

Abu Dhabi project eyes breakthrough in energy-storage tech

Sat, 2019-11-09 00:52

ABU DHABI: One of the biggest challenges facing humanity as it grapples with global warming caused by greenhouse gas emissions is how to supply clean, renewable energy at a competitive cost where and when it is needed.

Fortunately, a renewable form of energy such as solar, which is generated only during the day, can now be converted into electricity non-stop. In theory, at least, this opens up the possibility of boundless energy for the 1.2 billion people living in societies along the Earth's so-called sunshine belt.

Through efficient exploitation of renewable energy sources such as solar and wind, coupled with state-of-the-art energy storage systems, many countries can not only power their everyday lives in a way that was impossible before, but can also reduce their dependence on fossil fuels.

A small but significant step was taken recently in the Middle East when Azelio, a Swedish solar-energy company, entered into a partnership with the Abu Dhabi Future Energy Company (Masdar) and Khalifa University of Science and Technology to run a pilot project evaluating new technology in power storage.

"The technology is important in order to have access to energy, which builds growth and wealth," Azelio's CEO, Jonas Eklind, said.

INNUMBERS

- 1.2 BILLION – People in the world have no electricity
- 2.4 BILLION – People connected to grid that fails to deliver sufficient energy
- 27.3 GIGAWATTS – Saudi Arabia's combined target of solar and wind energy by 2024
- 40% – Percentage of Kingdom's electricity produced by burning oil in 2016
- 400 MEGAWATTS – Capacity of Dumat Al-Jandal, Saudi Arabia's first and the Middle East's biggest wind farm

"Without electricity, you cannot be part of the modern world. If you don't have it and you wait for a centralized solution, you might wait 40 to 50 years. With our solution, you can have it next week."

The Abu Dhabi unit aims to test and demonstrate Azelio's Stirling engine systems and "integrated thermal energy storage" solution for projects that use solar energy and wind energy, or projects that provide off-grid

solutions.

Testing will determine if the technology can be included in current as well as future renewable energy projects.

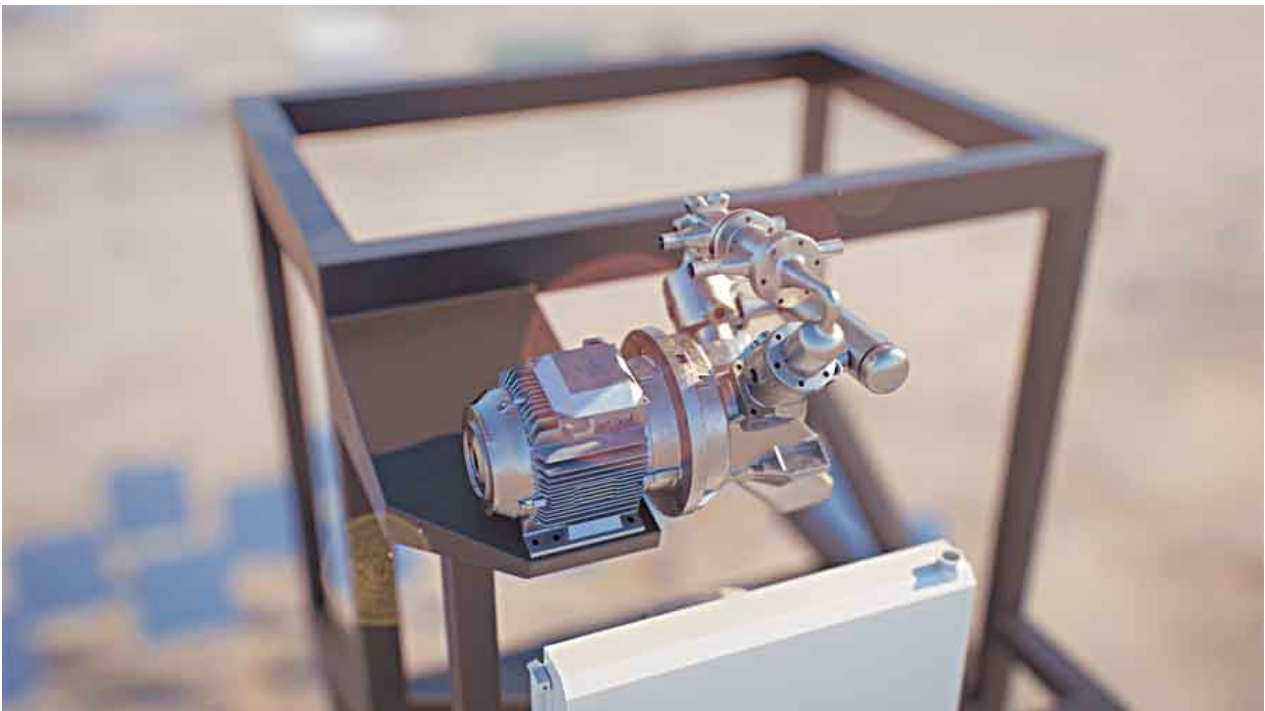
“What we are doing is a technology to store renewable energy in a wide sense, and it can be any type of renewable energy coming from any source,” Eklind said.

“We store a lot of energy and then convert that stored energy to electricity on demand. Consumers can then control when they want electricity.”

Azelio said that this “distributed base load” can be built in smaller-sized units close to consumers, which removes the need for a complex national grid system. The company also says that by adding an ingenious storage innovation to its Stirling engine, it makes electricity generated by a renewable source accessible at all hours of the day.

“It can be a local system that services, for instance, one factory, one village, one hotel or one desalination unit with whatever they need, 24 hours a day,” Eklind said. “We have worked with the technology for some years at more of a demonstration level and we have a unit in Sweden.

“We are also providing a reliable way forward for countless enterprises in remote locations around the world. Renewable electricity in its purest form is readily available exactly when it is needed. The opportunity for sustainable growth has never been greater.”



The Stirling engine efficiently converts thermal energy into mechanical movement to generate electricity. (Supplied)

Given that 1.2 billion people still have no electricity today and about 2.4 billion are connected to an electricity grid that cannot provide them with enough power, Azelio’s partnership with Masdar and Khalifa University of

Science and Technology could not have been more timely.

“So for all these people, we could be a solution to give them a base load system instead of waiting 35 years for someone to build a national grid,” Eklind said.

As things stand, communities that are not connected to a stable grid are often forced to use generators, which entails burning diesel to generate electricity.

Azelio says that its system can replace a lot of the diesel burning, which benefits the climate and the environment. According to the company, the system is also less than half the price of conventional methods.

The company has installed a verification project of the technology for a state-owned firm in Morocco that is expected to be operating before the end of this year.

The Abu Dhabi unit will be Azelio’s second abroad.

Yousef Baselaib, executive director of sustainable real estate at Masdar, said: “With Masdar City established as the natural home for innovation in sustainable urban development and clean technologies, we are delighted to be working with Azelio and Khalifa University to help validate the commercial feasibility of their project.”

The pilot will be installed at the Sustainable Bioenergy Research Consortium site on the Masdar City campus of Khalifa University. Power generated from the project will be used to drive the air-conditioning for the project’s office and storage units.

“It’s general verification for the technology, but it is also special because Masdar wants to verify our technology to be a part of their projects. They build a lot of renewable energy projects and they need to have a source, especially in solar, which you don’t have at night,” Eklind said. “So we can essentially deliver solar energy in the middle of the night.”

Khalifa University will provide research support and expertise for the two testing periods, and the data collected by the researchers will be compared with findings from existing “dispatchable technologies.”

“As a research-intensive academic institution, Khalifa University offers one of the most suitable platforms for testing and demonstration of new technologies and solutions, especially in clean energy,” said Arif Sultan Al-Hammadi, executive vice president of the university.

Eklind said that even in the developed countries of northern Europe, electricity grids face challenges as a result of local electricity production with wind and solar.

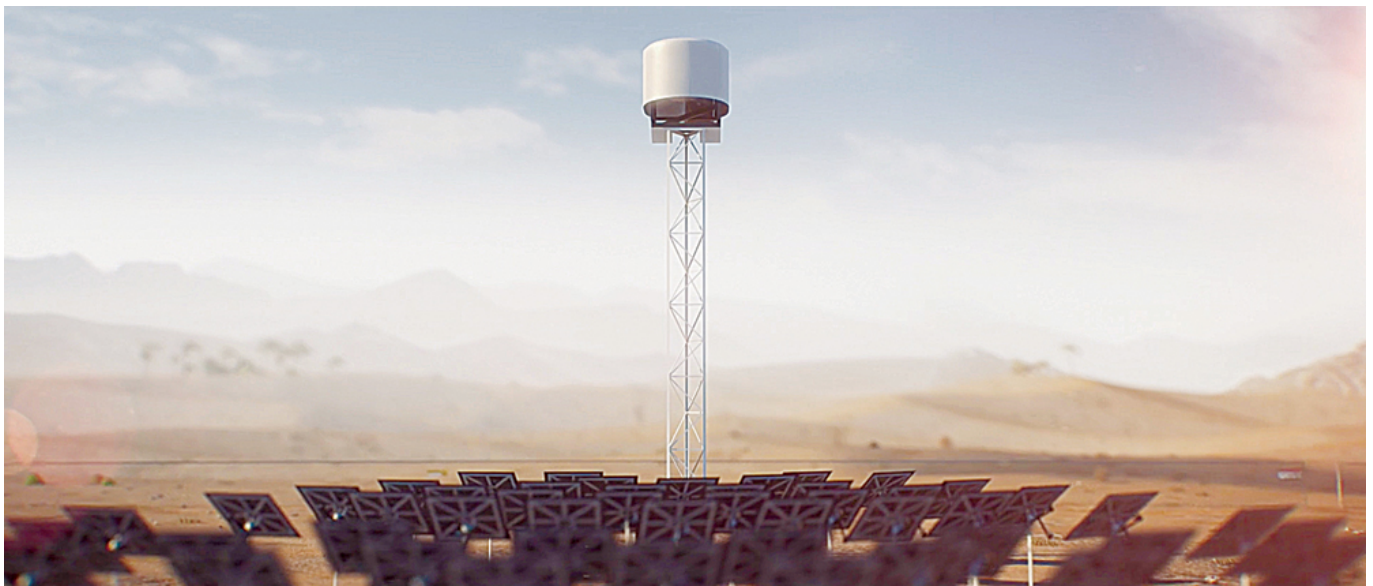
Residents produce electricity with their own solar panels during the day, then use up the energy at night charging their cars, with no production during that period. “So they have a huge demand on electricity,” Eklind said,

adding that the grid systems are not designed to cope with such types of fluctuation.

By contrast, Azelio's technology builds stability and prepares the grid for new challenges, he said.

Referring to the partnership with Azelio, Al-Hammadi said: "Masdar Institute at Khalifa University will continue to serve as the research location for leading and cutting-edge scientific exploration in clean energy-related areas, including energy storage, biofuels, renewable energy mapping, advanced power and nuclear energy.

"As a research institute, it will continue to set fresh milestones while obtaining new solutions in clean energy and advanced sustainable technologies."



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Lands as 25-year lease expires

Author:

Sat, 2019-11-09 00:44

JERUSALEM: A deal dating from Israel's historic 1994 peace treaty with Jordan allowing Israeli farmers to lease two sites along their common border runs out Sunday but the tenants say that nobody has told them what happens the day after.

In the peace negotiations, Jordan agreed to lease the lands to Israel for a 25-year renewable period, with the Hashemite kingdom retaining sovereignty.

One of the sites is Naharayim, a spit of land where the Jordan and Yarmuk rivers meet, which is called Baqura in Arabic.

The other location, deep in the Negev desert south of the Dead Sea, is known in Hebrew as Tzofar and in Arabic as Ghumar.

Notification

In October last year, Jordan's King Abdullah said his country had notified Israel that it wants to take them back.

Now with the deadline only hours away, Idan Grinbaum, head of the Israeli regional council for the Jordan Valley, says Jordanian officials have told him that as of Saturday night, the Naharayim site will be out of bounds.

"As of this time no Israeli official has met with us or issued a letter on the topic," he said in a statement to AFP.

Grinbaum said that since Abdullah's October declaration "there were enough opportunities to change the decree but unfortunately that didn't happen."

The change would affect members of two agricultural communities who have been working the lands at hand for 70 years, "and feel that Israel has abandoned them," he said.

"It's very unfortunate that this is how we're departing from the Island of Peace," he said of Naharayim.

Asked by AFP for details, the Israeli Foreign Ministry sent the reply, "the agreement will expire on November 10th," without elaborating.

1994 treaty

Since the heady days of the 1994 treaty, which made Jordan only the second country after Egypt to make peace with Israel, relations with Amman have been strained.

Opinion polls have repeatedly found that the peace treaty with Israel is overwhelmingly opposed by Jordanians, more than half of whom are of

Palestinian origin.

In 2017, an Israeli Embassy security guard in Amman killed two Jordanians.

Three years earlier, an Israeli soldier at a border crossing killed a Jordanian judge he deemed a threat.

Just last month, Amman recalled its ambassador from Israel over the prolonged detention without trial in the Jewish state of two Jordanians.

Israel has not commented on the reasons for their imprisonment, though Israeli media have said they were detained on suspicion of security-related offenses.

They were freed and returned to Jordan on Wednesday and Israeli Prime Minister Benjamin Netanyahu's office said the Jordanian ambassador would return shortly.

Private television station Channel 13 reported on Thursday that Netanyahu's national security adviser, Meir Ben-Shabbat, had met on Monday in Amman with Jordanian Foreign Minister Ayman Safadi who told him there would be no extension to the Naharayim and Tzofar leases.

Citing "senior sources" in Jordan, it said Safadi instead suggested that compensation be paid to the Israeli farmers for crops remaining at the sites after the handover.



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Israel, Jordan mark 25 years of imperfect peace
Jordan recalls envoy to Israel to protest detention of two citizens

Demos continue to paralyze Iraq as political factions look for a way out

Author:

Fri, 2019-11-08 01:38

BAGHDAD: Political parties in Iraq resumed their meetings on Thursday in an attempt to resolve the current crisis and end the public protests. Meanwhile, the demonstrations continued to paralyze daily life in Baghdad, where bridges have been blocked and government institutions disrupted for more than a week.

The country's leading political forces have been trying to find ways to break the impasse and appease protesters that are acceptable to all parties.

The demands of the demonstrators include the dismissal of the government, amid accusations that Prime Minister Adel Abdul Mahdi and his allies authorized the use of lethal force in an attempt to suppress the protests when they began last month, leaving more than 300 people dead and 12,000 injured.

They also want new election laws, early parliamentary elections, amendments to the constitution, and the appointment of a new members of the Independent High Electoral Commission.

"There is no gap between the demands of the demonstrators and the initiatives of the political forces," said Mohammed Al-Sudani, a prominent Shiite politician and former minister, who added that talks were continuing to find compromises that are acceptable to both sides.

"Regarding the dismissal of the government or the prime minister, a legal and official request to question the prime minister has been made by Al-Nassir bloc and others, which is supported by the majority of the parliamentary blocs. This means that we are about to change the government," he said, adding that the only uncertainty is about the timing and mechanisms for doing so.

"The problem now is that there is no clear leadership among the demonstrators that can negotiate for them, so they must appoint leaders or ask one of the parties they trust to represent them," said Al-Sudani.

Abdul Mahdi has been trying to calm the protesters' anger by providing them with job opportunities daily in various ministries, and by speeding up the resolution of financial and administrative corruption cases involving politicians and officials.

On Thursday, the Integrity Commission banned the governor of Babil and the former governor of Basra – both facing corruption charges – from traveling, while the Supreme Judicial Council sentenced in absentia a former bank manager to seven years in prison for wasting public money.

The political system in Iraq has been based on political quotas since 2004. No administrative, ministerial or constitutional amendments can be made without a consensus among the Shiite, Kurdish and Sunni political forces, regardless of the number of parliamentary seats each holds.

Abdul Mahdi's allies mostly come from Iranian-backed Shiite and Sunni political factions, along with the Kurdistan Democratic Party (KDP), which is led by the influential Masoud Barzani.

The Sunni factions have been the most weakened political force since the areas they controlled were taken over by Daesh in 2014 and then recaptured by Iraqi forces and Shiite factions backed by Iran.

Most of them subsequently joined forces with Shiite factions to become part of the larger Alliance Towards Reform coalition led by influential Shiite cleric Moqtada Al-Sadr, or the Iran-backed Al-Binna'a alliance, both of which joined Abdul Mahdi's government in Oct. 2018.

Kurdish parties were fragmented after the 2018 parliamentary election as a result of competition between them and political dissent.

The KDP remains the largest and most influential, especially in the autonomous northern Kurdish region, where it controls the regional government, its finances and its share of the federal budget.

The KDP is also the most prominent Kurdish political ally of Al-Binna'a and one of the strongest objectors to the dismissal of Abdul Mahdi, early elections and constitutional amendments.

"Barzani is against any change to Abdul Mahdi's status or the constitution because he benefits from the current situation," said a senior Kurdish leader and a governmental adviser.

"Abdul Mahdi gave him facilities he (Barzani) never dreamed of, especially with regard to oil contracts and the region's share of the annual budget.

"Any alternative to Abdul Mahdi means the application of constitutional and legal articles with respect to the budget, disputed areas, oil contracts and oil exports by the Kurdish region, and this would mean very significant losses for the KDP."

While keen to find a way to end the current crisis, Iraq's political factions remain determined to preserve their own interests and keep any individual losses or concessions to a minimum, politicians involved in the ongoing crisis talks told Arab News.

"They will definitely block the dismissal of Abdul Mahdi when voting," said a prominent Shiite politician. "They (the political coalitions) will introduce

a new election law and a new electoral commission and will stall ... before they agree to early elections.

“Maybe they will agree to hold an early election but it should take place after a year or so. Already the preparations will need more than this amount of time.”



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Iraq's main port blocked by protesters hours after reopening UN chief condemns live fire at Iraqi protesters as 'disturbing'

[Is it the end of US nukes in Turkey?](#)

Author:

Fri, 2019-11-08 01:20

ANKARA: The recent free fall in relations between the US and Turkey has sparked speculation over the future of American nuclear weapons currently stationed on Turkish territory.

“Turkey is not the place to host US nuclear arms,” Steven Pifer, from the American Brookings Institution research group, wrote in a report.

Following US President Donald Trump's recent public confirmation of the weapons' presence on Turkish soil, the two countries have found it difficult to reach a quiet deal on their potential withdrawal.

As the nuclear leftovers of the Cold War strategy, Turkey is part of a group of five NATO members – along with Germany, Italy, Netherlands and Belgium – hosting US nuclear weapons as an “open secret.”

Some 50 B61 nuclear gravity bombs – designed to be dropped by US fighter aircraft – are reportedly stationed in underground vaults at the southern Incirlik air base, about 160 to 240 km from the Syrian border.

HIGHLIGHT

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Pentagon officials are also reportedly reviewing plans to find alternative homes for US “personnel and assets” currently stationed at Incirlik. In 1963, the US removed nuclear missile batteries from Turkey during the Cuban missile crisis to avoid atomic war with the Soviet Union.

But experts are divided about the possible repercussions of physically removing nuclear weapons from Turkey considering its strategic location for the defense of Europe and the Middle East.

Eric Edelman, a former US ambassador to Turkey and senior Pentagon official, recently said that pulling the atomic arsenal from the country would be risky, and he believed the weapons were safe and secure there.

“I’m not in favor of taking any actions that would potentially accelerate Turkey’s thinking about pursuing its own independent nuclear deterrent,” he added.

The arrangement of hosting US nukes was part of NATO’s greater policy of deterring mass infantry movements from the USSR with the presence of a small number of nuclear weapons on European soil, and as an ally Turkey was part of the strategy.

Meanwhile, Ambassador James Jeffrey, the US special representative for Syria engagement, will lead a delegation to Turkey on Nov. 8-9 to discuss issues of mutual concern. Turkish President Recep Tayyip Erdogan’s Nov. 13 trip to Washington, DC to meet Trump has also been confirmed.

Azime Telli, a nuclear energy expert from Turkey’s Mersin University, said talk of withdrawing US weaponry was part of political maneuvering related to Turkey’s recent purchase of the Russian S-400 missile system that is incompatible with the air-defense system of the NATO alliance.

"However, even if this decision is taken, it cannot be quickly implemented because we are part of the NATO alliance and it wouldn't be so easy to break this strategic relationship," she told Arab News.

The US recently removed Turkey from its F-35 Joint Strike Fighter program, claiming the combat aircraft project could not coexist with the Russian system. The F-35 is US' most sophisticated warplane and Turkish companies were producing about 937 of its parts.

"Along with economic and diplomatic sanctions from the US, closing Incirlik air base was always at the table as a bargaining chip to increase the tension between the two countries. The removal of the nukes will also be used as a negotiation tool during the Trump-Erdogan meeting on Nov. 13," Telli said.

Some experts fear a US nuclear withdrawal from Turkey would create regional instabilities.

"The presence of these nukes was providing Turkey with a kind of immunity against all neighboring countries having nuclear capabilities, not only Russia but also Iran," Telli added.

During a meeting of his governing party in September, Erdogan raised the nuclear issue, and said: "Some countries have missiles with nuclear warheads, not one or two. But we can't have them. This, I cannot accept."

His comments were interpreted by many as a warning that Turkey would not stand idly by if its neighbors become nuclear-armed states.

Selim Sazak, an expert on nuclear nonproliferation from Brown University, in Providence, Rhode Island, told Arab News: "NATO tactical nuclear weapons in Europe are not much more than relics of the Cold War whose significance is more symbolic than anything else.

Their removal has been a rallying point for the European nonproliferation community."

He said the military value of the weapons, which are currently based at six sites in Europe, was still uncertain. "And some of these host countries were pioneers in the efforts toward a tougher and more activist stance on nuclear disarmament, which was most recently recognized with the Nobel-winning ban treaty.

"So, theoretically, a few of them might support the removal of these weapons at the London Summit and Trump, one of whose pet peeves is the US' NATO expenditures, might claim this as another instance of America made great again," he added.

Sazak also thinks the debate on removing nuclear weapons will not remain with Europe which the allies know. "So, do the nuclear-armed allies – especially Italy, which has been as aggressive as the Turks on keeping the nukes – just shrug? Are we ready for a denuclearization of Europe? I think not," he said.

Some analysts believe that if a withdrawal did happen it would signal a de

facto end to the Turkish-American alliance as well as Turkey-NATO ties, and would push Ankara closer to Moscow.

However, Sazak said: "I don't think we're there yet. I think there is a lot riding on 2020 and election years are mostly about keeping a steady ship. Regional security is less about Russia and more about the alliance's stability.

"Removing nukes from Turkey will most certainly be an intra-alliance crisis. Does NATO want it? Need it? That's the question."

He added that the political impact of any removal of US atomic weapons from Turkey would be a far greater crisis than their actual physical withdrawal. And where would they go?

Sazak said the most likely option would be one of the other existing US nuclear weapon sites at air bases in Aviano and Ghedi-Torre in Italy, Kleine Brogel in Belgium, Volkel in the Netherlands, and Buechel in Germany. Romania and Greece have also been mooted as possible stores but Sazak added: "You would have to revamp these facilities – spend money – to make them nuke suitable."



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Iran starts enriching uranium at Fordow amid reports UN nuclear inspector detained Turkey captures sister of slain Daesh leader Baghdadi in northern

Lebanese students join Beirut protests

Author:

Fri, 2019-11-08 01:20

BEIRUT: The students of the Lebanese University known as “the university of the poor” joined public protests in their 22nd day.

It is a state university and most of its students are from the poor and middle classes. According to its administration, its students make up 35 percent of the total number of the country’s university students.

Students chanted as they headed to Riad Al-Solh Square to demand basic services at their university. They spoke of the ambiguity of their professional future in the light of the domination of favoritism over the employment process. Their colleagues in other faculties complained about them on social media as the administration and teachers prevented students from leaving lecture halls to join the movement.

Students from public and private universities and schools took to the streets across Lebanon chanting “revolution.” They included students from Saint Joseph University, Haigazian University, Antonine University and the Lebanese American University.

Some groups focused on public institutions and prevented employees from entering, while others gathered in front of Zouk Thermal Power Plant to protest pollutant emissions.

Chants were accompanied by banging on pots and metal ware. This practice started on Wednesday night when people went to their balconies in Beirut, Sidon and Tripoli and banged on pots as a sign of their support for the protests.

The people of Beirut last used this method in 1916 during the famine that hit Lebanon under Ottoman rule.

The protests have not yet caused any responses from the authorities except for the resignation of the government. The president has not yet set a date for the binding parliamentary consultations to appoint a new prime minister, pending behind-the-scenes consultations with his political allies and outgoing Prime Minister Saad Hariri.

There is a possibility of forming a technocratic political government with a mixture of political ministers and experts, while protesters insist on a fully technocratic government that works to hold early parliamentary elections.

In the context of reviewing corruption cases, the financial prosecutor, Judge Ali Ibrahim, listened to the testimony of former Prime Minister Fouad Siniora at the Palace of Justice. The hearing lasted about three hours and “focused on the case of the \$11 billion that was spent when Siniora was Prime Minister between 2006 and 2008,” according to the National News Agency.

Ibrahim also filed a lawsuit against the Director-General of Customs Badri Al-Daher for “wasting public funds.”

The Attorney General Judge Ghassan Oweidat referred a complaint presented by a number of lawyers against all ministers in successive governments since 1990 to attorney Ghassan Al-Khoury for “embezzling and wasting public funds for personal and material benefits, exploiting power and authority and seriously harming the Lebanese people,” in order to initiate investigations and take all necessary measures.



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