration to limit this to 1.5C. The world has already warmed by around 1C over the past century, fueling sea level rises, heatwaves, storms and the decline of vulnerable ecosystems such as coral reefs.

Shindell would not share exact details of the IPCC report, but he said that the more ambitious 1.5C goal would require a precipitous drop in greenhouse emissions triggered by a rapid phaseout of fossil fuels, particularly coal, mass deployment of solar and wind energy and the eradication of emissions from cars, trucks and airplanes.

Even then, emerging technology will be required on a global scale to capture emissions at the source and bury them in the ground or remove carbon directly from the air.

"The penetration rate of new technology historically takes a long time," Shindell said. "It's not simple to change these things. There aren't good examples in history of such rapid, far-reaching transitions."

The fading prospect of keeping the global temperature rise to below 1.5C has provoked alarm among leaders of low-lying island nations that risk being inundated should the world warm beyond this point.

"Every country must increase the ambition of their existing targets," said Hilda Heine, president of the Marshall Islands, which announced a plan to reach net zero emissions by 2050 at the UN general assembly in New York this week. "If we can do it, so can everyone else."

The UN general assembly has again pitted the world's countries against Donald Trump when it comes to climate change, with the US president using his keynote speech to praise "clean coal".

Trump has vowed to exit the Paris accord, a stance that Emmanuel Macron, the French president, told the UN should be met with consequences such as a refusal by countries to enter into trade deals with the US.

“It’s a lot more difficult without the US as a leader in climate change negotiations,” Ola Elvestuen, Norway’s environment minister, told the Guardian. “We have to find solutions even though the US isn’t there.”

Elvestuen said countries, including Norway, which is one of the world’s largest oil and gas producers, need to transition away from fossil fuels, embrace electric cars and halt deforestation.

He admitted these changes had not happened quickly enough since the Paris deal. Last year, global greenhouse gas emissions rose slightly again after a short period of stasis.

“We are moving way too slowly,” Elvestuen said. “We have to do more of everything, faster. We need to deliver on policies at every level. Governments normally move slowly but we don’t have the time.”

“The 1.5C target is difficult, but it’s possible. The next four to 12 years are crucial ones, where we will set the path to how the world will develop in the decades ahead. The responsibility in doing this is impossible to overestimate. To reach the goals of the Paris agreement we need large structural changes.”

A difference of 0.5C in temperature may appear small but the IPCC report, which is a summary of leading climate science, is expected to warn there will be major impacts if warming reaches 2C.

“Even 1.5C is no picnic, really,” said Dr Tabea Lissner, head of adaptation and vulnerability at [Climate Analytics](#).

Lissner said a world beyond 1.5C warming meant the Arctic would be ice-free in summer, around half of land-based creatures would be severely affected and deadly heatwaves would become far more common. “0.5C makes quite a big difference,” she said.

Source: www.theguardian.com/environment/2018/sep/26/global-warming-climate-change-targets-un-report

2.2 Four years is all we have *17th September 2018.*

by PRATCH RUJIVANAROM. THE NATION

Grim reports on climate change say act now or be ready for catastrophe.

HUMANITY HAS only about four years left to stabilise global temperatures and save the world from environmental catastrophe stemming from extreme climate change, scientists have warned.

After negotiations at this month’s Bangkok Climate Change Conference ended in failure, the world’s leading scientific agencies, the United Nations and environmentalists are urging governments to show greater determination.

They want to see more ambitious action to rapidly de-carbonise the global economy and stabilise the temperature at the safest possible level of 1.5 degrees Celsius.

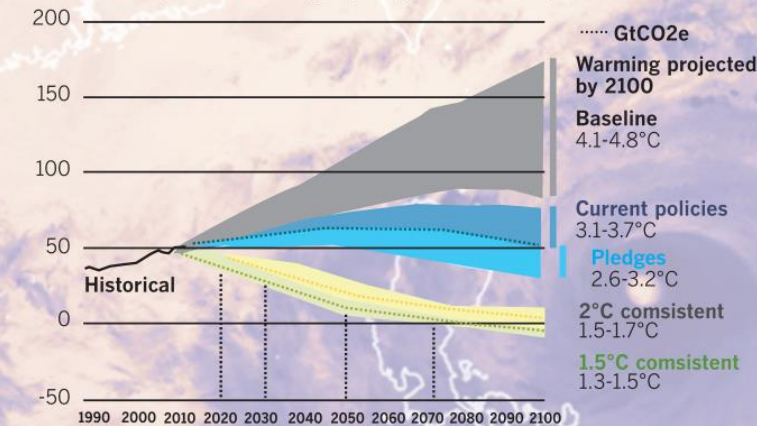
They also identified Southeast Asia as a strategic area in the mission to reverse climate change, calling the region not only a major front in the battle against the spreading use of fossil fuels but also one of the locales most vulnerable to the detrimental impacts.

WHERE IT'S STALLED

Statistics reveal the difficulty ahead in limiting the global temperature rise to 1.5 degrees Celsius, on which climate experts say the future of the planet depends, based on the international cooperation envisioned in the Paris Agreement.

2100 Warming Projections and milestones ahead

Emission and expected warming on pledges and current policies



In order to achieve Paris Agreement's goal we need to lower greenhouse gas (GHG) emission to these rates.

Projected GHG emission rate in the "business as usual" scenario:

by 2020 57 GtCO₂e

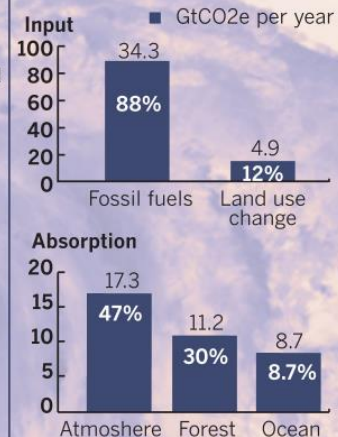
by 2030 59 GtCO₂e

GHG emission in 2016: 39.9 GtCO₂e

38 32 95 lower below 2010 level

Complete decarbonisation

The carbon cycle and carbon budget during 2007 to 2016



Latest Climate Action Tracker assessment of nationally determined contributions:

"Critically insufficient" – United States, Russia, Turkey, Ukraine, Saudi Arabia

"Highly insufficient" – Canada, China, South Korea, Japan, Indonesia, South Africa, Chile, Argentina

"Insufficient" – Brazil, Peru, Mexico, Britain, European Union, Kazakhstan, Australia, New Zealand, UAE

"Two-degree compatible" – Bhutan, Costa Rica, Ethiopia, India, Philippines

"1.5-degree compatible" – Morocco, Gambia

Role models: none

Sources: Carbon Dioxide Information Analysis Center, Climate Action Tracker

NATION GRAPHICS

An analysis by an organisation called Carbon Brief on "carbon budgets" in 2016 sounded the alarm. If the world continues to release greenhouse gases (GHG) at the current rate, the carbon budget for maintaining the global temperature rise at 1.5 degrees would expire in "four years and one month".

Another group, Climate Action Tracker (CAT), in May assessed different countries' levels of commitment to climate-change mitigation as set out in the Paris Agreement. It revealed that the current pledged commitments were too weak to achieve the agreement's ambitious aims. It said many rich nations were also unable to honour their pledges, known as Nationally Determined Contributions (NDCs).

Even if all countries reduced GHG as projected in their NDCs, total global emissions would still reach the equivalent of 52-55 gigatonnes of carbon dioxide (GtCO₂e) in 2025 and 54-58 in 2030. Those figures are significantly higher than the emission goals established in Paris. To hold at 1.5 degrees, GHG emissions would have to be cut to 38 GtCO₂e by 2025 and to 32 by 2030.

UN Environment in its latest "emissions gap" report said that, unless the gap is closed by 2030, it will be extremely hard to reach the goal of holding global warming to well below 2 degrees.

The emissions gap refers to the GHG reduction shortfall compared to goals. CAT estimates that, in order to hold at 1.5 degrees, the gap would have to be around 17 GtCO₂e in 2025.

“Despite political, industrial and civic leaders strengthening and implementing the Paris Agreement, current state pledges cover no more than a third of the emission reductions needed, creating an ever-growing dangerous gap,” UN Environment chief Erik Solheim warned.

CAT assessments of NDCs for the European Union and 30 countries elsewhere showed the commitments of wealthy developed countries were “very weak and highly insufficient” to reach the Paris climate-stabilisation goal. Developing countries, on the other hand, were pursuing much more ambitious goals for cutting GHG and more pronounced climate-change mitigation commitments.

The findings suggest that the richer countries are “losing interest” in the Paris Agreement, even though they emit the most greenhouse gases

Long-term mitigation strategies

Solheim and CAT emphasised that every signatory to the agreement had to urgently scale up both policies and targets and to develop long-term mitigation strategies to stay on target for holding the temperature rise to 1.5 degrees.



Environmental activists and supporters take part in a demonstration in front of the United Nations building, in Bangkok on September 8, 2018. // AFP

PHOTO

“If we cannot strengthen our mitigation commitments in time, we will miss the final opportunity to prevent the global temperature from rising beyond 2 degrees and fail to avoid catastrophic outcomes of extreme climate change,” Solheim said.

Some hope can be found in a Climate Analytics report on limiting the temperature rise. It said the 1.5-degree goal was achievable by transitioning towards becoming low-carbon societies and ceasing the use of fossil fuels by 2050.

“Climate stabilisation is an important technical and political challenge,” the report said. “Many solutions and technologies represent many wedges to achieve the required emission reduction. No further delay in mitigation action is allowed, as the global emissions must decline rapidly and steadily after 2020.”

Greenpeace International executive director Jennifer Morgan, speaking at the Global Climate Action Summit in San Francisco on Friday, urged all nations to get more ambitious, chart clear paths to net-zero emissions by mid-century and empower “bottom-up” climate action.

“We have arrived at the moment of truth,” she said. “Climate change is here and it’s big and dangerous. Super-typhoon Mangkhut and Hurricane Florence are the latest grim examples of the dangers the changing climate might pose.

“We’ve lost precious time through denial and insufficient action from political leaders and companies and we’re now running up against the clock. We’re at the 11th hour and in urgent need for climate leadership and action before it truly is too late.”

Many studies and analyses concur that mitigation efforts in Southeast Asia will be much harder. The International Energy Agency (IEA) expects the region to keep up “very high demand” for fossil fuels because they’re the cheapest sources of energy.

According to the IEA report “Southeast Asia Energy Outlook”, energy demand here will grow by two-thirds by 2040. Even though all 10 countries in the region signed the Paris accord, the IEA expects coal consumption to continue to rise, making Southeast Asia the fossil-fuel industry’s last stronghold on Earth.

The IEA said strong growth in consumption would lead to a rise in GHG emissions from the energy sector of more than 70 per cent. That was in clear contravention of the mitigation aims of the Paris Agreement, it said, and would make the region all the more vulnerable to severe natural disasters.

The IEA said energy-use transition and de-carbonisation remained possible in the region, but policymakers clearly faced tough decisions.

Somporn Chuai-Aree, a science and technology lecturer at Prince of Songkla University, noted that the fossil-fuels industry has strong influence in the region and over governments, so he was pessimistic that Southeast Asia and especially Thailand could move away from carbon by 2050.

“In my opinion, successful energy transformation requires governments that cherish the interests of their citizens more than big fossil-fuels conglomerates,” Somporn said.

Source: www.nationmultimedia.com/detail/national/30354597

3.0 Events

- 3.1** ANGVA’s Vice President, William Aw will be representing ANGVA at the 8th St Petersburg International Gas Forum (SPIGF), 2 – 5th October 2018, Expoforum Convention and Exhibition Center, St. Petersburg, Russia. More info on this event at www.gas-forum.ru
- 3.2** ANGVA’s Executive Director, Lee Giok Seng will be representing ANGVA at the 11th Environmentally Sustainable Transport Regional Forum (11th EST) organized by United Nations Centre for Regional Development (UNCRD), 2 – 5th October 2018, Shangri-la Hotel, Ulaanbaatar, Mongolia. More info on this event at www.uncrd.or.jp
- 3.3** The 12th Natural Gas Vehicles & Infrastructure Indonesia Forum and Exhibition which is scheduled to take place in Jakarta, Indonesia, 8 – 10th Oct 2018, has been moved to next year to coincide with the plan of ANGVA to hold ANGVA 2019 in Jakarta, Indonesia next year. Announcement on ANGVA 2019 will be released soon.

4.0 End

Any comments and suggestions on the topics and information covered and to be covered in future are most welcome. Please send your comments and suggestions to Lee Giok Seng at email: leegs@angva.org