

# Sun-starved Sweden turns to solar to fill power void



## Bloomberg

Sweden, known for its long dark winters with barely any daylight, is seeing a solar power boom.

Harnessing whatever sunshine the country gets is emerging as the quickest solution to fill part of the void left by two closed nuclear reactors in southern Sweden, where the biggest cities and industries are located. With shortages piling up in the region and consumers keen to secure green energy at stable prices, solar is quickly catching up with wind as developers put panels on rooftops and underutilised land in populated areas.

While the lack of sunlight is a hindrance, every bit of new electricity capacity will lower imports from Europe where prices are more than three times higher than in the rest of Sweden. Projects are also getting built quickly because

developers are directly getting into power sales deals with consumers and aren't dependent on government support, said Harald Overholm, CEO of Alight AB, which started Sweden's biggest solar plant this month.

Companies are targeting a quick ramp-up, pushing total capacity in the country to 2 gigawatt this year. That's more than the two nuclear reactors in Ringhals that were halted in 2020, and will close the gap with Denmark, an early mover in the industry in the region.

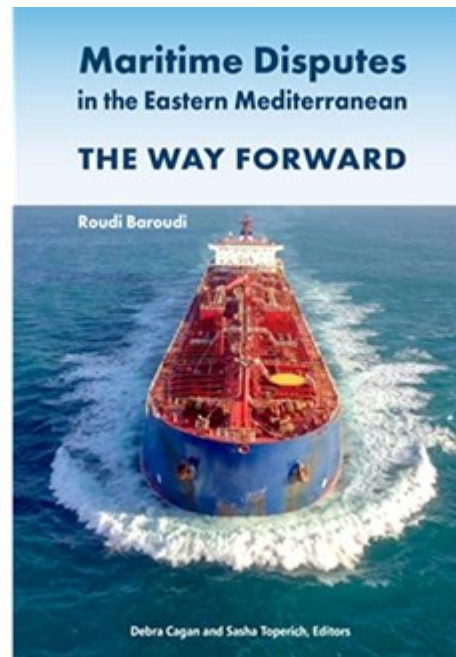
"We are very good at creating contracts directly with commercial partners that use power, and that is what drives our development," said Harald Overholm, CEO of Alight.

The past winter has demonstrated the hole left behind by the two atomic reactors, with the government facing the task of resolving a divergent market. While vast hydro and wind projects have kept the cost of electricity in the sparsely populated north in check, a lack of generating capacity and congested grids have forced the south at times to import power.

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**Dr. Roudi Baroudi's "Climate and Energy in the Mediterranean: What the Blue Economy Means for a Greener Future" book launched at the**

# Athens Energy Dialogues in Athens, Greece.



Dr. Baroudi: “The war in Ukraine has exposed not only Europe’s dangerous over-reliance on natural gas and other energy imports from Russia, but also the extent to which disrupting that relationship could wreak havoc around the world. Ever since Moscow launched its invasion in late February, the European Union has been hesitant to impose sanctions on Russia’s energy industry because it lacks other alternatives, and it lacks those alternatives because of a years-long hesitance to maintain a sufficiently diverse basket of sources and suppliers. The continent also suffers from inadequate regasification capacity, which means it cannot fully replace piped gas from Russia with seaborne loads of LNG from other countries.

Mr. Baroudi highlighted that there are solutions for all of these problems, and some are already under way. “Europe could also bolster its energy security by helping to develop the increasingly promising gas fields of the Eastern Mediterranean, the output of which could then be linked by undersea and/or overland pipeline to the European mainland. The utility of these and other moves would also be significantly enhanced by building new storage facilities for both LNG and conventional gas, which would make Europe a lot more resistant to future supply disruptions,” said Mr. Baroudi.

But most importantly in the long term, Europe needs to seize the opportunity presented by the great potential for offshore wind energy in the Mediterranean, since making full use of this potential – just in the coastal waters – could generate at least some 500 MILLION megawatts of electricity: in other words, the same as the entire global nuclear industry”.

Full press release available here: <https://lnkd.in/gUTi4zT6>

Dr. Baroudi’s book available here: <https://lnkd.in/gp8ePj2j>

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**European Energy Crisis: R. Baroudi: “It is entirely possible for Greece to be a strategic energy hub for**

# Europe”



**Roudi Baroudi**

**CEO, Energy & Environment Holding, Qatar**

**Interview with Newmoney.gr by Symela Touchtidou**

## **Questions:**

- 1. What is your assessment on the current energy crisis?  
How long will it last? Is there a way out of it? Is  
there a way out of it without Russia included?**

Obviously it's a very serious problem, not only for Europe, but also for the whole world as this is affecting so many aspects, from electricity crises to petrol prices for vehicles, transportation in general, food chain, etc.

It's very difficult to predict how long it will last as the war has just begun, but four months in, it has already caused

so much damage. Predicting an end-date is a difficult ask because both the problems and the solutions have so many moving parts. First, the problem is a product of several contributing factors, including: earlier decisions to phase out coal and nuclear plants in some European countries; a failure to sufficiently diversify Europe's overall energy basket (leading directly to over-reliance on Russian supplies, especially pipelined natural gas); and the after-effects of the early-pandemic collapse of oil and gas prices, which forced many producers around the world to shut down, leading in turn to upward pressure on international prices when demand recovered. The combined impact of all this was made even heavier by the timing: the crisis comes just as we are struggling to keep up with decarbonization goals by transitioning away from fossil fuels and toward cleaner and greener energy, leaving European energy markets extremely vulnerable to supply interruptions – or even the possibility thereof. To have had the Ukraine war break out when it did was in many ways worst-case scenario, and that's what we're dealing with.

Second, the effectiveness and timeliness of solutions will be determined by multiple variables that depend on sound decision-making and dedicated follow-up, adequate financing from both governments and multilateral financial institutions, and cooperation among EU countries and with their neighbors in North Africa and the Eastern Mediterranean. Europe has several buttons it can push, and the more of them it pushes, the better the results will be. Some of these would be to delay the coal/nuclear phaseouts; radically increase investments in renewables like wind and solar; expand Europe's capacity to receive and process shipments of liquefied natural gas; make better use of such capacity in Spain by linking it to France, and therefore the rest of Europe, by pipeline; install shared power grids with neighboring regions; help develop undersea



gas resources in the Eastern Mediterranean; and build new pipelines linking EU markets to gas producers in Central Asia. The more of these things we do – and do well – the sooner the crisis will recede. The more we allow implementation of such steps to be delayed, the longer the crisis – and Europe's vulnerability to similar problems in the future – will persist.

So in the final analysis, yes, we can get out of this crisis, but there is no single path that will get use there. And yes, we can do so with or without the participation of the Russians, but of course the process would be much easier with them somehow included.

**2. Do you see energy prices ever going back to the 2020 levels? Will Europeans have to adjust to living with expensive electricity and fuels? What would that mean for the overall European economy?**

In the medium/long terms, provided we take all or most of the steps I listed earlier, energy prices will definitely go back one day to the levels for 2020 as a whole, but not to the negative prices seen briefly when COVID-19 caused demand to fall off a cliff before production had been dialed back, causing a sudden glut. As I'm sure you know, commodity prices for oil and gas are connected not only to their respective supply and demand situations, but also to each other. The conditions that caused negative prices were highly unusual, and even if we approached those levels again, by their nature they could not last long.

Nonetheless, prices can be brought down, and the process is already under way. As of today, many responsible countries are increasing their production of oil and gas to help calm markets in Europe and elsewhere, but some countries are refusing to, while several others are under sanctions,

preventing them from bringing to the market several million barrels needed to cool off the price hikes. For the time being, Europeans are having a very hard time to cope with electricity and fuel costs, especially here in Greece, where energy prices are unbelievably high. Germany is another example.

Given the situation, and because it's probably the fastest method available, some European countries need to suspend or reverse their decisions to close their nuclear and coal power plants. Instead, they need to delay closures for another five-to-seven years, and maybe build one or two new coal plants, too, to cope with rising demand and restrain upward pressure on prices until other sources of energy can come online.

Despite the likelihood that prices will eventually retreat, in the short to medium term, Europeans definitely need to adapt. Studies have indicated that elevated energy prices will mean reduced economic growth, especially in Germany, whose importance to the rest of Europe cannot be overstated. That means more people will have less means to cope with higher energy prices, and that makes it incumbent on EU and national leaders to develop policies and mechanisms to cushion the blow, especially for lower-income families.

**3. The Greek government asks from the EU “a targeted and temporary intervention” in the natural gas wholesale market to bring prices down. Do you believe such an intervention is possible, and if so, what impact could be?**

It is definitely possible. There will be circumstances when the EU has to assist EU members, such as during times of war, and the current situation is an extraordinary one, unseen since World War II. With this extraordinary state of affairs, the Greek government – like any other member state – can and



should propose viable paths forward, e.g. caps on rising electricity, petroleum and/or other energy costs. At the very least, with the help of the EU, the government should be able to subsidize certain low-level consumers, for instance households whose consumption is less than 100 KWh per day.

**4. Are you aware of the 'Six-Point Plan' of the Greek government? What is your assessment on it? (available here <https://primeminister.gr/en/2022/03/09/28836> )**

Yes, I am aware of the Six-Point Plan that Prime Minister Mitsotakis has proposed. It's a very positive move forward in order to cushion some of the pain from disastrous price increases, which are driving inflation across the Greek economy. Here, Greece is contributing to the European Union's overall policy formulation, which seeks to provide protection against the major consequences emanating from the Russia-Ukraine war, and the Greek plan is definitely doable. There are other measures, too, that could be taken to shield the country from the continuous negative repercussions of the war in Ukraine. Of course gas supplies could be increased by expanding the Trans-Anatolian gas pipeline (TANAP) to boost imports from Azerbaijan gas, for instance, but keeping coal power plants would also help contain pressure on electricity prices, as would adding a nuclear plant of 4,000-6,000 MW. Moving quickly to promote energy conservation, too, would also help alleviate spiking costs and give Greek households and business sustainable access to more affordable electricity.

**5. Greece is the only European country where electricity prices are directly linked to natural gas international stock prices. Do you believe there is a way out of this? What measures could be taken to bring electricity prices in the Greek market down?**

Yes, there is definitely a way out. This is the responsibility of the Regulatory Authority for Energy, which controls and regulates energy prices in Greece. Given the circumstances, the RAE certainly has a powerful incentive to propose a different mechanism, one that would follow other European countries in order to help keep energy prices at affordable costs for all.

**6. You have written a book on “Maritime Disputes in the Eastern Mediterranean: The Way Forward”. Do you believe there is room for peaceful cooperation between Greece, Cyprus and Turkey in the energy field and if so, what would be the means to achieve it?**

Yes, I believe very strongly that Greece, Cyprus, and Turkey could and should find ways to cooperate in the energy field, and there several ways in which working together would offer many advantages. One is exploration and development of oil and/or gas deposits beneath the seabed of the Eastern Mediterranean, in which the parties could share costs, share data, reduce duplication, invest in one another's fields, etc. The same could go for offshore wind farms.

Another is the construction of one or more pipelines that could transport East Med gas to the European mainland without having to have the entire route under water: just get it to Turkish coast and run the rest of it overland. Potentially, the three countries also could team up to build an LNG plant, an enormous investment and therefore one for which spreading the risk would be very attractive.

Definitely there is always room for peace and there is always room for diplomacy. The way forward is for Greece and Turkey to continue their discussions based on the principles of the UN Convention on the Law of the Sea (UNCLOS) which is the Atlas of the World Ocean. Unlike Cyprus, neither Greece nor

Turkey is a signatory to UNCLOS, but its guidelines and precedents are applicable to – and actionable by – all countries. UNCLOS provides a legal and technical infrastructure with which Greece and Turkey, as the main parties, could sit down and, with reference to surveys using the latest science and technology, arrive at a fair and equitable maritime solution. Both Prime Minister Mitsotakis and President Erdogan have expressed their willingness to solve this conflict, and I believe that right now, the time is right to get it done. In my book, I have highlighted studies indicating that both countries would lose some maritime areas, but both countries would gain far more: the beauty of a win-win outcome, one in which both neighbors would be able to benefit from the region's oil and gas wealth, and both peoples would be able to enjoy peace and prosperity.

**7. Greece aspires to become a strategic energy hub for Europe. Is this possible and if so what benefits will it bring to the country?**

Absolutely it is possible. Depending on what quantities they have, every East Med country that ends up producing oil and gas can become an energy hub to some extent at least. Looking back, 10 years ago, Cyprus was slotted to become a nice regional hub for pipelines and an LNG terminal, and if development keeps on growing, it still has a good chance to make those predictions come true. Greece could also become a major energy center in the next decade if their exploration efforts confirm the same kinds of deposits found offshore other East Med countries like Egypt and Israel. Indeed a lot of private sector firms are interested, but this will probably take 5-10 years after exploration confirms sufficient quantities of hydrocarbons.

The benefits of hub status would be significant: more good-paying jobs for Greek citizens, more profits for Greek

companies, more revenues for the Greek government, more funds available for roads, schools, and hospitals, more influence on the European and global stages, etc.

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# Russia-Ukraine war could delay Europe's decarbonization plans for a decade



Russia's invasion of Ukraine could force Europe to delay key decarbonization efforts for up to a decade, a prominent regional energy expert has warned in Greece.

"They don't have many choices left," said Roudi Baroudi, CEO of Doha-based Energy and Environment Holding, an independent

consultancy. "Unless some European countries pull out all the stops, much of the continent could soon be looking at crippling shortages, prohibitively high prices, or both."

Now that Europe is moving to reduce imports of Russian oil and gas, he explained, some of the measures expected to reduce carbon emissions may have to be put off "for eight, nine, maybe 10 years," as would planned shutdowns of nuclear generating stations.

"The European Union will need to provide the necessary permissions in some cases, plus financing in others," he said. "Eight to 10 nuclear plants and as many as 30 coal stations slated for decommissioning will have to remain online to keep up with electricity demand, and several projects required to replace Russian gas will need to be accelerated with additional funding and/or guarantees."

If and when gas stops flowing through pipelines from Russia, Baroudi told the 7th Delphi Economic Forum last week, "it cannot be replaced by simply ordering more liquefied natural gas from Qatar, the US, and/or other producers. Europe doesn't have enough receiving facilities to re-gasify such huge amounts, which is why efforts to expand capacity in Germany and the Netherlands are so urgent."

Coordinated releases of strategic oil reserves by the US and other countries are helping to contain upward pressure on crude and other energy prices, he said, but reasonable levels "cannot be maintained unless more supply makes it to market and that means oil producers –primarily OPEC but others as well – have to start pumping more."

On yet another front, "Spain has both spare LNG receiving capacity and an undersea pipeline for imports of gas from North Africa – but very little of that can reach the rest of Europe unless and until a new pipeline connects the Iberian Peninsula to the rest of Europe via France," said Baroudi, who has been advising companies and governments on energy policy for decades. "Paris has recently voiced new openness to that idea, but the EU can and should do more to facilitate it. It

should also do more to establish an agreed route for another pipeline to carry gas from the Eastern Mediterranean to Greece and/or Turkey.”

Baroudi also argued that the EU would be wise to ensure adequate capital flows into renewables such as wind and solar. “We might have to retain fossil fuels longer than we had planned, but that’s no reason to stop funding a cleaner future,” he said. “In fact it’s a reason to move as quickly as possible.”

“The whole situation is very sad,” he added. “Ever since the Paris Agreements of 2015, and especially since the Glasgow climate summit last year, Europe had been on the right track to be ready for a decarbonized economy. But now those plans are being pushed temporarily to the back burner. Apart from the lives being lost in the fighting, the energy and economic implications will mean severe hardships across the continent, especially for lower-income people. And much of the cause is due to the fact that Europe had delays to diversify its sources of supply. Now it finds itself scrambling to prevent an economic disaster.”