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Sanraksha

Quarterly Newsletter

Sri Lanka
Sustainable Energy Authority

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FUEL CRISIS

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Sri Lanka Sustainable Energy Authority

Guidance

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இலங்கை நிலைபெறுதகு சக்தி அதிகாரசபை
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Content Summary

Editorial

To Face the Energy Crisis!

Looking at the history of global energy crises, it is apparent that our country was not affected by the first oil crisis. However, the second oil crisis, the global oil crisis of 1979-80, had some impact on our country.

This was due to the rapid growth in the industrial sector as the Government that came to power in 1977 changed the existing economic system and introduced an open economy to the country. This oil crisis, which occurred within a year or two of the introduction of new economic reforms, Resulted in the increas of energy costs of industries. This increased the cost of production, which led to an increase in the prices of exports and consumer goods.

To address this situation, the then Government established the Energy Conservation Fund in 1985 No. 02 of 1985 with the aim of addressing the energy crisis. Through this, efforts were made to motivate the public to consume electricity and fossil fuels efficiently.

When the third oil crisis spread throughout the world, it was felt by our country more than the previous energy crises. The existing conservation strategy alone was not sufficient to deal with it. Therefore, in addition to energy conservation, the Sustainable Energy Authority was established by Act No. 35 of 2007, with the powers to increase the production of electricity through renewable energy Sources using the renewable energy potential Available in the country.

Through this, apart from providing efficient equipment for energy conservation to the country and providing energy conservation knowledge to the public, the country's renewable energy sector developed rapidly. It has now been able to develop more than 500 MW through small hydropower plants and up to 2000 MW through solar power plants to meet the country's energy needs and is moving towards the goal of meeting 70% of the country's electricity needs by 2030 through renewable energy.

Oil Crisis

We have heard a lot about the "oil crises"; we have seen in the media how the people are suffering due to oil crises. In recent times, the people of this country also had the bitter experience of a fuel crisis. This was because Sri Lanka had to face an economic recession. Due to the fuel crisis, the people had to stand in queues for oil, buy oil on a quota (ration), severely restrict the use of fuel and cut down on the use of fuel powered vehicles to a great extent.

Thereafter, the generation of electricity from operational power plants using oil was also brought to a minimum level. Therefore, the people had to face difficulties due to power cuts. Such oil crises can affect any country at any time. What is discussed here is not about such oil crises that a particular country suddenly faces, but about oil crises that occur globally.

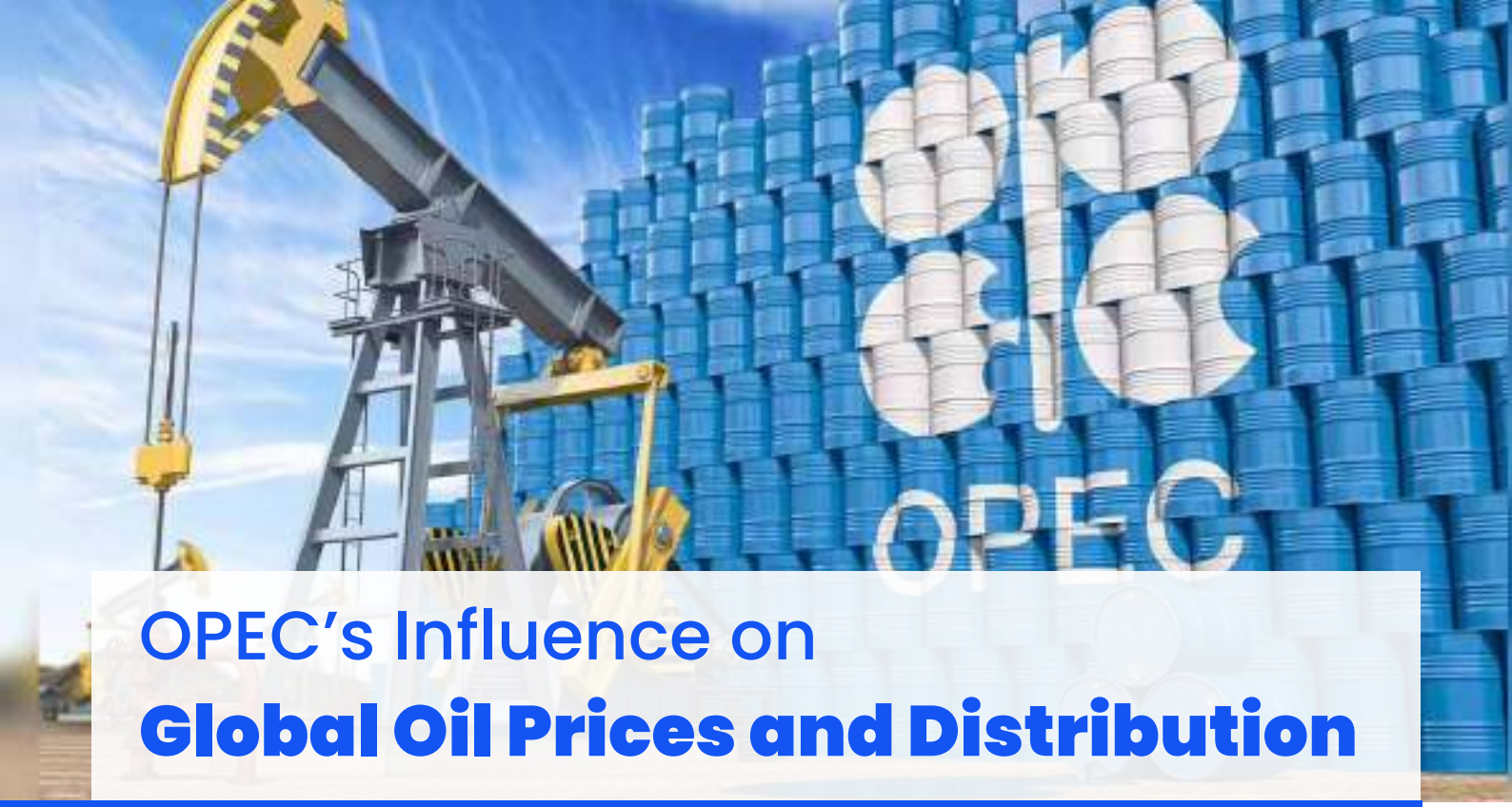
An oil crisis is a sudden and severe disruption in the global supply of oil. It also causes oil prices to rise dramatically. This can lead to economic and social problems. Economic growth may slow; inflation may increase; and in some cases, even economic recessions can happen.

Various factors can cause an oil crisis. World wars and wars between countries are the most prominent among them. Similarly, some decisions made by countries involved in oil production can also cause global fuel crises. When such a fuel crisis occurs, political animosity may even arise between countries.

Sometimes, it is only after a fuel crisis that authorities begin to think and act on their country's future energy use. Hardships caused by a fuel crisis may prompt authorities take steps to investigate the country's existing energy sources, plan the introduction of energy-efficient vehicles and devices and implement energy conservation.

There have been instances throughout history that oil crises have caused great inconvenience to many nations of the world. Among them, the most severe oil crises are those that occurred in 1973, 1979 and 2008. These oil crises adversely affected the lives of people living in various countries around the world. Due to such oil crises, people in some countries had to restrict their transportation activities as well as energy use. The Governments of those countries even brought in laws and regulations necessary for such restrictions. People in some countries also had to face food shortages due to the oil crisis. The economies of many countries collapsed. There were also cases where social and political problems arose within the State. It is not the powerful nations of the world that are most affected by the such oil crises, but the poor and developing nations.

Manjula Wijayaratne



OPEC's Influence on **Global Oil Prices and Distribution**

The Organization of the Petroleum Exporting Countries (OPEC) is a permanent intergovernmental organisation of oil-exporting nations that coordinates the petroleum policies of its members to stabilise the global oil markets.

OPEC is a powerful organisation in the world of petroleum. It collectively influences the global petroleum market. It also promotes cooperation between major oil-producing countries and oil-dependent countries with the aim of maximising profits from petroleum.

The background for the establishment of OPEC was created in 1949. Venezuela invited several countries to form an organisation of petroleum exporters. Venezuela's invitation went to Iran, Iraq, Kuwait and Saudi Arabia. Venezuela hoped that as the world recovered from the Second World War, more formal and closer communication and exchange of ideas could be established among the petroleum exporting countries.

It is important to understand the background to the global oil production, sales and export situation at that time. At that time, oil production had only just begun in several of the world's largest oil fields, located in the Middle East. It should also be noted that various institutions were active in the world regarding oil production, sales and export. Among them, the Interstate Oil Compact Commission (IOC) of the United States of America also stood out.

The reason the United States was able to establish such an institution in the field of petroleum was because it had become the world's largest producer and consumer of petroleum by that time. Meanwhile, the world oil market was dominated by a group of multinational companies known as the "Seven Sisters". After the collapse of the monopoly of the Standard Oil Company (SOC) of American businessman John D. Rockefeller, five oil companies affiliated with the Seven Sisters were headquartered in the United States. The political and economic power that had existed until then regarding the production and sale of petroleum provided the necessary impetus for the establishment of OPEC.

By the beginning of February 1959, the activity of multinational companies operating in the

fuel sector was at a high level. These companies were able to find new suppliers. At the same time, these companies worked to lower oil prices in Venezuela and the Middle East by about 10%. A few weeks later, the first Arab Petroleum Congress of the Arab League was held in Cairo, Egypt. The leaders attending the meeting paid special attention to the policies of the multinational oil companies to reduce fuel prices. As a result, Consultation Commission on Petroleum for Oil-Exporting Countries was established.

The multinational oil companies were required to submit their plans to the commission to change fuel prices. However, the oil-exporting countries' opposition to the policies of the fuel companies and Western countries regarding fuel continued to grow. The major oil companies unilaterally lowered prices twice.

The Baghdad Conference was held between September 10 and 14, 1960. Representatives from Iran, Iraq, Saudi Arabia, Kuwait and Venezuela discussed ways to raise fuel prices in their countries. Much of their attention was focused on how to respond to the unilateral actions of multinational oil companies. Together with Arab and non-Arab producers, Saudi Arabia formed the Organization of the Petroleum Exporting Countries (OPEC) to secure prices. This was despite strong opposition from the United States.

The representatives of the Middle Eastern countries suggested that the headquarters of OPEC should be established in Baghdad or Beirut. The representative of Venezuela opposed this. He thought that the headquarters of OPEC should be established in an impartial place. Accordingly, the headquarters of OPEC was established in Geneva, Switzerland. On September 1, 1965, the headquarters of OPEC was transferred to Vienna, Austria. This was due to the Swiss authorities' policy of refusing to extend diplomatic privileges. OPEC's headquarters are currently located in Vienna, Austria.

The founding and membership of OPEC

OPEC was founded in Baghdad, Iraq, on September 14, 1960. OPEC was registered with the United Nations on November 6, 1962. OPEC had five founding members. The founding members were Iran, Iraq, Saudi Arabia, Kuwait and Venezuela. Today, its membership has grown to twelve. Later, Algeria, the Republic of the Congo, Equatorial Guinea, Gabon, Libya, Nigeria and the United Arab Emirates joined. These countries are from Africa, Asia and South America. The population of OPEC member countries is said to be more than 484 million. Looking at the list of member countries, it is clear that no country from Europe, North America or Australia is a member of OPEC.

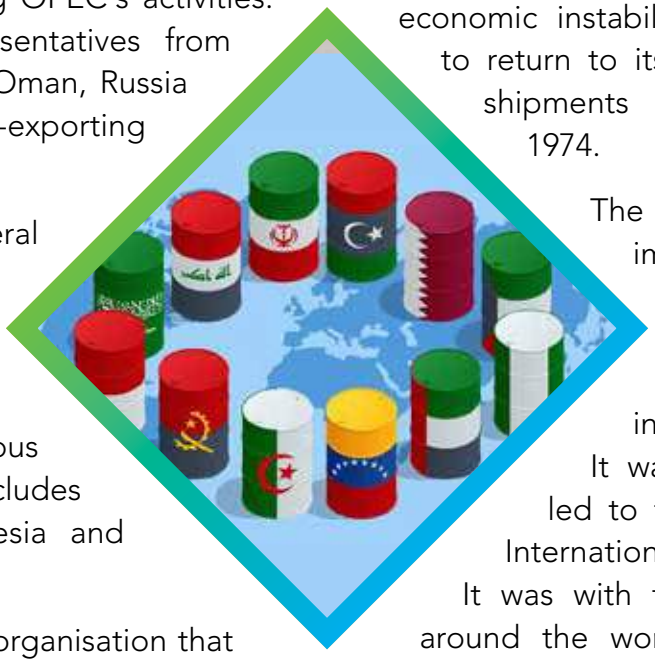
It is also stated that the twelve member countries contribute to producing more than 38% of the world's petroleum production. 81.5% of the world's discovered petroleum reserves are located in OPEC countries. Another highlight is that about 67.2% of these reserves are in the Middle Eastern group of OPEC countries. According to the 2022 reports, 38% of the world's petroleum production is in OPEC countries.

Petroleum is the main trade and export commodity of OPEC member countries. Moreover, the overall economic, social and political development of OPEC member countries depends on export revenues. The revenue from petroleum sales is used for industrial and economic development, as well as to provide suitable employment opportunities for the population of those countries and to provide facilities such as education, health, etc. Overall, it can be said that the revenue from petroleum sales directly affects the improvement and maintenance of the living standards of the people living in those countries.

Non-OPEC countries also participate in some of the OPEC's activities. This is at the invitation of OPEC. Such countries are known as OPEC Plus. The OPEC Plus list of countries includes Azerbaijan, Bahrain, Brunei, Brazil, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan

and Sudan. Meanwhile, Sudan submitted an application to the organisation in 2015 to become a member of OPEC. However, Sudan has not yet been granted OPEC membership.

Representatives from several non-OPEC states have been attending OPEC meetings since 1980s with the aim of observing OPEC's activities. Among them are representatives from Canada, Egypt, Norway, Oman, Russia and several other oil-exporting countries.



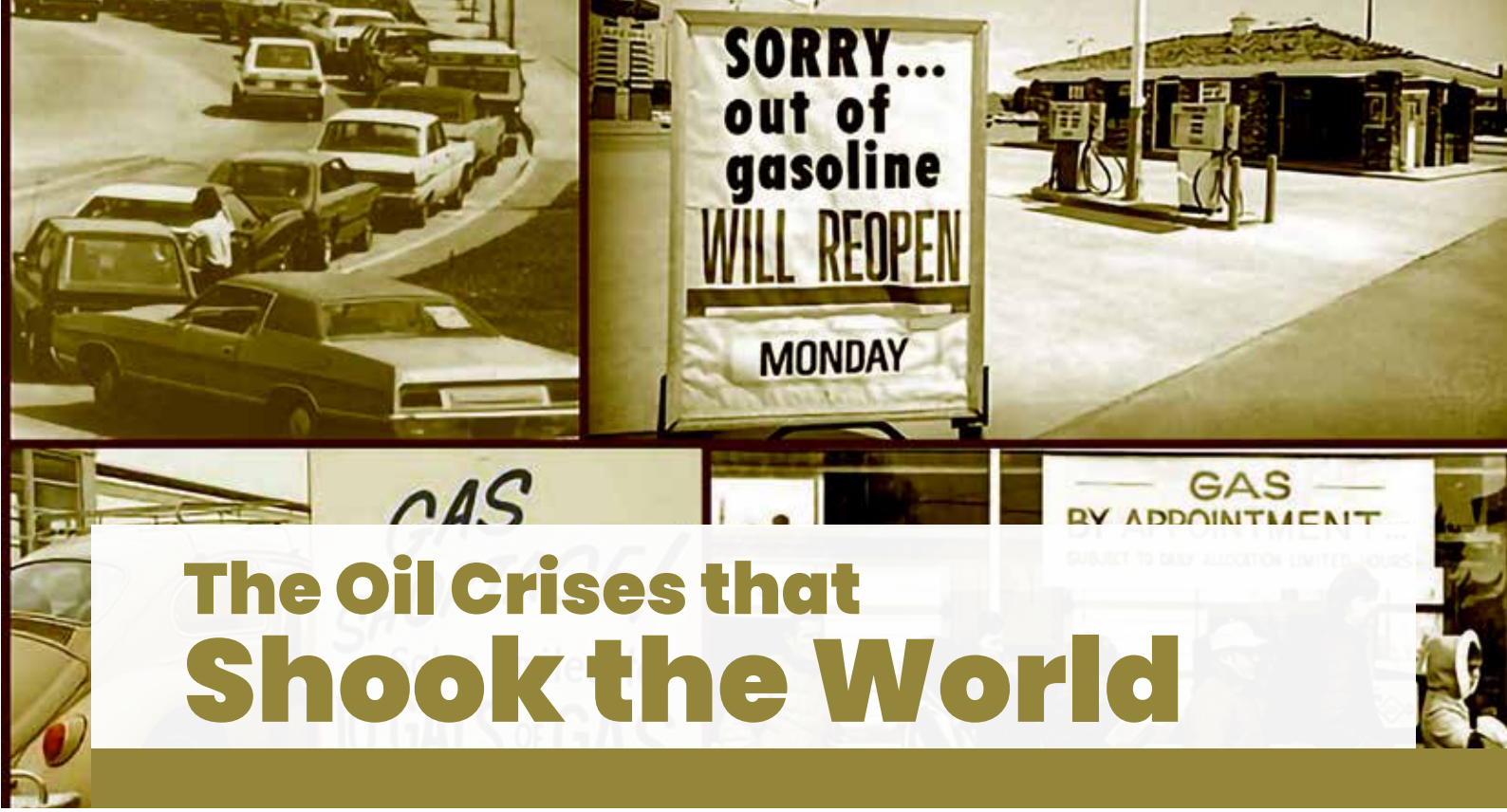
There are also several countries that were members of OPEC for a period of time and then withdrew from the organisation for various reasons. The list includes Angola, Ecuador, Indonesia and Qatar.

OPEC is an international organisation that can greatly influence the world. The world realised how powerful it is in 1973. In the early 1970s, OPEC faced a serious crisis. This was with the outbreak of the Yom Kippur War. By this time, another organisation called the Organization of Arab Petroleum Exporting Countries had also been formed. Arab countries involved in the oil production process were included in that organisation. Arab States that are members of OPEC also took part in it.

In 1973, the Yom Kippur War began between Israel and the Arab States. The Organisation of the Petroleum Exporting Countries began an oil supply cut against the United States and other industrialised countries that supported Israel. The Organization of the Petroleum Exporting Countries even took steps to stop sending oil ships to the United States and other industrialised countries that supported Israel. This caused oil prices to increase significantly. Reports indicate that the price of a barrel of crude oil increased from US$3 to US$12. As a result, energy rationing had to be started suddenly; US oil production fell; currency devaluation and a coal strike in the United Kingdom also emerged. Energy shortages arose in the United States and throughout Europe. Reports indicate that ordinary people were greatly affected. The world economy was heading towards a recession, with rising unemployment, soaring inflation and economic instability. The situation began to return to its previous state after oil shipments resumed in late March 1974.

The 1973-1974 oil embargo imposed by OPEC countries sent a red warning to the authorities of the United States and other industrialised countries. It was the energy crisis that led to the establishment of the International Energy Agency in 1974. It was with that crisis that countries around the world began to make the necessary policy decisions to stockpile their oil stocks in a way that would withstand months of supply disruptions. Many countries around the world took steps to reduce speed limits on highways, introduce energy-efficient vehicles and equipment, produce energy from sunlight and reduce the energy used to cool or heat buildings. This led many countries around the world to energy conservation programmes. This was due to the consequences of the oil crisis. Since then, there has been a growing trend towards coal, natural gas, nuclear power and other alternative energy sources. OPEC showed the world in the 1970s that oil could be used as a political and economic weapon even against the world's most powerful nations. So how devastating would OPEC's influence be for the developing and impoverished nations of the world?

Prabhashani Iddamalgoda



The Oil Crises that Shook the World

There have been times when oil prices have risen and crises have occurred due to oil shortages, affecting all nations of the world. The most talked about among them is the oil crisis that occurred in 1973.

1973 Oil Crisis

The 1973 oil crisis was primarily caused by the Yom Kippur War. This war took place from October 6 to 25, 1973. The conflict was between Israel and the Arab states. The Arab States were in an alliance, led by Egypt and Syria. Richard Nixon, who was the President of the United States at the time, informed the Congress that Israel needed $2.2 billion in aid. The request was approved by the Congress. This confirmed that the United States fully supported Israel. The Organization of Arab Petroleum Exporting Countries (OAPEC) issued a statement in October 1973, declaring a complete oil embargo against states supporting Israel. The Organization of Arab Petroleum Exporting Countries initially targeted Canada, Japan, the Netherlands, the United Kingdom and the United States. This target was later expanded to include Portugal, Rhodesia (now Zimbabwe) and South Africa.

The oil embargo, imposed in October 1973, was lifted in March 1974. However, oil prices rose by approximately three hundred percent. In other words, the price of a barrel of crude oil rose from US$3 to US$12. It was particularly notable that oil prices in the United States at that time were higher than the average global oil price.

The imposition of the oil embargo and the subsequent unexpected increase in oil prices had created a number of short-term and long-term crises in the global economic and political spheres. Even the United States, a powerful country in the world, had been adversely affected. There was a strong debate among its authorities regarding energy security. The American automobile industry and many other large-scale industries had problems. The oil embargo and the increase in prices did not affect European countries evenly. However, it must be said that it had adverse effects on all countries in Europe. The regional authorities devalued their country's currency. This pushed the country's economy into a crisis. The authorities of the United Kingdom, Germany, Italy, Switzerland and Norway took steps to severely restrict transportation. Air traffic, vehicle traffic and boat traffic in those countries were suspended

Countries that faced the oil crisis were also looking for ways to avoid being affected by such a crisis again. While buying oil from the Middle East region, some countries took steps to start buying oil from other countries of the world. Some other countries were seen taking steps to increase nuclear energy.

on Sundays. Coal miners in Britain went on strike for higher wages. Railway workers joined their strike, prolonging Britain's energy crisis. The Labour Party, which was elected in the 1974 General Election, further tightened laws to reduce energy consumption. It imposed a law requiring only one room in a house to be heated, even in winter. The Netherlands was also taking steps to tighten laws against those who used too much electricity. It enacted laws that would punish anyone who committed such an offense by sending them to prison.

When the oil embargo was imposed in 1973 and oil prices rose in 1974, about 90% of Japan's oil was imported from the Middle East. The country could only store enough oil for 55 days. Japan was facing its worst crisis since 1945. Considering the current situation, the Government issued an order to reduce the use of oil for industries and electricity consumption by about 10%. The Japanese authorities took steps to further increase these cuts. The oil crisis caused a significant drop in the country's economic growth rate. Its inflation rate rose to 9%. In this way, the oil crisis affected every country in the world very badly. India, South Vietnam and South Africa were among the countries that were affected by it.

Countries that faced the oil crisis were also looking for ways to avoid being affected by such a crisis again. While buying oil from the Middle East region, some countries took steps to start buying oil from other countries of the world. Some other countries were seen taking steps to increase nuclear energy. Japan was the most prominent country to use nuclear energy. The attention of various nations of the world was focused on energy conservation. Many countries took steps to accelerate experiments on the production of high-efficient devices and automobiles.

1979 Oil Crisis

In the 1970s, another important step was taken regarding petroleum. It was the transfer of petroleum production operations and related assets to the Governments of those countries. This step was taken with the aim of obtaining more revenue for the Governments of those countries. In such a background, the Iranian Revolution began in 1979. The Iranian Revolution was based on the need to overthrow the monarchy that existed in Iran until then. In the run-up to the revolution, a wave of strikes broke out across Iran. Among them, the strike of oil idustry workers that occurred in late 1978 attracted the most attention. More than 37,000 oil industry workers went on strike. Due to this strike, crude oil production decreased from 6 million barrels to 1.5 million barrels a day. Global oil supply decreased. At the same time, an oil crisis arose again. The Iranian Government sought short-term solutions to the problem by assigning the Navy to oil production. In this context, the price of a barrel of oil began to

increase steadily. Within about twelve months, the price of a barrel of crude oil increased to US$39.50. The increase in prices led to an oil shortage. It was, of course, similar to the 1973 oil crisis.

Meanwhile, in 1980, the Iran-Iraq War began. Iran's oil production fell sharply due to the war. Moreover, Iraq's oil production also began to be disrupted by the war. As a result, Iraq's oil production also decreased significantly. Reports state that the Iran-Iraq War caused a further 7% drop in world oil production. The decline in oil production in these two countries led to a global economic recession. Oil prices did not reach their previous prices (pre-crisis prices) until the mid-1980s.

The 1979 oil crisis was a global disaster and people around the world were reminded of the bitter experience of the 1973 oil crisis. Car owners in the United States were terrified. They rushed to gas stations to buy more fuel. As a result, oil and gas sales increased unnecessarily and lines of vehicles could be seen in front of gas stations. Some politicians in the United States proposed rationing oil and gas. It is also said that California, Pennsylvania, New York, New Jersey, Oregon and Texas made all the necessary arrangements to use such a rationing system to provide gas and oil to the public. Meanwhile, Iranian revolutionaries took over the US embassy in Iran. In response, then US President Jimmy Carter imposed sanctions on Iranian oil. The Carter administration also took steps to remove controls on oil prices in the country as a step to resolve the oil crisis.

Industrialised countries, except for the United States, had taken steps to reduce their dependence on OPEC oil in response to the oil crisis of the early 1970s. Industrialised countries were already preparing to use coal, natural gas or nuclear power to generate electricity. Some countries in the world had spent billions of dollars on research to find oil in non-OPEC oil-rich areas, such as Siberia, Alaska, the North Sea and the Gulf of Mexico. By 1986, global oil demand had fallen to 5 million barrels per day. However, non-OPEC oil production had increased by more than 5 million barrels per day. As a result, OPEC's share of the oil market fell from 50% to 29% between 1979 and 1985, according to reports.

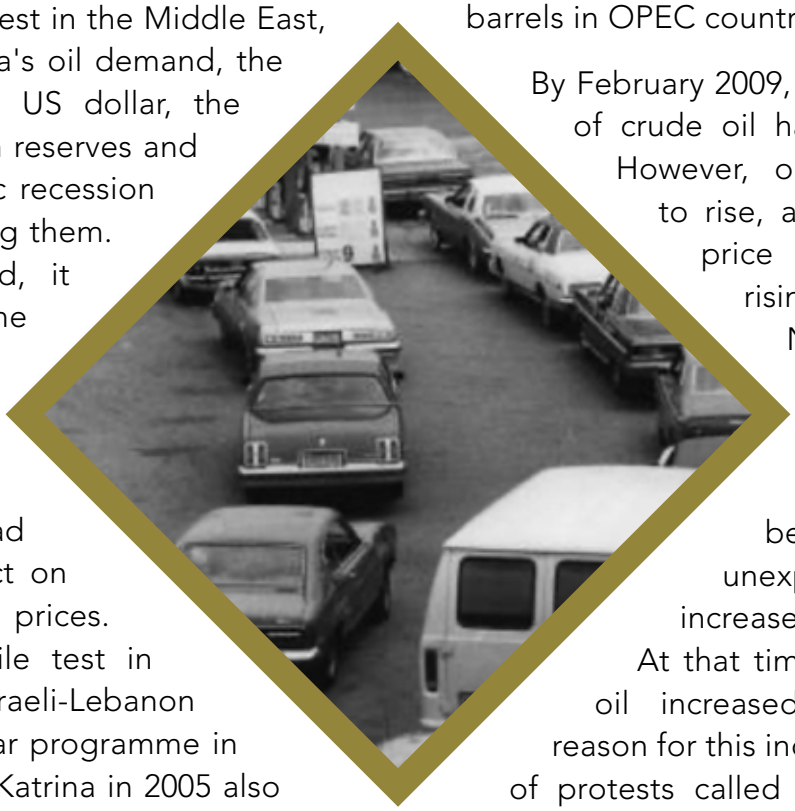
Oil prices began to fall steadily from the mid-1980s. Except for the Gulf War, oil prices continued to fall for the next twenty years. By 1990, oil prices had fallen by about 60%. This was due to major oil producers such as Mexico, Nigeria and Venezuela expanding their production capacity. It should also be noted that Russia became the world's largest oil producer and oil from the North Sea and Alaska came to the market during this period, which also had an impact on oil prices.

The 2008 Oil Crisis

Oil prices began to rise again in 2003. At that time, the price of a barrel of oil was more than US$30. By August 11, 2005, the price had

By 1986, global oil demand had fallen to 5 million barrels per day. However, non-OPEC oil production had increased by more than 5 million barrels per day. As a result, OPEC oil market share fell from 50% to 29% between 1979 and 1985, according to reports.

increased to US$60. The price of a barrel of oil reached its highest value in July 2008. At that time, the price of a barrel of oil was about US$147.73. Critics point out that there were many reasons for the increase in the price of a barrel of oil. The unrest in the Middle East, the increase in China's oil demand, the depreciation of the US dollar, the decline in petroleum reserves and the global economic recession are prominent among them. On the other hand, it should be said that the events that took place in global politics and natural disasters during this period had some kind of impact on the increase in oil prices. North Korea's missile test in July 2006, the 2006 Israeli-Lebanon conflict, Iran's nuclear programme in 2006 and Hurricane Katrina in 2005 also affected oil prices. Therefore, the 2008 oil price spike can be seen as the culmination of a series of events that took place over several years.



Economic experts expressed different opinions about the unexpected increase in oil prices. Some experts believed that an oil crisis would occur that was worse than the oil crises of 1973 and 1979. The prices of all other products made from by-products of oil refining also increased with the increase in oil prices. The most important of these was the increase in world food prices. The increase in food prices was also a reason for social unrest among poor in developing nations.

The oil price decline began in early September 2008. In early September, oil prices fell to US$110. As oil prices began to fall, OPEC Secretary-General El-Badri announced that he would reduce daily crude oil supply by about 500,000 barrels. He said this because OPEC was supplying a large amount of oil to the market at that time in order to overcome the global economic recession and strengthen the dollar. Therefore, the need to restore that oil supply had arisen. In December 2008, OPEC decided to reduce the daily oil production by 2.2 million barrels in OPEC countries.

By February 2009, the price of a barrel of crude oil had fallen to US$35. However, oil prices continued to rise, as evidenced by the price of a barrel of oil rising to US$55 by mid-November.

The price of a barrel of crude oil, which had been at a stable level, unexpectedly began to increase again in early 2011. At that time, a barrel of crude oil increased to US$100. The reason for this increase was the series of protests called the "Arab Spring". The series of protests spread throughout the Middle East and North Africa. The protests that began in Tunisia spread to Libya, Egypt, Yemen, Syria and Bahrain. As a result of the Arab Spring, the Egyptian revolution in 2011 and the civil war in Libya in 2011 caused the price of a barrel of crude oil to increase. On the other hand, the imposition of international sanctions against Iran also affected the price of oil. At the beginning of 2014, the price of a barrel of crude oil was around $100. Oil prices were stable during 2014-2015 because the world market was receiving a large supply of oil.

According to OPEC reports, the price of a barrel of oil had fallen to US$22.48 by January 2016. It is surprising that a barrel of oil, which was priced at US$140.73 in July 2008, had fallen to such a low price by the beginning of 2016.

Manjula Wijayaratne

Another Oil Crisis Averted at the Last Moment!

Although an oil crisis is disastrous for the entire world, the risk of an oil crisis arises in many cases where there is war between nations. The risk is even greater if an oil-producing country is in the middle of such a war. Such a risk arose this year as well. That was with the outbreak of the Israel-Iran war.

Background to the War

The Israeli-Iranian war began in June of 2025, with a heated atmosphere in both countries. The war was triggered by the conflict between Israel and Iran. Although both countries are Middle Eastern States, the two countries have been acting against each other for decades. In the conflicts between Israel and Lebanon, Iran supported Shiite militants - Hezbollah militants. In the conflicts between Israel and Palestine, Iran came to the aid of Palestine. That is, to strengthen the Hamas organisation in Palestine. In the civil conflict in Syria, Iran always supported the Syrian Government. It provided transportation facilities, technical facilities and very well-trained soldiers to Syria. In that case, Israel supported the Iranian rebels and launched airstrikes on Iranian forces in Syria. Iranian nuclear scientists were killed in these attacks. Meanwhile, Iran wanted to destroy Israel. Not only that, Iran also continued to provide weapons to Hamas and Hezbollah. This growing tension between Israel and Iran became more serious by 2024. It then escalated into war in June 2025.

The Iran-Israeli war began on June 13, 2025. The conflict has been at a very high level since the beginning. The Iranian Ministry of Petroleum issued a statement on June 14 that Israel had launched airstrikes on two oil fields in Iran's Bushehr province. It also stated that the oil fields were on fire as a result of the attack. The statement also stated that gas production there had been stopped.

Attacks on Oil Fields and Nuclear Facilities

The Iran-Israeli war began on June 13, 2025. The conflict has been at a very high level since the beginning. The Iranian Ministry of Petroleum issued a statement on June 14 that Israel had launched airstrikes on two oil fields in Iran's Bushehr province. It also stated that the oil fields were on fire as a result of the attack. The statement also stated that gas production there had been stopped.

On June 19, it was reported that an Israeli airstrike had destroyed a reactor at Iran's Arak nuclear complex. However, Israeli officials later confirmed that there was no damage or radiation leakage from the attack. The International Atomic Energy Agency said in a statement that the reactor was in an inactive state. It also confirmed that it did not contain any nuclear fuel. The Isfahan Nuclear Technology Center and the Shahid Ali Mohammad Nuclear Center were later hit. Iranian authorities later took steps to remove uranium and equipment from the Shahid Ali Mohammad Nuclear Center. Parts of the Shahid Ali Mohammad nuclear facility were destroyed in a US airstrike. US President Donald Trump, speaking at the NATO summit, said that Iran's nuclear power had been destroyed. The statement further confirmed that the US was indeed behind the attack on Iran's nuclear power plants. However, the International Atomic Energy Agency confirmed that there was no radiation leak after the strikes.

The war, which began on June 13, was temporarily ended twelve days later, on June 24, following a ceasefire brokered by US President Donald Trump. This war between Israel and Iran is known in world history as the Twelve Day War.

Impacts

The Israeli-Iranian war can be called a war that had many negative effects on the world. Air travel was restricted due to the dangerous environment. Airlines were reluctant to fly over Israel, Iran, Iraq and Jordan. Iranian people could be seen queuing up to get fuel. It is all the more surprising that the people of Iran, which produces more than 5% of the world's oil production, were in such a difficult situation.

On the other hand, crude oil prices rose by about 10%. The increase in prices was mainly due to the restrictions on oil production by some countries due to the Twelve Day War. Several countries in the OPEC Plus alliance had restricted oil production in this way. namely, Saudi Arabia, Russia, Iraq, the United Arab Emirates, Kuwait, Kazakhstan, Algeria and Oman.

On the other hand, the talk in Iran about closing the Strait of Hormuz, which belongs to Iran, has been very controversial. More than 20% of the world's oil production and a third of its gas production are transported through this strait. It is also known as a major trade corridor between Asia and Europe.

The route is also short. Therefore, if ships travel through that strait, the cost of transportation is low. If the strait is closed, ships will have to follow alternative routes. Then the cost of transportation increases. That is a reason for the increase in oil prices.

The proposal to close the Strait of Hormuz was supported by the Iranian parliament. However, the final decision rests with Iran's Supreme National Security Council. With the Iranian parliament's support for closing the Strait of Hormuz, various experts began to express various opinions on the matter. Some said that the price of a barrel of oil could rise to US$110.

Speaking to 'Fox News' on the issue, US Secretary of State Marco Rubio said that US through China will pressurise Iran to stop closing the strait. "...If they close the strait, it would be economic suicide. We have alternatives. But other countries should look at this. It is more damaging to other countries' economies than ours. ..." he had said.

The US chose China to influence Iran because China is a major buyer of Iranian oil. China is the world's second largest economy. China buys 90% of Iran's oil exports. Due to the sanctions imposed on Iran, it has had to sell most of its oil production to China in this way. Therefore, the US had made the first decision based on the belief that China has the ability to influence Iran.

Oil prices fell significantly a few days after Iran launched a missile attack on the Al Udeid air base in Qatar. The missile attack targeted a base where the United States operates. However, Iran did not appear to launch any further attacks after that. It also appeared that Iran was refraining from closing the Strait of Hormuz. As a result, oil prices began to fall gradually. Otherwise, a global oil crisis could have occurred in 2025.

The main reason for the occurrence of oil crises is wars and conflicts that arise over any issue. Therefore, it is important to resolve conflicts and maintain a peaceful atmosphere in every country of the world.

Prabhashani Iddamalgoda

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Renewable Energy Solutions to the Fuel Problem

Many of the needs that were not provided for in the simple life of the past are now needed by almost every country and every citizen of the world. Here, wood was used as fuel for cooking, but today gas, electricity, etc. are used due to greater convenience. Although animals were used for transportation facilities in the past, later with the invention of vehicles, coal, etc. were used as fuel for greater convenience and speed. Today, kerosene, diesel and electricity are also used for this purpose.

Factories have also increased significantly compared to the last century. Since these factories use more machinery, the amount of fuel consumed has also increased. Therefore, it is difficult to even imagine the crisis situation that will arise in the world when a fuel crisis occurs.

Oil and coal are natural resources that are only available to a limited number of countries in the world. Because of these fuels, these countries have become among the richest and most powerful countries in the world, demonstrating the importance of fuels. However, these fossil fuels take a long time (millions of years) to form naturally. Fossil fuels are formed by natural processes such as anaerobic decomposition of dead organisms after they are buried underground.

But we are now accustomed to using fuel unnecessarily and are seen to be acting without thinking about saving. Not thinking about the depletion of natural resources and being accustomed to acting without responsibility and accountability, fuel is being wasted in our country and even in the world. Therefore, many scientists are of the opinion that it will not be long before natural fuels become scarce. As has been confirmed so far, it is predicted that the amount of petroleum available in the world is only for the next 45 years.

Therefore, we should pay close attention to fuel security. Here, fuel should be used sparingly for basic needs and fuel wastage should be avoided. Countries moving towards long-term development goals will have an increased need for fuel. Also, the development plans of countries, increasing population, urbanisation, etc., will also lead to an increase in fuel consumption.

The burning of fossil fuels also causes environmental pollution due to carbon emissions. Therefore, it can be said that the use of fossil fuels

About 16% of global energy consumption is met through the use of renewable energy. In Sri Lanka, many projects are currently being carried out to meet energy needs through renewable energy.

is unknowingly leading to many future problems. It is important to turn to the use of alternative fuels in the event of a possible fuel crisis and as a step to protect the environment.

Many people in Sri Lanka were eager to turn to alternative fuels in the face of the fuel crisis in 2022. This led to the use of firewood, coconut shells, biogas, etc. instead of gas and electricity for cooking and to solar energy, which generates electricity from sunlight instead of electricity. Since Sri Lanka is an equatorial country, it receives good sunlight in every quarter of the year. Therefore, solar energy can be used very easily. Since our country is an island, there is also the possibility of converting the wind flows that blow across the country into electricity. Also, even the power generated by sea waves can be converted into electricity.

Currently, many countries in the world are eager to use renewable energy for their energy needs. Geothermal energy can also be used as a renewable energy source. This energy source is called renewable energy because it does not run out even if we use it and is naturally replenished.

About 16% of the global energy consumption is met through the use of renewable energy. In Sri Lanka, many projects are currently being carried out to meet the energy needs through renewable energy.

Various researches are being carried out in various countries of the world as solutions to the current energy crisis. Among them, researches that can be used as a fuel for hydrogen gas have been successful and projects that generate hydrogen gas are currently being carried out in developed countries of the world. The current problem in using this fuel is that hydrogen gas has a high volatility and there are difficulties in storing and transporting it. Therefore, researchers are looking for solutions to these situations. Since hydrogen gas can be easily produced, if these problems can be resolved, it will be more beneficial for the world.

Although carbon decomposition due to fossil fuel combustion causes air pollution in the environment, the use of renewable energy does not cause that situation, so there is no harm to the environment. Also, there is no risk of shortage like fossil fuels, so there is no risk of that. In addition to all this, our country, as well as every country in the world, will be able to act with some independence without being influenced by the countries that have oil reserves in the world. Due to this, it will be possible to contribute to world peace to some extent.

Ayanthi Udugampala

Let's Learn About **GAS**

Currently, more than 50% of Sri Lankan households use LPG as the fuel for cooking.

However, housewives in this country are less aware and unaware of the use of gas cylinders and their safety. Therefore, being aware of safe LPG consumption is a great support for the safety of all of you. So let's learn about gas.

LPG

LPG is a mineral oil produced from petroleum and natural gas. It contains two main components. These are propane (C_3H_8) and butane (C_4H_{10}), which are colourless and odorless gases. However, when storing the above components in a gas cylinder, the manufacturing company adds a smell through a chemical liquid. The hope is that this will make it easier for the consumer to know if there is a gas leak. Also, when storing LPG in a cylinder, it is pressurised and the gas is converted into a liquid and stored. It can be seen that different countries store propane and butane by changing the percentage of propane and butane according to political and weather conditions. The main reason for this is due to the different characteristics of propane and butane.

When it comes to the propane component, it ignites at a lower ambient temperature than butane and has a lower combustion energy than butane. Propane also has a higher pressure than butane. Therefore, cylinders with a higher percentage of propane have higher volatility and are more likely to leak if a leak occurs.

Due to these different characteristics, colder countries and European winter quarters increase the percentage of propane, while hot countries and cold countries increase the percentage of propane during periods of increasing temperature. However, it can be shown that when butane is increased, it enables consumers to obtain more combustion.

Although the gas cylinder is liquefied as shown above, it remains as a high-pressure gas in the upper part and a liquid in the lower part as shown in the figure below.

Also, when the stored natural gas is taken out, the fuel pressure in the lower part is relaxed and pushed upwards as a gas.

The cylinders in which LPG is stored are of various sizes and it can be stated that 2.5 kg, 5 kg and 12.5 kg are used especially for homes and cylinders with higher capacities are used for industries. However, in Sri Lanka, a quality

certificate is mandatory for the cylinders used in this way.

Identifying the Expiration Date

Every gas cylinder has an expiration date. It is written on the inside of one of the three metal plates at the top of the gas cylinder.

It consists of an English letter first and a number second. The English letter indicates the month and the number indicates the year.

A: January - March (1st Quarter)
B: April - June (2nd Quarter)
C: July - September (3rd Quarter)
D: October - December (4th Quarter)

Regulator

The regulator is the main device used to control the flow of gas from the gas cylinder to the stove and to remove the gas from the cylinder. It is installed at the top of the gas cylinder and when the gas in the cylinder is released it can be controlled by the regulator.

There are 3 main types of regulators used in the country.

1. Clip-on regulator

   This is more suitable for ordinary homes.

2. Pressure reducing regulator

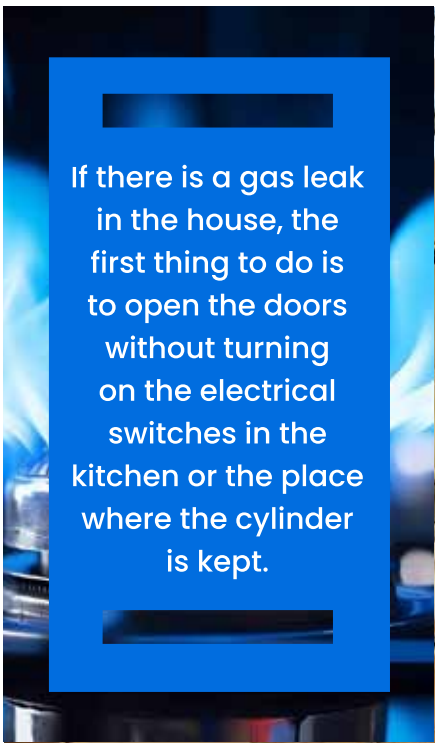
   This type is more suitable for places with higher consumption such as hotels and factories.

3. Automatic control regulator

   This is a safer type of regulator and is more expensive than other regulators. However, all of these types of regulators have the year and month of manufacture printed on the underside of the tube. It should be noted that replacing any of these regulators every 5 years is essential for safe gas consumption.

For safety in case of gas leakage

If there is a gas leak in the house, the first thing to do is to open the doors without turning on the electrical switches in the kitchen or the place where the cylinder is kept. Because the density of the gas is high, in the event of a leak, it settles in the lower part of the kitchen. Then the windows should be opened and the regulator should be removed from the cylinder.



Wrapping the cylinder with a wet cloth is also a step that can be taken to prevent it from burning. Because it blocks the supply of oxygen, the risk of fire can be minimised. Then, taking the cylinder outdoors is a step that can be taken to protect it from accidents.

Chaminda Liyanage
Deputy Director
Sri Lanka Sustainable Energy Authority

The Impact of the Oil Crisis on **Sri Lanka**

For many years, Sri Lanka has faced many challenges socially, economically, politically and culturally. The oil crisis can be pointed out as one such crisis. The common people of Sri Lanka were the ones who were adversely affected due to such crises. This oil crisis greatly affected their lives to become more miserable. The following is a note prepared based on the views expressed by H.D. Karunaratne, Senior Professor of Business Economics at the University of Colombo, on the impact of the oil crisis on the Sri Lankan economy.

Economic Impact

The world oil crisis is a situation that occurs due to the increase in the price of oil. The change in oil prices is affected by the demand side, the supply side, as well as geopolitical decisions. The first oil crisis occurred in the world in 1971. The reason for this was that the price of oil in the world tripled. In 1971, due to the establishment of OPEC, the price of a barrel of oil suddenly increased from US$ 2 to US$ 8, which marked the beginning of the world's first oil crisis. After that, there was a continuous increase in the price of oil in the world and with the second oil crisis in the late 1970s and after that, the oil crisis spread all over the world. The current oil crisis is caused by wars between countries in the world, supply restrictions due to geopolitical issues, supply and demand of petroleum from each country based on political decisions and decision-making.

Since a significant percentage of Sri Lanka's import expenditure is allocated for importing petroleum, the world oil crisis has led to an increase in the country's import expenditure. For a long time, Sri Lanka's export income exceeded its income and import expenditure increased, resulting in a negative balance in the trade account. The two factors that have had a strong impact on this are the increasing amount of petroleum imports day by day and the increase in the price of petroleum. In particular, the lack of hydroelectric power for electricity generation and the use of petroleum and fuel has led to the electricity crisis in Sri Lanka. On average, the increase in the amount of petroleum used and the increase in petroleum prices have had a major impact on the creation of an annual trade deficit of between $ 2-3 billion over the past 30 years. The main action that Sri Lanka must take to overcome the world petroleum crisis is to use alternative energy and turn to other sources of electricity generation.

The main obstacle in managing the macroeconomic situation of developing countries like Sri Lanka is the gap between imports and exports and the deficit in the State budget. The price

and volume of petroleum products have a strong impact on both of these aspects. When a global petroleum crisis occurs, fuel prices in the country increase and an inflationary situation may arise in the country. The main reason for this is that petroleum products are the main source of fuel for the Sri Lankan economy. Essential services such as electricity generation and transportation are heavily dependent on petroleum imports. The development of alternative transport modes is the main economic solution for this. For this, it is very important to plan the more than 100 rivers that start from the Central mountains of Sri Lanka and flow into the sea as a low-cost transportation system. Since transportation is a major source of price determination in the economy, reducing transportation costs has become an essential issue.

The main reason for the increase in commodity prices in the past was the increase in petroleum prices. As a result, many people in the society had to face many crises.

The following is a note prepared based on the views expressed by Mr. Siri Hettige, Emeritus Professor of Sociology at the University of Colombo, on the impact of the oil crisis on Sri Lanka nationally and socially.

National Impact

Indeed, this oil crisis has created a huge problem for us as Sri Lankans. Although it has not become a serious situation today, it may become a serious situation in the future. In the past, the value of the rupee fell sharply due to the collapse of the economy due to the inability to repay our country's debts. Although the price

of oil did not decrease, the value of our rupee did not decrease, so consumers had to pay more for oil. In the past, there was an oil shortage and a tradition of oil queues began. At that time, every vehicle owner, regardless of class, had to queue for hours for oil. As a result, some people even lost their jobs. Especially those working as taxi drivers were unable to provide for their families. Since they could not do their jobs properly, their economy was under great threat.

The oil queue culture also had a positive impact on the Sri Lankan people. When people queued for hours for oil, regardless of race or religion, sharing food and drinks was a truly valuable human quality. It was a great medicine for people who were stressed physically, mentally and spiritually. Even during a time of crisis in the country, we had the opportunity to see through the media the moments when the Sri Lankan people made friends with each other, enjoyed food and drinks, sang poems and songs and were happy. It is a matter of joy that our Sri Lankan people have been able to turn a crisis into a joyful situation. The problem of petroleum has arisen not only in

The main reason for the increase in commodity prices in the past was the increase in petroleum prices. As a result, many people in society had to face many crises.

our country, but throughout the world. Due to the unlimited burning of petroleum, a global climate crisis has arisen throughout the world. No matter how much petroleum is priced in the world, it has become indispensable for us. We need petroleum to generate electricity, to power the transportation system and to operate machinery. In particular, our country's transportation system is completely dependent on petroleum. Therefore, the emergence of a situation where petroleum is unavailable or the price increases in our country has a severe impact not only on the entire nation but also on the economy.

Social Impact

The middle class and the lower strata of the country are the most affected by the oil crisis. In the event of an oil shortage or an increase in oil prices, those who work with machinery and equipment that use petroleum and those who work in the transportation sector are the most vulnerable. When they lose their jobs, their families become helpless. Therefore, it is more important to minimise the use of petroleum as much as possible and instead promote and use of solar energy and other renewable energy. Otherwise, especially the lower strata of the country will be devastated. If our country is unable to buy petroleum within a reasonable time frame or if the price of petroleum becomes unaffordable, the entire transportation system of the country will deteriorate. Then, people will be unable to perform their daily duties and will have to roam the streets. As a result, people may develop various diseases and mental disorders.

Irrespective of status, every citizen should be given the opportunity to use public transport. Although most people in our country use motorcycles because they consume less fuel, motorcycle drivers are at risk in many accidents in our country. Often, even deaths occur in such cases. It is more important to minimise the use of motorcycles and make public transport more easily usable for people. In recent times, due to fuel shortages, people could be seen going to work by bicycles. In such cases, people who were unable to travel long distances by bicycle even suffered leg injuries. Some people were exposed to various accidents by going to perform such unfamiliar activities. Although riding bicycles was good for physical health, it was a dangerous situation for people who were not used to riding bicycles.

It would be more cost-effective to move towards renewable energy sources rather than trying to become completely dependent on petroleum. Then, even if petroleum prices increase or there is a petroleum shortage, Sri Lankans will be able to bear it to some extent.

Madara Mudalige

Harsha Wickramasinghe, the new Director General of the Sri Lanka Sustainable Energy Authority

Mr. Harsha Wickramasinghe assumed duties as the new Director General of the Sri Lanka Sustaiable Energy Authority on 12th March 2025. The Chairman of the Sustaiable Energy Authority, Professor Wijendra Bandara, its officers and officials of the Ministry of Energy attended the event.

At the time of his appointment, he was the Deputy Director General (Demand Side Management) of the Sustainable Energy Authority. He had led the Energy Conservation Fund, the predecessor of the Sustainable Energy Authority and is a former President of the Sri Lanka Energy Managers Association.

Engineer Wickramasinghe is a graduate of the University of Moratuwa and a Chartered Engineer affiliated to the Sri Lanka Institute of Engineers. He also holds a B.Eng. degree from the University of Colombo.

He has contributed to many developments in the energy sector, covering a wide range of areas such as energy policy, regulation, financing, capacity development and the inclusion of energy in school education.

Solar Panel System Training for Engineers at the National Water Supply and Drainage Board

The Sri Lanka Sustainable Energy Authority, at the request of the National Water Supply and Drainage Board, organised a three-day training programme on solar panel system design, technical evaluation and maintenance from 23 April 2025 with the aim of enhancing the knowledge of the engineers of the Water Supply Board on solar energy.

The workshop was held at the Sivas Training Center 2 of the Water Supply Board and 64 engineers representing 09 provinces of the island participated.

The lecture sessions were conducted by leading experts in the energy sector and a practical session was held concurrently at the Hambantota Solar Park of the Sri Lanka Sustainable Energy Authority on 17th May 2025.

The certificate awarding ceremony was held with the participation of the Director General of Sri Lanka Sustainable Energy Authority, Eng. Harsha Wickramasinghe, the General Manager of the National Water Supply and Drainage Board, Eng. T. Barathidasan and officials from both the institutions.

Anuruddha Ediriweera

Energy Efficient Labels for Air Conditioners Introduced

Sri Lanka Sustainable Energy Authority introduced an energy efficient labeling system to identify the efficiency of air conditioners imported into the country. This was done under the patronage of the Hon. Minister of Energy, Engineer Kumara Jayakody, on 25th September 2025 at the Battaramulla Nature Park.

Air conditioners consume the most electricity among the electrical appliances used in an office as well as a home. Therefore, this will help electricity consumers who buy imported air conditioners to be aware of the energy consumption of the appliance and thereby purchase more efficient air conditioners.

Previously, Sri Lanka Sustainable Energy Authority has introduced energy efficient labels for refrigerators and electric and light bulbs and the introduction of this labeling system is being done with the contribution of the Sri Lanka Standards Institution and the Ceylon Electricity Board.

Panasara Pubuduwa

Uva Provincial Ministry of Education and the Sri Lanka Sustainable Energy Authority, in collaboration with Uva Radio, have planned to hold an energy related quiz competition "Panasara Pubuduwa" from September 2025.

This quiz programme is held with the aim of educating school children and the general public about global climate change, increasing energy demand, sustainable energy and the importance of energy conservation.

A team of schoolchildren from one educational zone in Uva Province will participate in this competition and the first students in the competition will be educated on energy and energy conservation with the resources of Sri Lanka Sustainable Energy Authority.

Uva Radio is broadcast on the 97.6 FM frequency, covering the Southern, Sabaragamuwa, North Central, Eastern, Central and provinces. This competition is scheduled to be broadcast on the "Uva Prajaguwanvidhuliya" Facebook page and the "Uva Radio" Mobile App and Uva FM 7.6 You Tube Channel.

Workshop on Energy Efficient Buildings

A workshop on the Energy Efficient Building Code and the ISO 500001 Energy Management Standards was held at the request of the North Western Provincial Council on 26/06/2025 and 27/06/2025.

About 60 engineers, architects, quantity surveyors and technical officers of the North Western Provincial Council participated in this and resource contributions were provided by experts in the energy sector.

The objective of this workshop was to draw attention to the energy efficiency and sustainability of the housing plans submitted for approval for construction in the North Western Province and to draw attention of the house designers in the province to sustainable energy house design. The guidelines on sustainable energy house design in Sri Lanka, prepared by Sri Lanka Sustainable Energy Authority, were also introduced to the provincial officials.

Nimalka Samarakoon