

Ukraine's energy system: principles for post-war reconstruction

Friday 28 October 2022, by [PIRANI Simon](#) (Date first published: 28 October 2022).

Ukrainian socialists hosted an on line discussion on “Energy Crisis and Sustainability: lessons of the Russo-Ukrainian war” on 22 October. You can watch a recording [on youtube here in English](#), or [here in Ukrainian](#). The panel of speakers included Ukrainian climate policy researcher Maryna Larina; Leszek Karlik of the Energy Policy Group of Razem, the Polish left party; and Christian Zeller of the University of Salzburg; and me.

The event was part of an on-line conference on Reconstruction and Justice in Post-War Ukraine, hosted by the editors of the socialist journal [Spilne \(Commons\)](#). Recordings of all the sessions are now [up on line](#), and well worth viewing.

Here's the text of my talk. At the end I have added some comments on the discussion, and some links to further reading. I look forward to the continuation of our discussion. Simon Pirani.

I have not been to Ukraine since the invasion in February, and I only understand the difficulties people face at second hand. Furthermore, it is difficult for all of us to talk about post-war reconstruction when the war is raging. Every day this means not only deaths and injuries, but also the destruction of civilian infrastructure, including power stations and boiler houses.

This winter, Ukrainians will not only be trying to protect themselves from bombs and bullets, but also trying to stay warm and healthy in the face of disruptions to gas, heat and electricity supplies. [This month, Russian bombing has focused on civilian infrastructure, [putting](#) one third of power stations out of action and forcing widespread power cuts as winter temperatures set in.]

But even under these circumstances, discussion has begun about post-war reconstruction, in the first place between the Ukrainian government and European governments at the [Lugano conference](#) in July. They are making plans for the long term.

The labour movement, and social movements, need an approach to these issues that takes the side of working people and of society, as opposed to economic or political elites. I am going to suggest four principles that can help develop such an approach.

1. Energy should be supplied mainly from renewable sources.

Society internationally needs an energy transition – that is, a transition to a system without fossil fuels, centred on electricity networks, with the electricity generated from renewable sources such as solar, wind and wave power. In Ukraine, there is also some potential for biofuels made from agricultural waste.

I am sure everyone present knows why this is: because global heating could seriously damage human society, and the chief cause of global heating is the burning of fossil fuels.

For the last 30 years, the world's most powerful governments have gone to great lengths to delay the energy transition while simultaneously pretending to deal with the problem.

The labour movement and social movements need to advocate a transition that serves the interests of society, not capital.

Two points to make about Ukraine specifically.

a. Coal has historically been central, in the Donbas in particular. Coal use has been falling since 2016, mainly due to Russian military aggression. Now, political forces in the Donbas are discussing a future without coal. For example in the recent open letter by the Mayors of Myrnohrad, Chervonohrad and other towns ([here in Ukrainian](#), [here in English](#)). I hope that the labour movement and social movements will engage in this discussion.

b. Gas has also played a key role. The government has sought to reduce dependence on Russian gas, and there have been no direct imports since 2015. However, in Ukraine, as elsewhere, gas companies make the false argument that gas is part of the solution to the problem of greenhouse gas emissions, because it produces energy with fewer emissions than coal. Actually, it's part of the problem. The energy transition means moving away from gas.

2. It is in society's interests to cut the flow of energy through technological systems.

To understand this, we should, first, forget the idea of "energy demand". People do not want "energy". They want the things that it provides – heat, light, electricity to run computers, the ability to travel from place to place, and so on.

These things can be provided, using far less energy than is used now, by making better use of technologies that have existed for decades.

An obvious example is heat for people's homes. In Ukraine, this comes mainly from gas boilers, or by district heating systems based on combined heat and power plants.

Governments, not only in Ukraine but across Europe, can start tackling this problem now. First, we need insulation, to reduce the amount of heat needed. Second, we need electric heat pumps that are four or five times more efficient than gas boilers.

This would keep people warm, reduce the amount of gas needed and cut greenhouse gas emissions. These technologies are very simple, although retrofitting them to old buildings can be tricky.

These are short-term measures. In the long term, engineers see the creation of integrated urban energy systems as the priority. In such systems, there would be multiple inputs of renewably-produced electricity. These would be integrated with a range of electricity storage facilities, from hydro storage to electric vehicles.

These systems can be integrated, but also decentralised. This makes them more compatible with collective, non-state forms of social organisation that socialists favour.

Non-governmental organisations in Ukraine who favour such systems have [advanced](#) the idea of "energy freedom", that is, "the greatest possible freedom for citizens, organisations and communities to produce energy and manage it in their own economies".

In my view, socialists should take part in the discussion about what this means in practice.

3. We should demand that fuels and electricity are treated as services, as rights for all, not as commodities.

Now, after decades of neo-liberalism, oil, gas and electricity are treated as commodities not only for international trade but, in many countries, in retail markets.

In Ukraine there is a public service obligation on companies to supply electricity and gas to households at fixed prices. There are discussions at government level about how to change this system, in the name of reducing inefficiencies.

It's a basic principle for the labour movement that these changes should not be made at the expense of households. However, we should also go further, and challenge the notion that fuels, or electricity, are commodities to be bought and sold.

4. We should favour technologies that are compatible with our aims of social justice, and resist the imposition of technologies that serve the state and capital.

This is relevant to post-war reconstruction.

The EU has its "green new deal", that involves a limited shift to renewable energy supply technologies, but that protects powerful energy corporations and liberalised markets.

Many Ukrainian politicians are happy with this political framework and some of the technological choices it implies. This takes them along paths that I believe the labour movement and civil society should oppose.

For example, the EU is discussing plans to produce electricity from big wind and solar farms in Ukraine, and use it to produce [hydrogen for export](#). The hydrogen would be produced by electrolysis of water, a very energy-intensive process.

This is greenwash at its worst. Clearly, Ukraine needs electricity from wind and solar to end its reliance on coal and gas. To use it, instead, to produce hydrogen for export would be a form of neo-colonialism. I hope the labour movement and civil society, in Europe and Ukraine, will block this plan.

Another live political issue is whether new nuclear plants, specifically Khmelnytsky-3 and Khmelnytsky-4, should be built. This is in the interests of some Ukrainian politicians and business elites, but not in society's interests.

It is feasible to aim for a system that provides the electricity that Ukraine needs from renewable sources, without new nuclear. So investment in it will obstruct this aim.

Of course behind this are broader arguments about whether and how nuclear power should be part of post-fossil-fuel energy systems at all. I am not enthusiastic about nuclear power, because it is, by its nature, closely bound up with powerful state and military structures. By contrast, decentralised renewable technologies are by their nature compatible with collective, egalitarian ways of organising society.

Some points that came up in the discussion

About gas supplies in the short term. A questioner asked whether Ukraine could get through this winter, given the constraints on gas supplies. The answer is, yes it can. In recent years, Ukraine has produced about 20 billion cubic metres (bcm) of gas each year from its own gas fields, and imported

about 12-15 bcm/year at its western border. No gas has been imported directly from Russia since 2015. Although almost all of the gas imported physically originates from Russian gas fields, it is sold to Ukrainian gas companies by European traders. The prices have shot up, and that problem faces Ukraine along with other countries. But for emergency purposes, since it produces most of the gas it needs, Ukraine is well placed to deal with it – although it is likely that gas production will be lower this year, due to Russian aggression. However, it seems very likely that a far bigger problem, in the short term, will be the destruction caused to the electricity system by Russian bombing.

About new nuclear. A strong case was made in favour of nuclear power by Leszek Karlik (see also [his article here](#)). He argued that grid-scale deployment of renewables would be too slow to meet energy demand. In my view, supply should not be considered separately from demand. Energy throughput in post-war Ukraine, as in all countries, could be reduced by energy conservation (e.g. programmes to insulate homes and replace gas boilers with heat pumps, which reduces the throughput of energy needed for domestic heating). Second is a political point: nuclear power already has powerful support from state, corporate and military forces, in Ukraine and many other countries. Why should the labour movement and civil society use our political resources to support this expensive technology that for the foreseeable future will be controlled by social forces inimical to us? We should instead focus on technological changes that will benefit society, from home insulation and decentralised renewable power to re-making urban transport systems with fewer cars.

About workers in the energy sector. It was suggested during the discussion that it would be easier to organise labour solidarity among workers in the nuclear industry, than among workers who are e.g. installing solar panels and are not physically gathered in a workplace together and are not as highly skilled. In my view this is a poor reason to favour investment in nuclear power as opposed to investment in renewables. Trade unions in many European countries have made big steps forward in organising precarious and potentially hard-to-find workers including delivery drivers, call centre staff and others who work outside traditional industrial frameworks. And as a movement we should support union organisation everywhere. We should decide our attitude to energy technologies (nuclear, renewables, fossil fuels etc) by considering which of them best fit with the sort of energy transition we hope to achieve.

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P.S.

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