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SEE ENERGY BRIEF

Monthly Analysis

Are High Electricity Prices in SE Europe a Regional or a Country Issue?

Introduction

Last September, Greek Prime Minister Kyriakos Mitsotakis sent a strongly-worded letter to the European Commission. SE Europe was struggling to keep the lights on, he said **(1)** and the EU had to do something about it. The approach Mitsotakis proposed focused on creating a centralised energy market regulator and greater integration of national grids. On the face of it, this is a solution that makes sense. It is, however, a tricky solution that may end up doing more harm than good.

According to market analysts, a key reason for the electricity crisis in SE Europe was the disappearance of Ukrainian imports as Russian methodically destroyed the country's grid. It's too easy to blame it all on Putin but this is neither productive nor constructive. The fact is Ukrainian electricity exports are over and we must find new ways to secure and augment electricity supply in Central and SE Europe. Not only this, but exports of electricity from Europe to the Ukraine have risen substantially, too, to make up for lost local generation, which means substantial additional demand that apparently needs to be satisfied, reducing the amount of available electricity for internal markets. **(2)**

Mitsotakis's suggestion for greater grid integration essentially comes down to facilitating more exports of electricity between neighbouring countries in the region. This, he argued, would help secure supply and bring prices down—a big problem for governments in the region, which is not the wealthiest in the EU, to put it mildly. More interconnectors would indeed help regional exports. The problem is that they could jeopardise local supply of electricity. We know this because it has happened before. More specifically, it happened to Norway in 2022, when the country raised its electricity exports to Europe sharply to help plug the gap left by the cutoff of Russian gas supply. Exports of electricity rose by close to 50%... and Norwegians' electricity bills rose in sync.

When countries commit to exporting certain amounts of electricity to their neighbours they are bound by contracts to do so. The bind stands regardless of how much electricity local generators produce, although stipulations about minimum guaranteed supply for the local market are always sensible. However, electricity output can vary, especially with weather-dependent generators such as hydro, wind, and solar. This could result in shortages either for the local or the regional grid.

Electricity Market Reform Under Way

However, progress is being made ahead of the European elections toward closing the legislative process on a package of reforms crucial to the medium- and long-term future of the European Union. The European Parliament gave the green light on April 11 by an overwhelming majority to the four files of the electricity

and energy market reform package, confirming in plenary session the understandings reached in December 2023 with the EU Council (which will now have to put the "end" word with approval for entry into force) on electricity market and gas market decarbonisation.

On the electricity market front, the Union Electricity Market Design Regulation (433 votes in favour, 140 against and 15 abstentions) and the Union Electricity Market Design Directive (473 votes in favour, 80 against and 27 abstentions) are proof that "today is a success because many thought this reform was unnecessary or that we were capable of negotiating it," claimed the rapporteur of both files, Nicolás González Casares (S&D). Just remember how "in the summer of 2021, electricity prices were rising, and we were already saying that the set-up was not working, then Putin started the blackmail" before the Russian invasion of Ukraine when "the surge in gas prices was unsustainable, and this led us to act." In the future of the Union, there will be "social and climate justice, with more renewables and stability for consumers with more stable prices, more electric cars, and less carbon emissions," the Spanish MEP assured.

The central element of electricity market reform is the introduction of financing instruments for renewable and zero-carbon energy, including nuclear, making electricity prices less dependent on the volatility of fossil fuel prices. Direct public support for renewable electricity generation (wind, solar, hydro without storage, geothermal) and from nuclear power will be through a two-way contract for difference, in which generators are paid a fixed strike price for their electricity, regardless of the price in short-term energy markets. The Council will have the power to declare a price crisis (on a proposal from the Commission) based on the average wholesale electricity price or a sharp increase in retail electricity prices. In the event of a crisis, prices can be set at up to 70% of electricity consumption for small and medium-sized enterprises and up to 80% for households.

A Hypothetical Scenario and Solutions

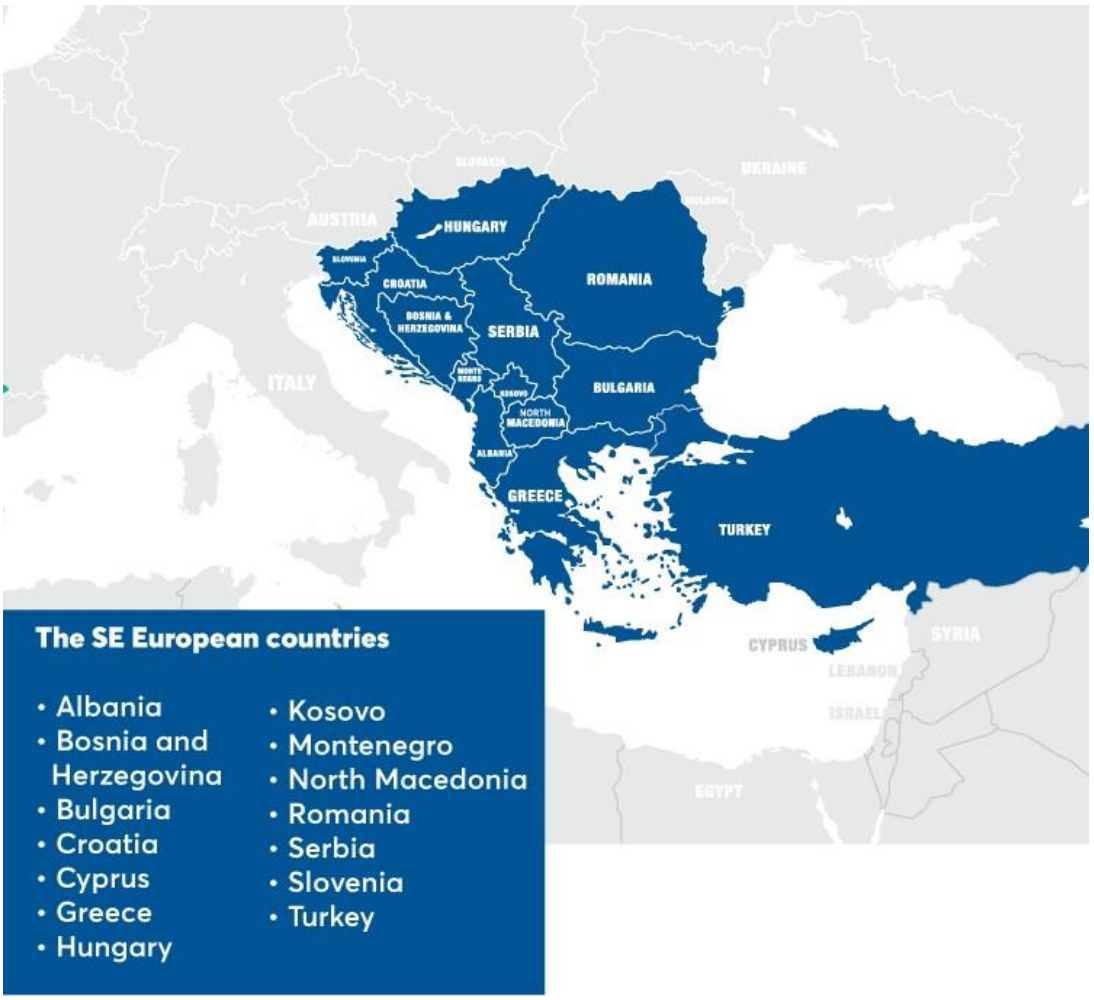
In a hypothetical scenario where, say, hydropower is down due to a drought but the country with the hydro generators is obliged by contract to export certain volumes to a neighbour, it would need to either curb domestic supply or raise prices because it would have to buy electricity from elsewhere to ensure adequate supply. This makes for quite a complicated picture, fraught with risks of even higher prices. A highly interconnected SE Europe also means greater supply volatility because when one country experiences a drought, for example, chances are the weather is pretty dry across the whole region, leading to an overall decline in power generation. Solar is also weather and solar cycle bound and there is no way around this.

One obvious solution would, of course, be more nuclear generation capacity. Yet this takes years to build, which means high prices and volatility of supply would last a while. Be that as it may, self-sufficiency is always the smarter choice to such an extent as it is possible and financially reasonable. Household solar is

part of the self-sufficiency path. So is the continued operation of existing gas and coal generation capacity.

The latter idea would certainly not sit well with the decision-makers in Brussels and many SE European capitals as governments pledge their undying support for the energy transition, apparently with no regard to cost. But what Mitsotakis's letter to the European Commission hints at is that this cost may turn out to be too great to bear. Because we are experiencing a shortage now, while we still have gas and coal-powered generation chugging along, generating electricity 24/7, available on demand.

Map 1: The SE European Region as Defined by IENE



Source: IENE

What would happen when this is gone, replaced by utility-scale solar and more wind installations? Much greater weather-dependency in power generation is what would happen. With more interconnectors and export commitments, this increased weather dependency would lead to even more uncertain supply, both for domestic and neighbouring markets. That's because one important point that grid integration advocates seem to consistently forget is that it would be difficult for Greece, for instance, to send its surplus solar to Bulgaria—because surpluses only occur at peak generation, which happens to be trough demand, both in Greece and in Bulgaria.

A more practicable solution, then, could be a cautious increase in conditional cross-border grid interconnection and an increase in domestic baseload generation along with rooftop solar as the cheapest, fastest to install non-hydrocarbon alternative, with a view to long-term energy supply security as well as demand growth management. In the context of energy supply, security must take precedence over any emission reduction ambitions that may or may not lead to a favourable change in the world's climate.

The Case for the SE European Countries

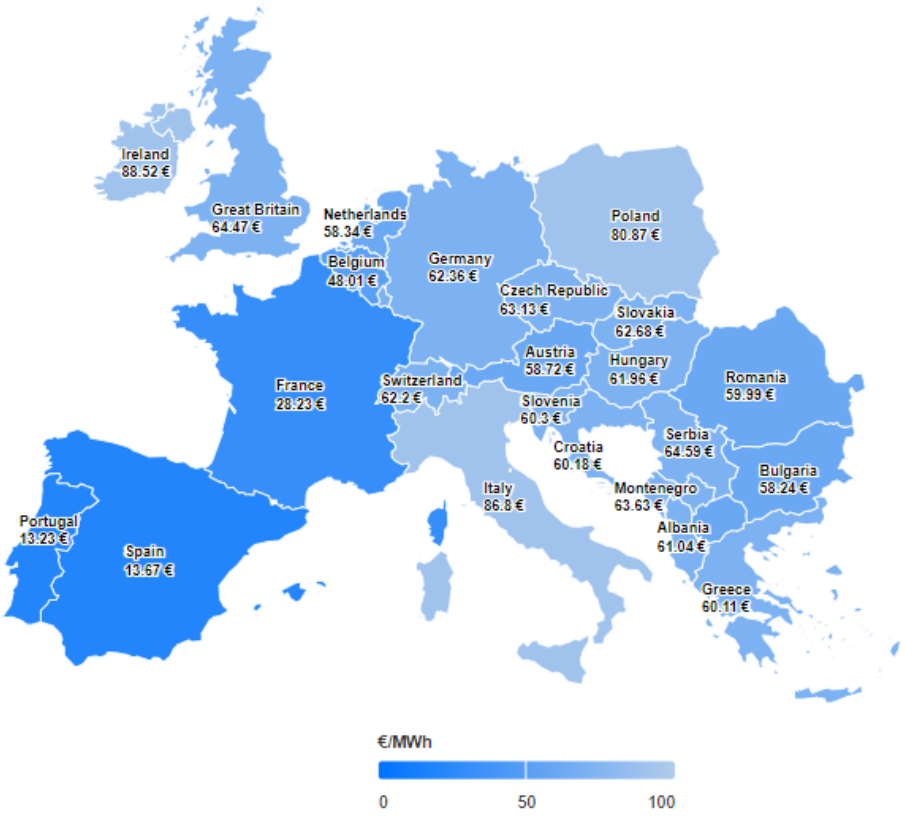
In tune with the Greek PM's letter to the European Commission's President, Greece, Romania and Bulgaria are preparing a proposal for an intervention mechanism that would be triggered any time wholesale electricity prices turn extremely high in Southeastern Europe, when the region is cut off from the rest of the European energy market **(3)**.

Separately, North Macedonia urged Energy Community Secretariat Director Artur Lorkowski to initiate an inquiry as to the reasons for the huge price disparity. The letter was signed by Minister of Energy, Mining and Minerals Sanja Božinovska and President of the Energy, Water Services and Municipal Waste Management Services Regulatory Commission (ERC or RKE) Marko Bislimoski **(4)**. A reduction in flows amid major works on some interconnections, combined with coal power plant overhauls and reconstruction, record heat in the summer, low hydropower output and Ukraine turning into a net electricity importer contributed to the split between the Balkans and Hungary on one side and Central and Western Europe on the other.

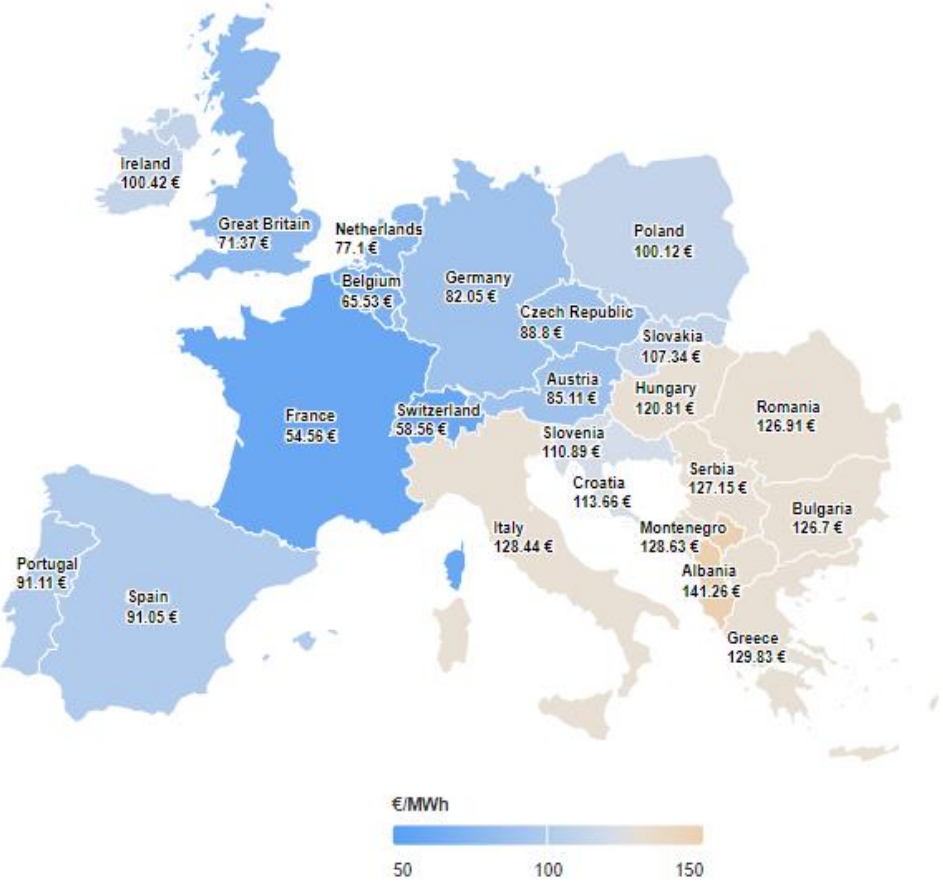
One major point is also the way that the electricity market works. Balkan countries trade according to the net transfer capacity (NTC) mechanism for determining available capacities, while the markets in the central and western part of the continent are connected via a flow-based market coupling (FBMC) system. The latter's algorithm seems to slash or completely eliminate available capacity at times from Germany and Austria toward Hungary. Hungary is the region's main electricity hub and the main supplier of electricity to Ukraine. So, the war-torn country turns south for its electricity demand, bolstering prices. It essentially makes SE Europe, for a certain period of time, an energy island.

Wholesale electricity prices in Greece have more than doubled from €60/MWh in April 2024 to €130/MWh last August, Mitsotakis pointed out in his letter and stressed: "This is a regional crisis." Relative to last summer, the country's production of electricity from wind and solar increased by 25%, while output from lignite fell 27%, he noted. "This disconnect between an energy transition that is highly successful, and electricity prices which jump suddenly to extreme levels requires a political response. Left unaddressed, it threatens our citizens and our competitiveness. It could undermine support for our EU Green Deal," the Greek prime minister stated.

Map 2: Wholesale Day-ahead electricity prices in Europe, April 2024



Map 3: Wholesale Day-ahead electricity prices in Europe, August 2024



Source: Energylive

At one point, the price of electricity in Hungary reached €940/MWh while in neighboring Austria it was just €61/MWh or 15 times less for the same product at the same time across an internal EU border, Mitsotakis underscored. It undermines the spirit and purpose of the internal market, in his view. Moreover, the spread between the highest and lowest price in the region exceeded €100/MWh for 395 hours in the summer, compared to 35 hours from January to May. "The system is so complex and opaque that is virtually impossible to understand precisely what is driving prices at any given point and time. We have created an incomprehensible black box – even to experts. And we cannot explain convincingly to our citizens why the price they pay is rising so suddenly. This is politically unacceptable," Mitsotakis warned.

As the European Commission is getting a new lineup, Greece is set to advocate for the completion of the single energy market. Mitsotakis said the EU needs stronger governance – a system that allows it more input into decisions made by individual countries that could have regional effects, such as planned outages. His second request is for more EU regulatory oversight. "We need an EU-wide regulator for electricity that can look at multiple markets at once – and reassure consumers that there is no foul play," he said.

As for exports to Ukraine, their impact is felt only by some countries without sufficient electricity transfers within the EU, Mitsotakis added. He pointed to the new electricity market design for options for Greece to "claw back windfall profits from producers and protect consumers during this shock". The country already charges a windfall tax on energy companies and directs the proceeds in the form of subsidies to vulnerable consumers. At the moment, the EU allows market interventions after a prolonged period of high prices. Greece, Romania and Bulgaria are set to request the possibility of reacting immediately to spikes. Mitsotakis said the EU must push for electricity interconnectors. When price disparities between countries reach extreme levels, the cost-benefit of interconnection propositions is much stronger, he explained. **(5)**

In particular, according to Naftemporiki.gr **(6)**, the three Balkan countries want part of the revenues from electricity markets to be directed to grids and the development of strong cross-border interconnections. It should be noted that Greece is also struggling internally with market distortions. In addition, Eurelectric **(7)** highlighted the role of a drop in power exports from France in the price disparity as well as the rise in the prices of natural gas. While the surge in electricity prices has lately subsided amid a cold spell and heavy rain, more challenges lie ahead. Coal-fired power plants in the region are mostly old and unreliable and need to be phased out, with efficient gas fired plants taking their place. Now almost certainly more outages for overhauls and maintenance are anticipated.

A case in point is the Kozloduy nuclear power plant in Bulgaria, which took one of its two reactors offline until November 30. It means 1 GW less in the regional system. Again, much depends on the weather and especially how cold the winter will be. Romanian Minister of Energy Sebastian Burduja recently said that his country would ask the EU for compensation for the high price difference between Eastern and Western

Europe.

"Of course, we are talking about a dry year, lower hydropower production, we are talking about problems in the interconnection area, maintenance on certain lines in Hungary. We are talking about a reduced capacity in Austria, the transfer-exports of cheaper electricity from Western Europe to Eastern Europe. We are also talking about support that we are very happy to extend to Moldova, but also to Ukraine – which creates pressure on prices in Romania, something that we note, but we cannot accept indefinitely. If we are still in a single European energy market, it can't be that only some people can pay the bill and we can endlessly tolerate prices that are two or three times higher than in the rest of Europe," Burduja stressed, as quoted by Agerpres. **(8)**

It is worth noting that the Greek energy ministry, along with its Bulgarian and Romanian counterparts, is preparing to submit a joint letter to the European Commission urging the establishment of a permanent mechanism to combat extreme electricity prices. This initiative was prompted by major wholesale electricity price disparities between eastern and western Europe. The letter has already been drafted and is pending the signatures of the three energy ministers before being submitted to Brussels.

Sources at the Greek energy ministry have noted that the matter is already being looked into by the European Commission. Also, Greece, Bulgaria and Romania want their proposal to be included on the agenda of the next EU meeting of energy ministers, scheduled for October 15, according to these sources. The three Balkan countries want some flexibility on a EU directive that would enable, whenever necessary, a clawback mechanism to be triggered into action so that electricity price disparities may be contained.

The joint letter is expected to describe, in broad terms, how this mechanism will work to avoid the side-effects of wholesale prices surges. Over the past few days, wholesale prices in the SE European markets have eased but are still well above price levels registered in central and western Europe. In Greece, today's wholesale price is down to €104.49/MWh, while price levels in Bulgaria and Romania are at €83.65/MWh. Wholesale prices in Austria, the Czech Republic and Germany are at €58.17/MWh, €55.05/MWh and €55/MWh, respectively.

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