

# ANGVA2U Info 08/2019. 25<sup>th</sup> July 2019. (for ANGVA members only)

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## 1.0 The Role of Gas in Today’s Energy Transitions – IEA Report, July 2019

This report was based on the study by the International Energy Agency (IEA)’s World Energy Outlook team. The report stated that natural gas is one of the mainstays of global energy: worldwide consumption is rising rapidly and in 2018 gas accounted for almost half of the growth in total global energy demand. Gas plays many different roles in the energy sector and, where it replaces more polluting fuels it also reduces air pollution and limits emissions of carbon dioxide.

The study finds that switching to natural gas has already helped to limit the rise in global emissions since 2010, alongside the deployment of renewables, nuclear energy, and improvements in energy efficiency. More significantly, it finds that existing infrastructure in the power sector offers an immediate opportunity for major additional emissions reductions, if economic and policy conditions are right. This would be enough to turn the rising emissions trend around and get global emissions back down to where they were six years ago.

The Role of Gas in Today’s Energy Transitions



The study show that the contribution of gas to energy transitions varies widely across the region, between sectors and over time. They also highlight that gas cannot do it all, it can bring environmental benefits, but it remains a source of emissions in its own right and new gas infrastructure can lock in these emissions for the future. The gas industry near term priority is to minimize emissions all along the chain from gas production to consumption, with a particular focus on methane emissions. For the longer term, the industry needs to explore seriously the possibility to reduce further the emissions intensity of gas supply via biomethane\* or low-emissions hydrogen (extracted from IEA Report “The Role of Gas in Today’s Energy Transitions, July 2019. [www.iea.org](http://www.iea.org)) (\*also known as Renewable Natural Gas or BioCNG)

## 2.0 Selected News / Articles

### 2.1 India

#### Thrust on CNG leads to 50% growth in fuel’s demand

*Consumption of petrol and diesel, which have much larger market, rose 48% and 20%.*

By Sanjeev Choudhary. ET Bureau. July 24, 2019



NEW DELHI: Demand for [compressed natural gas \(CNG\)](#) has expanded by 50% in four years due to a combination of the Modi government’s thrust on popularising the less-polluting fuel, expansion of filling stations, lower gas prices and multiple CNG vehicle launches by automakers.

CNG sales rose to 3,076 thousand metric tonnes in 2018-19 from 2,037 thousand metric tonnes in 2014-15. Consumption of petrol and diesel, which have much larger market, rose 48% and 20%, respectively, in the same period.

“The government’s strong commitment to the natural gas sector has been the biggest demand driver. This has helped expand fuel supply and boosted automakers’ confidence in CNG vehicles,” said ES Ranganathan, managing director of Indraprastha Gas Ltd (IGL), a gas utility active in Delhi and its suburbs. “Automakers have launched CNG variants of several passenger and commercial models in the past few years, increasing vehicle sales and fuel demand.”

Ford, [Honda](#), Mahindra and Eicher have in recent years launched CNG variants of passenger cars and commercial trucks joining Maruti and Hyundai, which had mostly dominated the factory-fitted CNG vehicles category for years. As automakers spent more resources on manufacturing CNG vehicles, they also pushed their dealerships to drive up sales. The share of factory-fitted CNG vehicles has rapidly expanded in the past few years. Previously, vehicle owners would mostly retrofit their cars after their warranties had expired.

Unavailability of land for setting up filling stations had hampered expansion for years but oil minister [Dharmendra Pradhan](#) prompted state-run oil companies to provide space for CNG dispensers at their petrol pumps, helping boost the number of CNG stations by 71% in 4 years to 1,730.

**Source:** <https://energy.economictimes.indiatimes.com/news/oil-and-gas/thrust-on-cng-leads-to-50-growth-in-fuels-demand/70355692>

## 2.2 India

### **India needs to double refining capacity despite electric vehicles push: Pradhan**

*The country’s energy consumption is projected to grow at 4.2 percent per annum up to 2035*  
by Our Bureau. The hindubusinessline. July 19, 2019



*Dharmendra Pradhan, Petroleum Minister Shahbaz Khan*

India will have to nearly double its existing hydrocarbon refining capacity to meet the fuel demand despite a rapid push towards electric vehicles according to Minister for Petroleum and Natural Gas, Dharmendra Pradhan.

Speaking at the Council on Energy, Environment and Water Energy Horizons 2019, Pradhan said, “In India, we have current domestic refining capacity of 250 MMTPA. Recent studies have pointed out that even with an aggressive EV roll out plan, India would need 450 MMTPA of refining capacity.”

“Unless we pay attention to this demand growth, in another few years, we will have to start importing refined products along with crude. And anyone investing in the refinery would need reasonable assurance that there will be demand for the economic life of the investment,” he added.

Pradhan said that India’s energy consumption is projected to grow at 4.2 percent per annum up to 2035, faster than all major economies of the world.

“While India’s energy demand increased to 754 million tonnes of oil equivalent (Mtoe) in 2017, the per capita consumption of energy is still much lower than the world average.

India's share of total global primary energy demand is set to roughly double to about 11 per cent by 2040, driven by strong economic development," he said.

**Source:** <https://www.thehindubusinessline.com/economy/india-need-to-double-refining-capacity-despite-electric-vehicles-push-pradhan/article28577414.ece>

## 2.3 Iran

### Tehran bus fleet equipped with 500 CNG tanks

GNV magazine.com July 16, 2019



Some 500 compressed natural gas (CNG) tanks have been provided to the buses running in the Iranian capital's transport fleet replacing the old ones, head of public transport and urban traffic affairs of the Municipalities and Village Administrations Organization, Marzieh Hesari, has announced.

"There are 3,000 buses running on CNG in the country's public transport fleet, some of which are old and damaged," she said.

The CNG price has risen by 10 percent since the beginning of last month in order to be earmarked for rehabilitation of bus fleet and replacing the old CNG tanks, she noted.

She went on to explain that the Ministry of Interior proposed a plan in this regard, which was approved by the cabinet of ministers in March 2019. The plan was first piloted in Tehran due to having the biggest bus transport fleet in the country, she further highlighted, adding, also there are more clunker buses in the capital and there is a need for higher supervision and controlling of the results.

She also expressed hope that the plan would be soon implemented in all provinces across the country, in case the budget is provided. The implementation of such plans will have a major role in reducing air pollution in metropolitan areas and will soon lead to an increase in the share of clean fuels in the country, she concluded.

**Source:** <http://www.gnvmagazine.com/en/flota-de-autobuses-de-teheran-equipada-con-500-tanques-de-gnc-2/>

## 2.4 Thailand

### Gas caps from next month

By Yuthana Praiswan. bangkokpost.com. Published: 23 July 2019.

The Energy Ministry plans to cap the price of cooking gas at 325.5 baht per 15-kilogramme cylinder and the price of natural gas for vehicles (NGV) at 13.62 baht per kg for public transport in August and September, say Minister Sontirat Sontijirawong. The announcement also said that PTT, the national oil and gas conglomerate, will pay for the subsidies.

"The capped prices for cooking gas and NGV are an urgent task for the ministry," said Mr Sontirat after a discussion with Kulit Sombatsiri, permanent secretary of the ministry, and other officials. Mr Sontirat said the measures will be effective for two months to reduce people's living expenses, including food hawkers and vendors who use cooking gas. For public transport, taxis, buses, minibuses and vans are eligible for the capped NGV price.

PTT has allocated 30 million baht for subsidies to help 200,000 hawkers and vendors. The capped price is 37.5 baht cheaper than the market price of 363 baht per 15kg cylinder. Hawkers and vendors can buy a

maximum of 150kg per month. This measure brings prices to the same level as those for the state welfare smartcard, but cardholders have a maximum purchase amount of 75kg per month. PTT earmarked 1.936 billion baht for the LPG direct subsidy from February 2015 to June 2019.

On April 19 the ministry decided to gradually increase the NGV price by a total of three baht per kg from a capped price of 10.62 baht previously to 13.62 baht. The decision increases the price by one baht per kg every four months -- on Sept 16 this year and Jan 16 next year. The price of NGV will reach 15.62 baht per kg in mid-January.

After the latest measure, the one-baht increase in September will be put off. Mr Sontirat said these measures for managing energy prices are appropriate given the economy's standing. Low-income earners and small companies have to be prioritised groups for support measures. "When low-income people cannot purchase electricity and fuel, the ministry has a duty to improve accessibility," he said.

The energy sector is central to the cost of living and business operations, so the ministry should intervene where there are high energy costs, said Mr Sontirat. The Energy Ministry will have a mid-term plan to promote consumption of biodiesel B10 and B20 to address the surplus of crude palm oil.

**Source:** <https://www.bangkokpost.com/business/1717059/gas-caps-from-next-month>

## 2.5 Finland

### **Wärtsilä forms Biogas Solutions unit to speed up clean fuels adoption**

Bioenergy International. Technology & Suppliers. Published: July 5, 2019.



Finland-headed oil, gas, marine, and energy technology major Wärtsilä Corporation has strengthened its commitment to environmental sustainability with the formation of Wärtsilä Biogas Solutions. Wärtsilä Puregas Solutions, a biogas upgrading technology, is merged with Wärtsilä's biogas liquefaction team, a unit with expert capabilities in liquefying upgraded biogas for end-users. Wärtsilä Biogas Solutions will be able to offer customers a one-stop-shop service for advanced biofuel production.

*Wärtsilä has provided the turnkey installation for the world's largest bioLNG facility. Wärtsilä Biogas Solutions combines biogas upgrading with liquefaction to offer a full service for advanced biofuel production (photo courtesy Biokraft).*

According to Wärtsilä, the market for advanced biofuels is growing in line with efforts regarding the reduction of fossil fuels. The European Union (EU), for example, under its RED II directive, has directed that by 2030, member states must require fuel suppliers to supply a minimum of 14 percent of fuel consumption in road and rail transportation from renewable sources.

Additionally, in both Europe and the United States (US), efforts are being made to decarbonise the natural gas grid. Wärtsilä's biogas technology supports this trend by removing carbon from the waste cycle, thereby lowering greenhouse gas (GHG) effects and reducing the level of carbon intensity. Furthermore, fossil driven natural gas grids may see an expansion towards transporting bio-related gases, such as biomethane or even synthetic methane, in the near future.

*Wärtsilä Biogas Solutions offers products for biogas upgrading to biomethane and the liquefaction of biomethane into bioLNG. Currently, our market share in this field is almost 60 percent, and we expect this to continue to grow as we further develop our capabilities, said Arne Jakobsen, General Manager, Wärtsilä Biogas Solutions.*

## Continued growth in bioLNG

Wärtsilä has earlier provided the turnkey installation for the world's largest bioLNG facility located in Skogn, Norway and will, by the end of the year, deliver two more bioLNG plants to customers in Scandinavia. Interest from both the European and North American markets is high, and Wärtsilä anticipates continued strong growth in this sector.

Wärtsilä's biogas upgrading plants utilise its in-house Puregas CA technology, a process that recovers more than 99.9 percent of the biomethane present in raw biogas. The process separates the carbon dioxide (CO<sub>2</sub>) from the biogas through chemical adsorption. The process is highly tolerant of variations in the raw gas composition resulting from changes in the feedstock.

The benefits of Wärtsilä's in-house developments and offering are considerable. They include the ability to deliver turnkey solutions, easy integration of all systems, a single point of contact throughout the project lifetime, fast delivery time, and full technical and service support.

Wärtsilä Biogas Solutions supports the company's vision for a 100 percent renewables future. The energy sector is undergoing a transformation towards the integration of increasing levels of power from renewable sources, and Wärtsilä's development activities are focused on providing flexible solutions that speed and enable this transformation.

Source: <https://bioenergyinternational.com/technology-suppliers/30749>

## 2.6 Finland

### Electric and biogas buses roll into Finnish cities

*Finnish cities are gradually moving towards fossil-fuel-free transport solutions with new investment.*  
News. Published: July 10, 2019.



Image: Jarkko Riikonen / Yle

Buses running on biogas and electricity are slowly becoming a more common sight in Finland, as transport companies and municipalities invest in greener options.

The central city of Jyväskylä took its first biogas bus into use this week and three more coaches will join it on the roads there in the autumn.

The transport company Mennään Bussilla won a tender competition to supply the biogas buses for eight years to the city after local decision-makers prioritized fossil-fuel-free alternatives. The buses draw on the city's own Mustankorkea biogas production plant. Depending on how it is equipped, investment in one biogas bus comes at price of around 250,000 euros.

### Just the beginning

In the western coastal city of [Vaasa, biogas buses](#) have been doing the rounds since 2017. Since this time, the cities of Oulu and Lappeenranta have also introduced the renewable energy-powered option.

**Ilkka Korpela**, sales representative for the Swedish truck and bus maker Scania in Finland, says that the biogas bus boom in Finland is just taking off.

He says Scania production facilities in Sweden and Poland have manufactured about 300 biogas buses in the last year, most of which have been sold to markets in Sweden, Norway and central Europe. Sweden already has some two thousand biogas buses in operation.



A new European Union directive enacted in June will push environmentally sustainable public investment decisions in the coming years. Scheduled to come into effect in 2021, it is already causing municipalities to consider investing in fossil-fuel-free options when arranging tenders for future services.

### **Helsinki goes all in on electric**

In the capital city of Helsinki, the Helsinki Regional Transport Authority (HSL) plans to introduce new electric buses to its fleet in the autumn. It has set a goal to make one out of every three buses serving the metropolitan area to be electric by the year 2025. This works out to be a major investment as well, as the network has a total of over 1,500 vehicles in operation.

The Lahti-based electric vehicle developer Linkker has already rented several buses to HSL for test use.

Electric buses are even more expensive than their biogas alternatives, costing 400,000 euros each on average – or the cost of two diesel-run equivalent buses. Use of the electric buses is considerably cheaper, however, says HSL's division manager **Ilmari Mäkinen**.

Diesel buses last between 15 and 20 years in everyday use. Because electric and biogas buses are still relatively new and still developing, it is impossible to estimate their user life ahead of time. The suppliers of both have promised that they will last at least 10 to 15 years.

**Source:** [https://yle.fi/uutiset/osasto/news/electric\\_and\\_biogas\\_buses\\_roll\\_into\\_finnish\\_cities/10871654](https://yle.fi/uutiset/osasto/news/electric_and_biogas_buses_roll_into_finnish_cities/10871654)

### **3.0 ANGVA related events**

- i. LNG Supply, Storage and Transportation South Asia Forum 2019. Dhaka Bangladesh. 5<sup>th</sup> – 7<sup>th</sup> August 2019. This event is organized by All Events Group AEG), Singapore and supported by ANGVA. More information on this event at: [http://www.lng-world.com/lng\\_southasia2019/](http://www.lng-world.com/lng_southasia2019/)
- ii. Biogas Upgrading and CBG Roundtable 2019. Chiangmai, Thailand. 14<sup>th</sup> – 15<sup>th</sup> August 2019. This event is organized by International Clean Energy and Sustainability (ICESN), Singapore and supported by ANGVA. More information on this event at: <http://www.icesn.com/thai2019/assets/BiogasThailand2019.pdf>
- iii. 9<sup>th</sup> Annual LNG Transport, Handling and Storage 2019. Padma Resort, Bali, Indonesia. 10<sup>th</sup> – 13<sup>th</sup> September 2019. This event is organized by All Events Group (AEG), Singapore and supported by ANGVA. More information on this event at: [http://www.lng-world.com/lng\\_bali2019/](http://www.lng-world.com/lng_bali2019/)
- iv. ANGVA 2019, The 8<sup>th</sup> ANGVA International Biennial Conference & Exhibition. Balai Kartini Exhibition & Convention Center, Jakarta, Indonesia. 25<sup>th</sup> – 27<sup>th</sup> Nov 2019. Hosted by ANGVA and Indonesian CNG Association (APCNGI). ANGVA 2019 will be co-located with the Asia Pacific Biogas Forum 2019 and Electric and Fuel Cell Vehicles Forum 2019. For more information please contact [angva@angva.org](mailto:angva@angva.org) or [aznita@angva.org](mailto:aznita@angva.org) or visit website [www.angva2019.com](http://www.angva2019.com)

### **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](mailto:leegs@angva.org)