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A Green Electrification Target for All?

COP31 as a Catalyst for European Clean-Tech Diplomacy

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Australia and Turkey chair this year's Conference of the Parties – COP31 – in Antalya. The host Turkey is setting its own agenda, including a global electrification target as part of the Global Climate Action Agenda, to increase electricity's share of global energy consumption from the current 20 per cent to 35 per cent by 2035. In order to maximise support, the COP co-chairs are proposing a non-binding and non-specific target. Although the EU and certain other countries are actively backing the initiative, financial support for developing countries is yet again an issue. Even the recent global energy price shocks are not enough to guarantee a green electrification target – despite its pertinent combination of climate action, energy security and competitiveness. Germany and the EU should work to advance international cooperation on climate-friendly electrification beyond COP31, and in particular to pave the way through bilateral relationships.

Today international climate negotiations (Conferences of the Parties, COPs) focus primarily on implementing already agreed climate targets. Every year, host countries propose new initiatives to accelerate implementation of the Paris Agreement. For example, the Global Climate Action Agenda adopted at COP30 in Brazil involves regular reviews of progress towards climate targets. For COP31, the Turkish hosts are looking at reducing waste and improving urban climate resilience, and in particular hoping to agree a global electrification target (COP31 35-by-35 Global Electrification Pledge). Such a target could be directly linked to the process of phasing out fossil fuels (Transitioning Away From Fossil Fuels, TAFF) launched by Brazil last year (see SWP Comment 05/2026). That would mean ensuring that electricity generated using fossil fuels is excluded — whereas the electrification target proposed for COP31 is not restricted to climate-friendly energy sources (green electrification). The Turkish COP31 president, Murat Kurum, made this clear at New York Climate Week in September. In other words, the target is partly at odds with TAFF. While Kurum advocates a voluntary approach to national electrification, he calls explicitly for an expansion of renewable energy to meet rising energy demand for artificial intelligence.

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The significance of electrification for climate action

"Green electrification" describes the transformation of energy consumption to replace fossil fuels with power from renewable sources. If consumers across all sectors — from industry and transport to buildings and agriculture — are enabled to switch to electricity-based processes and technologies, greenhouse gas emissions will be reduced. Efficiency gains can also contribute to reducing emissions, meaning an improved yield per unit of energy; electric mobility is a prime example.
Electrification of consumption is therefore a key complement to the green energy transition, which focuses primarily on the production of climate-friendly electricity. Successively electrifying energy consumption could enable all economic sectors and areas of life to switch to renewable energy. However, simply electrifying all sectors and everyday life ("electrify everything") is considered too costly. Green hydrogen will also be required, especially in industry (indirect electrification).

Growing political interest and economic expectations

The Turkish initiative capitalises on growing political interest in electrification. As the International Energy Agency (IEA) notes, the energy price shocks associated with the US-Iran war have accelerated a shift in thinking. The situation of persistently high and volatile oil and gas prices following the price shocks in 2022 and 2026 creates competitive disadvantages and social pressures in importing countries. For many, oil and gas imports are the Achilles' heel of their economies. In the long term, importing nations in Europe, Africa, Asia and Latin America can address that risk only by lowering the share of fossil fuels in their energy consumption.

Accelerating electrification is also expected to modernise economies and generate growth. Households and businesses will invest in new technologies, and infrastructure will need to be renewed and expanded. In Europe, weather-related fluctuations in renewable electricity supply must already be balanced with demand, making flexible electricity grids and large-scale battery storage increasingly important. Switching energy consumption in the transport and buildings sectors from oil and gas to electricity requires electric drives, efficient battery technologies and heat pumps, as well as electrolysers to generate hydrogen. Rising demand for electrification technologies (clean tech) is also driving international competition to develop cost-effective solutions — as was the case with solar and wind energy technologies.

Global market share in clean technologies is a key benchmark for Germany and other EU member states when it comes to measuring innovative strength and geoeconomic dominance, particularly in competition with China. Harnessing this competition to advance electrification and climate action at low cost while maintaining economic leadership is currently one of the major challenges facing European governments.

"Electrify Now" …

In June, in the run-up to COP31, the European Commission proposed an initial roadmap for achieving the global electrification target with the help of "renewable and other clean energy" ("Electrify Now"). To that end, it is coordinating activities between the three current COP presidencies — Brazil, Turkey/Australia and Ethiopia. At the same time, the initiative is looking ahead to COP33, when the next Global Stocktake will assess progress in implementing the goals of the Paris Agreement. Other countries, including the United Kingdom, Canada, the Philippines and South Korea, are also participating in "Electrify Now", and the two international energy agencies, the IEA and IRENA (International Renewable Energy Agency), are providing support, including through a special report

commissioned at the request of Turkey and Australia.

In July the European Commission also proposed an Electrification Action Plan for its member states, as part of the reform of EU climate policy (see SWP Comment 42/2026). Electricity's share of final energy consumption is to be doubled from the current 23 per cent to 46 per cent by 2040 (indicative target). In its proposal, the Commission links electrification to three key EU climate policy objectives: decarbonisation of industry, transport and buildings; security of supply; and strengthening European competitiveness. European demand for electric vehicles, heat pumps, electrolysers and batteries is to be met primarily by European suppliers. In the meantime, fossil fuel price volatility is boosting efforts to gain greater control over energy price trends and to reduce energy costs for consumers in both the short and long term.

Denmark and the Netherlands, in particular, along with the 2021 to 2025 German government, have pursued an electrification strategy to achieve national emission reduction targets. Norway also stands out in Europe, as an early adopter of electrification. Norway is a prime example of a country with structural geographical advantages. Its abundant hydropower resources have kept electricity prices low, and the buildings and transports sector both rely largely on electricity.

… but without China?

International cooperation on electrification is a balancing act for the EU. On the one hand, it wishes to advance global climate protection efforts. According to IRENA, meeting the global 1.5°C target would require 78 per cent of global electricity consumption to be supplied by renewables by 2035. Chinese products will be indispensable in scaling up the clean-tech sector internationally and reducing costs across the industry. European clean tech manufacturers require imported raw materials, chips and processors that can only partially be substituted by domestic production. On the other hand, the EU wants to protect European clean-tech companies from Chinese competition and curb China's dominance. Its accompanying trade policy initiatives, such as the Industrial Accelerator Act (IAA), therefore take a different, non-cooperative approach.

China's pace and dominance

China now accounts for around 80 per cent of the world's most important clean-tech products. And the country is itself a frontrunner in electrification, with an estimated 29 per cent share by 2025. In its latest Five-Year Plan, Beijing declares its intention to move even further ahead internationally. One component pursued under the heading of "green development" is "electric power substitution" to replace coal, oil and gas in end-use consumption. In other words: electrification, with a target of 35 per cent by 2030. The cornerstone of this policy is expansion of renewable energy, including green hydrogen, ammonia and methanol for industrial purposes and industrial parks planned in conjunction with large wind and solar farms.

From China's perspective, electrification serves economic modernisation and innovation and contributes significantly to the national growth strategy. The initial focus is on the Chinese market, which — according to one of the benchmarks — is set to become the world's largest market for electric cars. Electrifying industrial processes means increasing the production and use of heat pumps, electric heating systems and electrolysers. However, China's growth strategy cannot succeed without exports, with subsidies and excess capacity being used to flood international markets with clean technologies. Consequently, the competitive pressure on European companies will continue to increase, while Beijing's economic expansion will drive the international trend towards electrification and, consequently, decarbonisation.

The United States remains a key player

The US market is equally important in the international context. Although Washington is no longer participating in climate negotiations, the US energy sector is developing rapidly. The Inflation Reduction Act (IRA) introduced by the Biden administration in 2021 included a comprehensive support programme. Tax credits and investment incentives for green hydrogen, battery technology, electric vehicles and other clean technologies have expanded the manufacture of batteries, electric cars and solar installations. Scientific calculations suggest that the IRA could have almost doubled US emissions reductions. The effects of the IRA are still being felt, with continuing investment in renewable energy and battery technology. Demand for electric vehicles is also growing in response to rising fuel prices. As the US Energy Information Administration (EIA) reports, investment in wind and solar power plants is rising, driven by record electricity demand from artificial intelligence applications. Although Trump scrapped the Biden administration's funding for two major projects — halting an offshore wind project on the east coast and a solar power plant — the energy demand for data centres cannot possibly be met without renewables. Rising oil and gas prices are doing their bit to boost growth and development in the clean-tech sectors.

The global electrification target – a foregone conclusion?

Although an electrification target would contribute to climate protection and provide a degree of insulation from volatile energy prices, agreement at Antalya is by no means guaranteed. This is evident from the efforts of the Turkish COP Presidency during New York Climate Week in September. Rather than prioritising a green target, the pledge is not specifically green. Environmentalists are particularly critical that this would encourage the expansion of nuclear power.

The Australian-Turkish COP Presidency is focused on diplomatic success and wishes to avoid restricting the scope for progress in individual countries. Instead, poorer nations need to be brought on board to agreeing to yet another target through financial commitments. To this end, it has also involved companies and other stakeholders in the Global Electrification Pledge, which aims to mobilise funding for the poorest countries, island states and developing nations. Power grids and storage top the list of necessary investments. Meanwhile, the number of countries wishing to participate in the "Electrify Now" campaign has been growing, with the newcomers including Germany, Uruguay, Jordan and Kenya. The Pacific Island Countries expressed their support for the global target in a communiqué at the beginning of September, and coupled this with a clear call for technical and financial assistance.

The challenge remains to convince more developing countries to agree to an additional global target and take on another obligation. While many developing countries point to past failures to provide promised support for their efforts, the growing crisis in international climate finance further eroded the credibility of any commitments. The COP Presidency will need to demonstrate particular diplomatic skill here, both before and during the conference, and organise concrete incentives.

From the climate perspective, the global electrification target lacks binding commitments, and should ideally be limited to renewable electricity sources. As with the other implementation targets — in particular the global targets to double energy efficiency and triple renewable energy capacity by 2030 (COP28 in Dubai) — the targets should be formulated to enable monitoring and progress reporting. Codification will be required to ensure that progress is traceable. The Nationally Determined Contributions (NDCs), which parties to the Paris Agreement are required to submit to the UNFCCC every five years, could serve this purpose, as they allow countries to choose which climate targets they intend to

achieve and by what means. Ultimately, this would enable transparent tracking of progress on the global electrification target, including its contribution to climate protection.

Beyond COP31

In Germany and the EU, pressure is mounting to rapidly transform the energy system to increase use of electricity from domestic sources and to protect value chains. There is therefore a strong self-interest in electrifying on the basis of renewables, yet this is evidently not sufficient given the current energy supply risks and the anticipated costs of the system transition. For this reason, green electrification should be clearly named as a strategic goal. That will send an important signal to businesses across many sectors, charting a path towards greater stability of energy supply and safeguarding the business environment. Energy price volatility, persistent fossil fuel supply bottlenecks, and rising global energy consumption have led the EU to pursue green electrification with greater vigour. Combined with a global agreement of the kind envisaged for COP31, the electrification target could provide further impetus for international cooperation.

Meanwhile, in competition with China the aim should be to support European producers of clean-tech products and secure markets in third countries. The international climate negotiations on electrification provide an important signal in this regard and can help German clean-tech diplomacy to negotiate bilateral cooperation in more concrete terms. Here, the 'Electrify Now' initiative can serve as a useful platform for engaging like-minded middle powers and other trading partners.

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