

The new Poland's governmental scheme for boosting economic growth, often referred to as Morawiecki Plan, indicates that the Polish coal industry will only develop. Poland will remain a major coal producer and consumer in the V4 declaring to continue investment in extraction and sustainable coal power technologies. In the meantime, Germany reaches peak in net export of coal-generated energy, Energiewinde aside.

'Coal remains the key resort of energy. It generates 40% of world power, and 50% in Central and Eastern Europe', remarks Gaetano Massara, General Electric's CEO for South Eastern Europe.

Solid fuels are there to stay as the major energy source for at least several decades more. But there are initiatives aimed at making this transition a little less steep and a little greener, like recently opened RDK 8 module of an EnBW plant in Karlsruhe, Germany. Visegrad countries' power sectors, despite their more balanced energy mixes, rely heavily on various types of coal as well. In Czech Republic more than half of all energy is solid fuel generated, in Slovakia the number is well over 30%. The only notable exception here is Hungary with just 10% of total energy production coming from coal. And it is not at all for environmental reasons: Budapest's streetlights depend on burning of crude oil and natural gas, which amounts to about 60% of all Hungarian energy.

Odds are that solid fuels are to keep their position for quite a while. Not only they are more appealing to politicians of both conservative and labour backgrounds, they are also a lot easier to cope with technically and environmentally than broadly available alternatives. Mines and the burning process in power plants are not at all climate neutral, nor are they the most pleasant view for us to see. Nonetheless, they remain significantly less harmful to the direct vicinity than fracking or nuclear waste storage, side products of the two most widely applicable alternative resources.

There is also the matter of political realism. When it comes to security and stability of supply in dire circumstances, coal is often the only acceptable choice for European countries. Oil and conventional natural gas are not as prevalent and most of their reservoirs are geologically concentrated in several big spots on the planet. They come with an expiration date too. Uranium, on the other hand, is scarce in Europe and must be processed with an expensive technology to which very few states have access.

These are no specifications of the strategic resource for emergency power generation. It should be retrievable in considerable amounts and at any time from the state territories, easily stored and manageable with technology at hand. For V4 the answer to this conundrum for now can only be coal. And it transpires beautifully in the energy import statistics. The more a country steered away from coal, the more it now depends on import of

either fuels (Hungary imports from Russia over 80% of its natural gas, the primary source of energy in the country) or energy (Slovakia imports about 80% of all its energy, mainly from Czech Republic).

The most energetically independent nations in Visegrad - Poland and Czech Republic, the latter of which is the main net exporter of energy in the region - burn coal for most of its power. Probably that is the reason behind continued subsidies for coal energy in the region, apart from day-to-day politicians' fear of ruining their reelection opportunities.

And this is not a uniquely Central European condition. More green energy-oriented European countries also keep the money flowing into the coal industry. In Germany, for instance, even though green energy has priority on the grid coal subsidies have been running in steadily. It would be silly to blame just the mining lobbies for these obviously conflicted policies. In fact, most of the German coal power is for export. It supports foreign energy grids with prima facie lower carbon footprints, eg. in France, the largest net importer of German power. It is convenient for both parties. In Europe the CO₂ emission is calculated in the country where power is generated, not consumed. Therefore France can use German coal plants and keep its low carbon footprint, and Germany sells about 25-30 TWhs annually, impairing its CO₂ emissions record only slightly due to its high overall output.

Obviously, total environmental impact of coal burning is not diminished by peculiarities of the CO₂ emission algorithms. It still is a problem. However, it seems we are stuck with coal for at least another three or four decades until renewables are efficient enough and political climate more favourable so less strategical power play over resources would be expected. Over thirty years - that is a full generation. And issues spanning that long cannot be discarded as something that will be resolved on its own, perhaps as an effect of the soon-to-come green revolution.

The answer is less spectacular than biophotovoltaics or graphene superbatteries but, unlike those two, already at hand and available for mass-scale application. '1% more efficient conventional energy generation means 2% less CO₂ emission.', notes Mariusz Mielczarek, GE's director for Government Affairs and Policy in CEE.

Also, innovations in heat transfer and ultrahigh pressure boilers can boost the efficiency of coal-burning power plants up to 50% in the matter of years. To follow up on the German example, EnBW's newly built RDK 8 module in Karlsruhe - visited by editors on Visegrad Insight earlier this year together with a group of Central European journalists - reaches 47.5% vs. global average of 33% of efficiency at boiling water pressure of up to staggering 4,400 psi. 'Steam power plants are the future of energy generation after rise in coordinated

international actions to fight global warming, like the COP 21 convention,' says Massara. Steady investment in new solutions and continuous upgrade of coal-fired power plants across the continent, like in Karlsruhe, can make coal power way more sustainable until the switch to entirely green energy is finally available.

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