

POLICY PAPER

Renewable Electrification as a Means of Transitioning Away from Fossil Fuels

From Commitment to Implementation at COP31

Kerstin Opfer, Madlen Peter, Lina Adil, Giovanni Maurice Pradipta, Martin Voss, Jan Burck

Executive Summary

Renewable-based electrification is a central pillar of the global transition away from fossil fuels: COP31 should explicitly link the proposed ‘35 by 35’ target – which aims to increase electricity’s share of final energy consumption to 35% by 2035 – to the rapid expansion of renewable energy, grids, storage capacity, and energy efficiency. Electrification should reduce fossil-fuel dependence, rather than shifting energy demand onto fossil-fuel-based power systems. This requires simultaneous progress both in the electrification of end uses and in increasing the share of renewables in electricity generation. Countries may be making strong progress in one area while still facing significant gaps in the other; a two-pronged strategy is therefore essential to drive both areas forward in parallel.

Countries are already moving fast, and Germany needs to catch up: The global energy transition is gaining momentum, with countries pursuing very different but increasingly ambitious pathways to electrify their economies and expand renewable energy. China already reached an electrification rate of 33.6% in 2024, making it the global frontrunner. Ethiopia has largely leapfrogged fossil-fuel-based power development, and Indonesia and Turkey are rapidly scaling up their shares of renewable energy in electricity. Germany, once a leader of the energy transition, risks falling behind due to slow progress in electrification. Germany and the EU should use COP31 as an opportunity to demonstrate leadership by announcing the development of ambitious national roadmaps for a transition away from fossil fuel (TAFF), linking TAFF to comprehensive national electrification strategies.

Global ambition must be translated into tailored national action, backed by international support: Countries enter the energy transition from different starting points, which is why the global ‘35 by 35’ target must be translated into tailored, national targets. In most cases, renewable energy and electrification are already the most cost-competitive options, creating an opportunity for developing countries to leapfrog fossil-based energy systems. At the same time, the success of ‘35 by 35’ will depend on whether poor countries have the means to participate. Wealthy countries have a responsibility to work together to create the rights conditions and to provide the finance, technology, and capacity support needed to enable ambitious renewable-based electrification in poor countries. This is essential to ensure that no country is left behind and that all countries can benefit from the opportunities of the

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1 Political context

The UAE consensus reached at COP28 marked a historic turning point in international climate diplomacy. For the first time, governments agreed to transition away from fossil fuels (TAFF), alongside commitments to triple global renewable energy capacity and double the rate of energy efficiency improvements by 2030. Together, these commitments set out a clear path towards achieving the goals of the Paris Agreement. The challenge now is no longer agreeing on the direction of travel but demonstrating how these commitments will be implemented.

That challenge has become even more urgent amid the deepening global energy and food crises triggered by the conflict in the Gulf and the closure of the Strait of Hormuz. Disruptions to major oil, gas, and fertilizer supply routes removed substantial quantities of resources from global markets, driving up prices and renewing concerns over energy security and food affordability. More than any recent geopolitical event, the crisis exposed the strategic risks of continued dependence on fossil fuels and highlighted economies' vulnerability to fossil fuel-related supply shocks. This created a strong incentive for countries all around the world – but especially in Southeast Asia, the region most severely affected – to speed up electrification and renewable energy expansion.

Although the Brazilian COP Presidency failed to reach a consensus at COP30 on a formal global TAFF roadmap, its efforts demonstrated growing political support for moving beyond high-level commitments towards practical implementation. COP30 President André Corrêa do Lago announced that work on a Brazilian TAFF roadmap would continue ahead of COP31. Simultaneously, the Santa Marta Process¹ has evolved into a 'coalition of the doing', bringing together countries to develop national TAFF implementation plans, promote economic diversification, and strengthen international cooperation.

At the same time, the broader political context within the UNFCCC remains highly challenging. Tensions among Parties remain high. The contrast between a strong increase of promised climate finance and reduced availability of international climate finance and means of implementation undermine trust and constrain negotiations. Under these circumstances, attempts to reopen formal negotiations on TAFF at COP31 would likely result in another politically divisive debate. A more constructive approach is to advance implementation through the COP31 Action Agenda combined with visible national action in different parts of the world. Demonstrating that governments are translating international commitments into domestic policies will be essential for maintaining political credibility and sustaining momentum.

The incoming Turkish COP Presidency has placed electrification at the centre of the COP31 Action Agenda through its proposed '35 by 35' initiative, which aims to increase electricity's share of final energy consumption to 35% by 2035. This policy paper examines how COP31 and the Turkish '35 by 35' initiative can become a much-needed driving force for the implementation of the COP28 energy package, and identifies the national and international actions Germany should pursue to strengthen momentum ahead of COP31 and beyond.

¹ The Santa Marta Process aims to turn the fossil fuel phase-out debate into practical, economically realistic pathways. It brings together governments, experts, and civil society to address key challenges including supply and demand, economic and fiscal vulnerabilities, state-owned enterprises, diversification and decarbonisation, and access to finance. The first conference was held in Santa Marta in April 2026, with a second conference planned for 2027, hosted by Ireland and Tuvalu.

2 Renewable-based electrification as a driver for the transition away from fossil fuels

The commitment agreed upon at COP28 establishes the direction of the global energy transition, but it does not prescribe how countries should achieve it. Delivering on this commitment requires replacing fossil fuels with renewable alternatives across the economy while ensuring that energy systems remain affordable, reliable, and supportive of economic development. In this context, TAFF and electrification are two sides of the same coin. Electrification can shift energy demand away from direct fossil-fuel use, particularly in transport, buildings, and industry. But its climate benefits depend partly on what generates the electricity. Rapid electrification powered by renewable energy can simultaneously reduce fossil-fuel dependence and accelerate the deployment of renewable energy. Understanding the two agendas as mutually reinforcing therefore provides a positive and practical narrative for accelerating the energy transition.

Yet, as currently framed, the '35 by 35' initiative does not specify the energy sources that will underpin the additional electricity demand created by greater electrification. Electrification alone drastically reduces the demand for primary energy and the dependency on oil and gas, but it does not guarantee enough emissions reductions or progress towards TAFF. Without an explicit focus on renewable-based electricity, supported by investment in grids, energy storage, and system flexibility, additional needs could be met by producing electricity from fossil fuels or other energy sources that do not provide the same climate benefits. The initiative would therefore carry the risk of an increase in electricity consumption without delivering a commensurate reduction in fossil-fuel dependence. To be fully aligned with the Paris Agreement's 1.5°C temperature limit and the energy transition envisioned at COP28, the expansion of electrification should go hand in hand with a rapid increase in renewable electricity supply.

What is electrification?

Electrification refers to the process of increasing the share of electricity in final energy consumption by replacing technologies powered by fossil fuels with electric alternatives. However, the meaning and priorities of electrification differ across countries.

For many countries in the Global South, electrification remains closely linked to the urgent need to expand access to sufficient, reliable, affordable, and safe electricity. For them, accelerating progress towards universal electricity access is a critical part of electrification.

In many industrialised countries, the focus increasingly lies on replacing fossil-fuel-based technologies with electric alternatives such as electric vehicles, heat pumps, or electric industrial processes. At the same time, new sources of electricity demand, including cooling, digitisation, and data centres, are reshaping electricity systems worldwide.

Electrification should therefore be understood not as a single technological pathway, but as a broader transformation that reflects different national circumstances and development priorities. Importantly, electrification should be understood as a tool for decarbonisation and development. To ensure this, electrification must be guided by the principles of equity, sufficiency, universal access, and a fair allocation of energy resources and infrastructure.

The scale and composition of electrification are both critical. According to IRENA's revised 1.5°C scenario², by 2035 electricity should account for 35% of total final energy consumption, while at least 78% of the electricity required to achieve this level of electrification should come from renewable sources. These two targets, need to be achieved simultaneously. Reaching a 35% electrification rate without the 78% share of renewable electricity would not deliver a 1.5°C-aligned transition.

Taken together, these benchmarks imply that renewable electricity would need to account for 27.3% of total final energy consumption by 2035 (*Figure 1*). The '35 by 35' initiative should therefore be understood as a target for greater electrification and as an opportunity to drive a simultaneous expansion of renewable energy. The stronger the link between the two targets, the greater the potential for electrification to contribute directly to TAFf.

How to measure renewable-based electrification?

The renewable-based electrification rate for country c and time t can be calculated by multiplying the overall electrification rate, which is the share of electricity in the total final energy consumption (TFEC), by the share of renewable energy in electricity generation.

$$\text{Electrification Rate}_{c,t}^{\text{renewable}} = \frac{\text{Electricity Generation}^{\text{renewable}} \cdot \text{TFEC}_{c,t}^{\text{electricity}}}{\text{TFEC}_{c,t}} \cdot 100\%$$

This definition can also be applied to derive a global benchmark for renewable-based electrification:

$$\text{Electrification Benchmark}_{\text{global}}^{\text{renewable}} = \text{Electricity Generation}^{\text{renewable}} \cdot \text{Electrification Benchmark}_{\text{global}}$$

$$27.3\% = 0.78 \cdot 35\%$$

To assess whether increased electrification is contributing to TAFf, a third indicator is needed. A useful indicator is the share of fossil fuels in total energy supply (TES). This measures the proportion of a country's overall energy supply derived from coal, oil, and gas, providing a system-wide measure of fossil-fuel dependence that extends beyond the electricity sector. According to the IRENA 1.5 revised scenario³, the share of fossil fuels in total energy supply must at least decrease to 48% by 2035 globally.

Together, the three indicators provide a framework for assessing progress:

- **Electrification rate:** measures how much energy demand is being shifted from direct fossil-fuel use to electricity; benchmark should be at 35% globally by 2035.
- **Renewable share of electricity:** measures how clean the electricity supply is and therefore the extent to which electrification can reduce fossil-fuel use and emissions; benchmark should be at 78% globally by 2035.
- **Fossil-fuel share of TES:** measures the remaining dependence on coal, oil, and gas across the entire energy system; benchmark should be at 48% globally by 2035.

² IRENA (2026), [Transitioning away from fossil fuels: A roadmap powered by renewables, electrification and grid enhancement](#), International Renewable Energy Agency, Abu Dhabi. All URLs last accessed in September 2026.

³ Ibid.

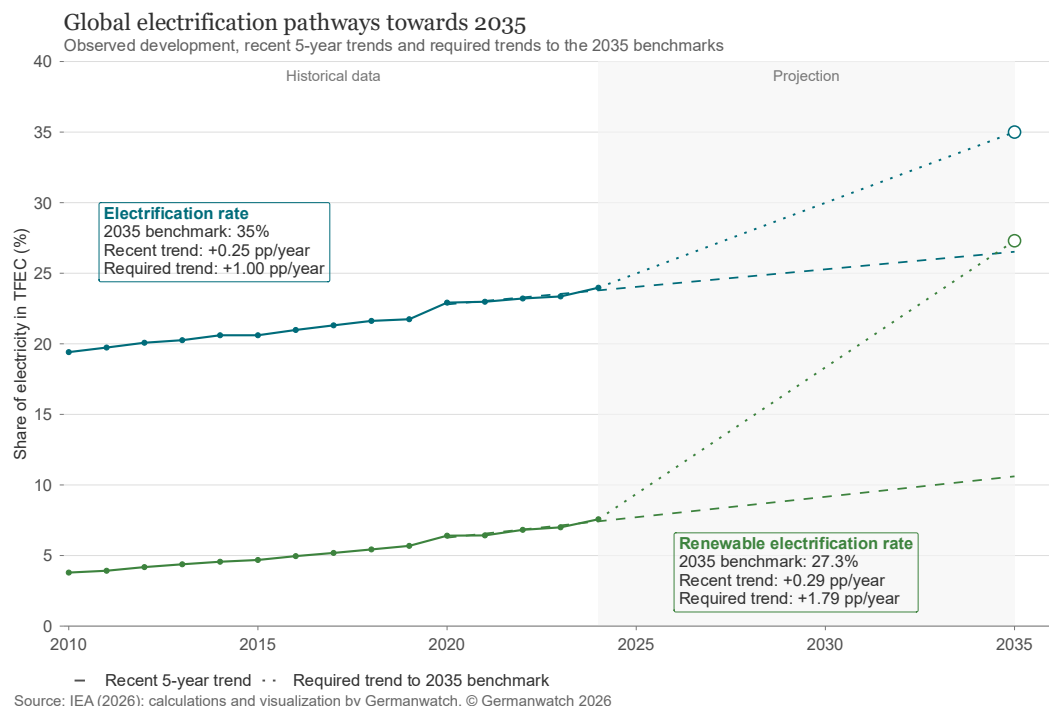


Figure 1. Global development of the electrification rate (blue) and the renewable-based electrification rate (green) since 2010, shown in relation to the global 2035 benchmarks. For each indicator, the figure shows two trends: (i) the recent linear five-year trend (dashed lines), representing the current global trajectory, and (ii) the required linear trend needed to reach the respective 2035 benchmark (dotted lines). The renewable-based electrification rate is defined as the overall electrification rate multiplied by the share of renewable energy in electricity generation. The required trend to reach the 2035 benchmark for renewable-based electrification is substantially steeper than the trend required to reach the 2035 electrification benchmark without accounting for the renewable share of electricity generation. pp/year denotes percentage points per year.

3 Five country cases: From global targets to national implementation

Countries enter the energy transition from different starting points and therefore face different priorities in aligning their energy systems with a 1.5°C pathway. To capture these differences, we assess countries against the three benchmarks described above. These benchmarks are not meant to imply that a given country's national targets should be set at exactly this level. However, they provide a useful indication of how well a country is doing compared to the necessary global trends. Countries' starting points are grouped into four tiers according to how many of these benchmarks are already reached (*Figure 2*):

- **Tier 1** comprises countries that have reached all three benchmarks
- **Tier 2** those that have reached two
- **Tier 3** those that have reached one
- **Tier 4** those that have not yet reached any benchmark

This framework highlights that leadership in the energy transition can take different forms: countries may be progressing strongly on one target but still face significant gaps on others. The ranking therefore provides a snapshot of where countries stand today and an indication of where further action is most needed.

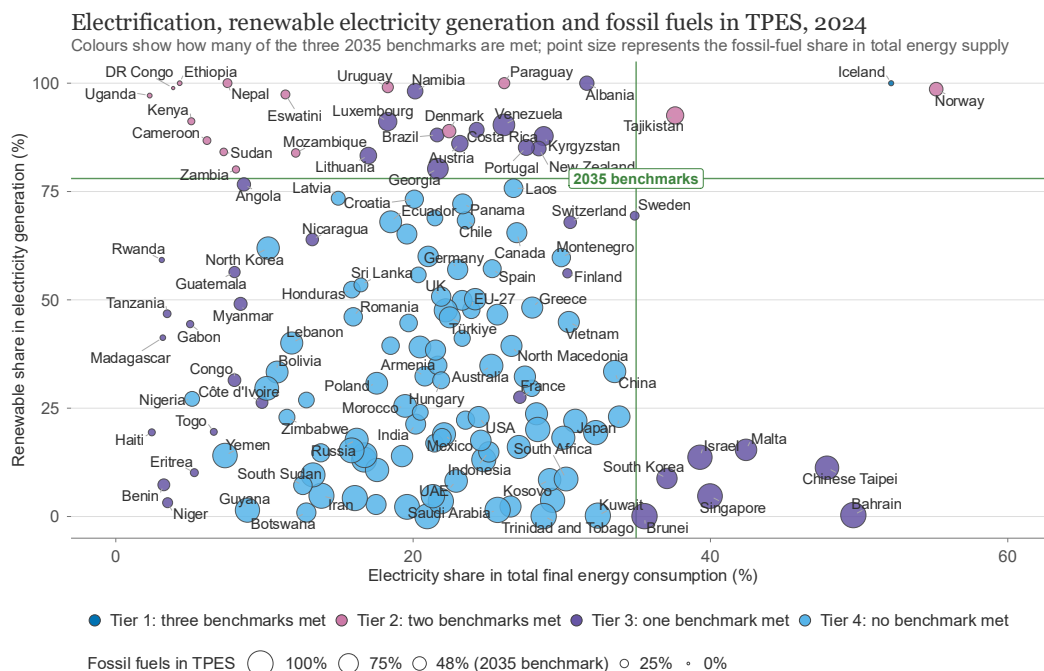


Figure 2. The figure presents three dimensions of the energy transition for 147 countries (incl. EU): the share of renewable energy in electricity generation (y-axis), the share of electricity in total final energy consumption (TFEC; x-axis), and the share of fossil fuels in total energy supply (TES), represented by circles. Larger circles indicate a higher share of fossil fuels in TES. The two green lines indicate the global 2035 benchmarks of 78% renewable energy in electricity generation and 35% electricity in TFEC, respectively. The global 2035 benchmark of 48% fossil fuel in TES is indicated by the reference circle size in the legend. Countries are grouped into four tiers according to the number of the three benchmarks they have reached in 2024.

Not all renewables are unproblematic

Many countries with high shares of renewable energy rely heavily on large-scale hydropower. However, large dam projects are often associated with human rights violations and environmental concerns. Sometimes dams can even produce additional greenhouse gas emissions where water catchments are particularly shallow. At the same time, the costs of solar and wind power have fallen drastically, offering cost-effective alternatives for expanding renewable electricity.

3.1 Germany: From energy transition pioneer to electrification laggard

In Germany, electrification has so far received limited political attention. If the linear trend since 2010 continues, Germany will fall well short of reaching a 35% electrification rate by 2035. Even the more favourable five-year trend would not be sufficient to reach that level of electrification. Likewise, the decline in the share of fossil fuels in total energy supply remains far too slow to credibly support TAFF (Figure 3). The first six months of 2026 show a remarkable acceleration, most likely a reaction to the international energy crisis. But the policy framework needed to sustain this dynamic development – or even accelerate it – is not in place. Germany is, however, on a stronger trajectory in the power sector: if only the linear trend since 2010 continues, the country is broadly on track to reach 78% renewable electricity by 2035. Germany's existing national target is to achieve 80% renewable electricity by 2030, which remains a realistic goal.

However, under the pretext of short-term cost reduction, and using the slow progress in electrifying key sectors of the economy as an excuse for a lower target for total renewable electricity supply levels, the federal government's planned policies carry the risk of slowing down the expansion of renewable energy, rather than creating frameworks to accelerate electrification. This would prolong Germany's dependence on imported fossil fuels and weaken the competitiveness of German industry in key markets. What Germany needs instead is a forward-looking electrification strategy that treats electrification and renewable energy deployment as a cornerstone of energy security, resilience, and industrial competitiveness.

Further reading: [Elektrifizierung als Schlüssel für Resilienz und Wettbewerbsfähigkeit](#) (German)

- This briefing outlines the opportunities presented by electrification, ideas for an Electrification Action Plan, and key elements of an electrification strategy for Germany.

3.2 Turkey: Architect of the '35 by 35' target

Turkey has made limited progress on electrification and is currently not on track to reach a 35% electrification rate by 2035. Neither the five-year trend nor the trend since 2010 shows a significant increase, highlighting the need to substantially accelerate electrification across the economy. Turkey's power sector is moving more decisively: wind and solar have become the main drivers of growth in domestic electricity generation, and their share has risen sharply in recent years.⁴ Yet even this positive trajectory remains insufficient to reach 78% renewable electricity by 2035, which means that further acceleration is needed (*Figure 3*).

With coal still accounting for around one-third of power generation – and almost two-thirds of coal-based power generation relying on imports – faster electrification and renewable deployment are central to Turkey's energy security and economic resilience.⁵ As an economy with a relatively strong industrial base with significant hard-to-abate sectors, Turkey is well positioned to pilot a national electrification roadmap and to demonstrate how electrification can strengthen energy security, improve affordability, and boost industrial competitiveness. However, the planned expansion of nuclear power capacity carries the risk of weakening the link between electrification and the broader transition to a renewable-based energy system. It is therefore particularly important that the national implementation of the '35 by 35' electrification target is clearly embedded within the accelerated expansion of renewable energy. Building on its role as a regional convenor, Turkey can also promote regional and sector-specific transition roadmaps centred on energy security, economic diversification, and sustainable development.

3.3 Ethiopia: Renewable energy leapfrogger

Ethiopia has largely leapfrogged fossil-fuel-based power development, building one of Africa's cleanest electricity systems. More than 95% of installed generation capacity comes from renewables, including hydropower, solar, wind and waste-to-energy (*Figure 3*). With electrification still low, the immediate priority is expanding universal access to reliable and affordable electricity and to electrify the economy. Nearly 56% of the population have no access to a basic electricity supply, while over 92% of households rely on traditional biomass for cooking. Reliability and affordability

⁴ CCPI (2025), [Climate Change Performance Index 2026: Türkiye](#).

⁵ Ember (2025), [Türkiye Electricity Review 2025](#).

remain challenges, particularly in rural areas. Additionally, heavy reliance on hydropower increases vulnerability to climate impacts.

At the same time, these challenges represent a major opportunity. Renewable-based electrification can support development, expand productive uses of energy including green industrialisation, improve living standards, and help Ethiopia avoid locking in fossil-fuel infrastructure. Ethiopia has already put ambitious policies in place to capitalise on this opportunity. The National Electrification Program, the Sustainable Energy Development Strategy, and the Clean Cooking Roadmap aim to expand access, diversify the energy mix, and promote clean cooking. Ethiopia is also well positioned to become a renewable electricity exporter in the Horn of Africa, with interconnections to Djibouti, Kenya, and Sudan already built or under development.⁶

Given Ethiopia's low historical emissions, low per-capita energy consumption, and significant development needs, Ethiopia should get the international support to leapfrog. It would be unfair to slow Ethiopia's progress and to leave Ethiopia behind on the global stage. On the contrary, rich countries have a responsibility to enable Ethiopia to make faster progress by providing accessible climate finance, technology transfer, and support for capacity-building. With this support, Ethiopia can turn its current leadership role in the field of renewable energy into a major development opportunity, demonstrating how renewable-based electrification can drive sustainable economic and social development.

3.4 Indonesia: South-East Asia's rising energy-transition contender

Indonesia is on track to reach a 35% electrification rate by 2035 but remains far off track when it comes to the transition of its power system (*Figure 3*). In 2024, fossil fuels – mainly coal – still accounted for 82% of electricity generation.⁷ This reflects a broader, system-wide dependence, with fossil fuel inputs dominating the primary energy supply. Under the current 5-year trend and the trend since 2010, the country is not on track to achieve a 78% share of renewable energy in electricity generation or to reduce the share of fossil fuels in the total energy supply to 48% by 2035 (*Figure 3*). As one of Asia's fastest-growing economies and a major driver of rising regional electricity demand, Indonesia therefore has significant potential to accelerate the shift towards renewable energy.

At the same time, Indonesia is emerging as a potential renewable powerhouse in Southeast Asia. The energy crisis caused by the closure of the Strait of Hormuz exposed vulnerabilities primarily in the transportation sector, which is heavily dependent on fuel imports. While electrifying transport is essential to mitigate these import risks, the transition cannot succeed without renewables: electrifying transport energy demand, whilst the electricity grid is powered 82% by fossil fuels, reduces primary energy demand by three-quarters, but shifts the remaining emissions from tailpipes to smokestacks.⁸ In response to these energy security risks, the government has begun to put increasingly ambitious plans for the expansion of renewable energy into action, including a target of 23 GW of new renewable capacity by 2030 and the ambition to deploy up to 100 GW of solar capacity within the next few years. The Indonesian state-owned electricity enterprise's (Perusahaan Listrik Negara, PLN) 2025–2034 power development plan further supports a substantial expansion of renewables,

⁶ Mission 300 (2025), [National Energy Compact for the Federal Democratic Republic of Ethiopia](#).

⁷ Ember (2026), [Key energy data for Indonesia](#).

⁸ IESR (2025), [Indonesia Energy Transition Outlook 2026](#).

while President Prabowo Subianto has announced intentions to phase out coal power and to achieve 100% renewable electricity by 2040.⁹

The key challenge is now to move from these ambitions to rapid and sustained deployment, while reducing fossil-fuel dependence across the wider energy system. Indonesia's scale, growing electricity demand, and significant renewable potential give it the opportunity to become Southeast Asia's renewable powerhouse. If Indonesia delivered on its new targets, it would not only put the country on a stronger path towards its 2035 goals but could also demonstrate that a rapidly growing economy can meet rising energy demand while accelerating the transition away from fossil fuels.

Electrification rate, renewable electricity generation and fossil fuel dependence

Historical development since 2010, linear trends, and global 2035 benchmarks

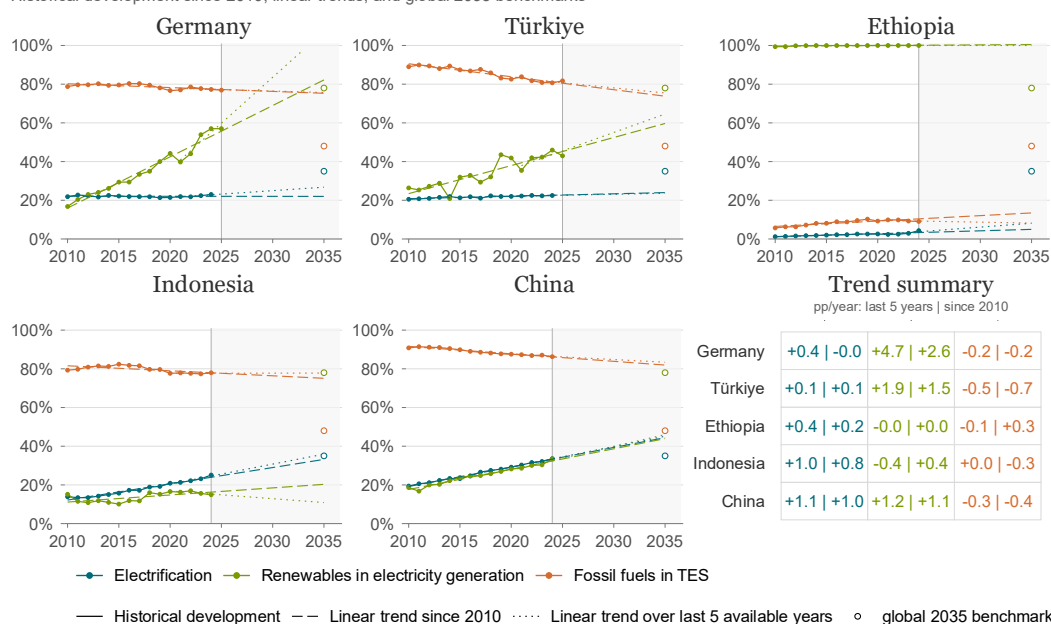


Figure 3. Historical development (solid circles and line) and linear trends since 2010 (dashed line), as well as 5-year linear trends (dotted line), in the electrification rate (blue), the share of renewables in electricity generation (green), and the share of fossil fuels in total energy supply (TES) (orange) for Germany, Turkey, Ethiopia, Indonesia, and China, compared to global 2035 benchmarks (open circles). Historical data is available through 2025 for Germany and Türkiye and through 2024 for Ethiopia, Indonesia, and China; more recent developments are therefore not reflected by the trend estimates. In particular, responses by several Asian countries to the closure of the Strait of Hormuz may change their trajectories and put some countries on a more encouraging path towards the 2035 benchmarks. The accompanying table summarises the trends; pp/year denotes percentage points per year.

3.5 China: Renewable-energy heavyweight and electrification frontrunner

China reached 33.6% electrification already in 2024. Renewable sources accounted for 33.5% of electricity generation in 2024 (Figure 3), broadly in line with the global average. Those deployments are accelerating, with wind and solar alone accounting for 22% of electricity generation in 2025, well above the global and Asian average of 17%.¹⁰ Yet, China remains behind the target of 78% renewable

⁹ CCPI (2025), *Climate Change Performance Index 2026: Indonesia*.

¹⁰ Ember (2026), *Key energy data for China*.

electricity share, and fossil fuels still make up a large share of both power generation and total energy supply (*Figure 3*).

But there are encouraging signs of a structural shift. Electricity generation by coal fell by 71 TWh in 2025, the first annual decline since 2015. Moreover, China's recently published five-year plan for the coal sector includes reaching peak coal consumption by 2030, while oil and gas are expected to peak even earlier. However, ongoing efforts to modernise the coal power plant fleet risk a lock-in of coal's share in the power sector. Paired with a continued expansion of domestic coal production for energy security reasons and a strategic shift to use coal in the chemical sector for fuel and feedstock, it seems unlikely that significant and rapid reductions will follow those peaks.¹¹

Continued rapid deployment of wind and solar, combined with the phase-out of fossil-based electricity generation, should be the priority for the power sector. Beyond electricity, China must also accelerate the reduction of fossil-fuel use across the wider energy system. Its progress in the electric vehicles and green buildings sectors as well as the expansion of the national emissions trading system provide a strong foundation. Maintaining the pace of renewable-energy deployment while decisively reducing fossil-fuel dependence would allow China to consolidate its emerging structural shift away from fossil fuels and provide a powerful signal for the global transition.

4 Equity in the '35 by 35' target

As demonstrated by the country examples above, energy transition pathways will vary significantly across countries and regions, reflecting differences in economic structures, existing energy systems, electricity demand, fiscal space, and access to energy. Asia is electrifying rapidly, having overtaken the West in electrification in 2016. This shift extends beyond China, with Southeast Asia and South Asia increasingly outpacing the EU and the US in electrification, EV uptake, and solar deployment.¹² These trends illustrate that there is no single appropriate pace or level of electrification for all countries. Countries should therefore translate the global 35% target into national electrification strategies that accelerate equitable renewable-based electrification. The 35% target provides a common benchmark, while countries with greater capacity and potential should pursue higher levels of ambition. At the same time, no country should be left behind or miss out on the economic and development opportunities associated with renewable-based electrification. An equitable approach requires ensuring that all countries have the opportunity and means to benefit from renewable-based electrification.

For advanced economies, the priority should be to rapidly replace existing fossil-fuel combustion with renewable-based electricity. This applies in particular to the sectors of heating, road transport, and other established fossil-fuel uses, where wealthy countries have a large stock of buildings, vehicles, appliances, and infrastructure that can be converted to electricity. Transforming an existing system is often time-intensive and challenging. Hence, there is a risk that the European Union (EU) will fall further behind Asia. The EU Electrification Action Plan, published in July 2026, sets an indicative electrification target of 46% by 2040, which the Commission will assess as part of the post-2030 Energy Union package. However, even this level of ambition is insufficient. The EU should aim for a 60% electrification rate by 2040¹³, complemented by a binding renewable energy target. This would strengthen the link between electrification and decarbonisation, ensuring that rising electricity

¹¹ CCPI (2025), [Climate Change Performance Index 2026: China](#).

¹² Ember (2026), [Electric Asia](#).

¹³ Germanwatch (2026), [Elektrifizierung als Schlüssel für Resilienz und Wettbewerbsfähigkeit](#).

demand is met primarily through renewable sources rather than creating policy signals that could encourage broader expansion of the nuclear sector.

In many poorer, developing countries, the priority is to expand access to renewable energy and create new electricity demand, rather than primarily replacing current fossil-fuel consumption with electricity. Realising this leapfrogging potential means providing reliable, affordable, and renewable-based electricity for households, businesses, transport, and industry. However, the countries with the greatest potential for such leapfrogging are often those facing the greatest financial constraints. Limited fiscal space, high debt burdens, high capital costs, and high interest rates restrict the ability of many poor countries to mobilise the investment required for new electricity infrastructure, renewable generation, and modern grids.

Africa, for example, faces significantly higher renewable energy financing costs than Europe, with the weighted average cost of capital (WACC) reaching about 12% compared with 3.8% in Germany and Europe.¹⁴ In order to create equitable conditions for Africa's leap forward, international support will be required. Wealthy countries have a particular responsibility not only to provide direct support, including concessional finance, technology transfer, and capacity-building. They should also pursue reforms of the international financial architecture that address the structural drivers of high capital costs, expand access to affordable long-term finance, and reduce investment risks in poorer countries. Together, these measures would enable poor countries to pursue ambitious renewable-based electrification without compromising their development needs. This support is essential to ensure that tailored national pathways contribute to a common global goal and that no country is left behind.

5 Key action priorities for COP31

A central test for COP31 will be whether a critical mass of governments can demonstrate credible progress towards a just, orderly, and equitable transition away from fossil fuels. Prospects for a strong negotiated outcome continue to be hampered by political divisions and unresolved questions around finance and adaptation. Hence, COP31 should build on the progress made at previous COPs, prevent backsliding, and strengthen implementation of strong South-North frontrunner groupings through the Action Agenda.

The existing global energy transition agenda provides an important foundation. At COP28, governments agreed to triple renewable energy capacity, double energy efficiency, and transition away from fossil fuels, establishing a clear direction for the global energy transition. At COP29, this agenda was complemented by commitments to expand energy storage and modernise electricity grids. The new '35 by 35' electrification target represents a further building block in this architecture and should therefore be pursued as a means of reinforcing the existing COP28 and COP29 commitments.

In addition to incorporating this new commitment into the energy transition architecture, COP31 should focus on implementation. It should demonstrate how existing commitments can be translated into concrete national action, while strengthening the foundations for greater ambition ahead of the second Global Stocktake. The following priorities should guide action at COP31:

¹⁴ IRENA (2025), [Renewable power generation costs in 2024](#), International Renewable Energy Agency, Abu Dhabi.

Action 1: Spell out the ‘35-by-35’ target in concrete terms so that renewable-based electrification becomes realistic

Turkey’s ‘35 by 35’ initiative has the potential to become an important driver for modernisation, access to affordable energy and mobility services, and TAFF. Yet, as currently framed, the initiative does not specify the energy sources that will underpin the additional electricity demand created by greater electrification. To be fully aligned with the Paris Agreement’s 1.5°C temperature limit and the energy transition envisioned at COP28, the following steps are necessary:

- **Integrate renewables into the ‘35 by 35’ target:** The target should be explicitly linked to the COP28 tripling renewable target, and it should be anchored in renewable-based electrification, with particular emphasis on accelerating solar and wind deployment. It should also be linked to the COP29 grids and storage commitment, recognising that energy storage and grid infrastructure are both essential to develop resilient, decarbonised global energy systems.
- **Integrate efficiency:** The target should be explicitly linked to the COP28 doubling energy efficiency target. Electrification is most likely the fastest way to implement efficiency, as it reduces the demand for primary energy for the same energy or mobility service by about 3 quarters. In addition, it should be ensured that electrification does not create unnecessary electricity demand. Policies should combine electrification measures with building renovation, efficient heating and cooling, public transport or small EVs, demand-side management, and other efficiency measures.
- **Integrate a circular economy approach:** COP31 should establish the circular economy as a strategic pillar of the energy transition, recognising it as a key response to both materials-related emissions and growing resource pressures driven by electrification and the deployment of renewable energy. Turkey’s announcement in Bonn of a 15% circular material use target by 2035 provides an important initiative that should be prominently reflected in the COP31 Action Agenda, with an explicit link to the ‘35 by 35’ target. This should include recognition of the full waste hierarchy and a broader material scope extending beyond organics and plastics. In particular, the Action Agenda should recognise circularity for metals and other critical materials as a strategic prerequisite for electrification, given the rapidly growing demand for the resources needed to deliver the energy transition.
- **Build a coalition of committed countries:** The COP31 Presidency should actively seek countries’ formal commitments to the ‘35 by 35’ target. A broad coalition of countries would give the target greater political weight. The target provides an important entry point for countries that are so far unwilling to engage in the TAFF Santa Marta process to nonetheless advance renewable-based electrification, a core element of the transition. By focusing on a concrete and less politically contentious area of action, the electrification agenda can help to achieve a broader convergence and to create momentum for later progress on TAFF. The target should therefore be prominently integrated into the COP31 Action Agenda and carried forward into the second Global Stocktake, making sure that progress can be tracked and assessing whether national efforts as a whole are sufficient to close the electrification gap.
- **Translate the global target into national electrification strategies to accelerate equitable renewable-based electrification:** Governments should establish policy and regulatory frameworks that accelerate the shift towards renewable-based electrification, for example by ensuring that electricity is not taxed or otherwise burdened to a greater extent than fossil fuels and that clean electricity and electrification technologies remain affordable and accessible to all segments of society. For countries that are part of the Santa Marta process, these strategies should be part of their national TAFF roadmaps. Wealthy countries should support

poor, developing countries in creating these enabling conditions through risk-sharing and risk-absorption mechanisms, adequate finance, technology transfer, and capacity building, so that all countries can benefit from the development opportunities of renewable-based electrification and no country is left behind.

- **Use Electrify Now as a delivery mechanism:** The COP31 Presidency should use the Electrify Now initiative to support countries in developing national electrification plans, to facilitate peer learning and the exchange of replicable policies, and to help mobilise finance – particularly for emerging and developing economies. It should also help identify common infrastructure and technology needs, including grids, storage, and resilient renewable-energy supply chains.

Action 2: Integrate renewable-based electrification into national TAFF roadmaps

Countries participating in the Santa Marta process should announce, ahead of or at COP31, national TAFF roadmaps that set out concrete measures, timelines, and responsibilities for delivering TAFF, with renewable-based electrification as one core pillar.

- **Make electrification a core component of TAFF planning:** Countries that are part of both the Santa Marta process and the ‘35 by 35’ initiative should explicitly integrate the ‘35 by 35’ target into their national TAFF roadmaps, which could form a part of their next NDC, avoiding the development of separate TAFF and electrification strategies and empty announcements. Electrification should be embedded as a core component of the national TAFF roadmap, with clear targets and measures for delivering the ‘35 by 35’ target. This would ensure policy coherence, reduce duplication, and demonstrate how renewable-based electrification can serve as a key pathway for delivering TAFF.
- **Align roadmaps with national development priorities:** Roadmaps should address energy access and affordability, industrial development, energy security and resilience, fiscal and debt constraints, technology transfer and capacity-building, ensuring that TAFF supports development objectives. They can also be part of the NDCs.
- **Set measurable implementation requirements:** Governments should establish time-bound targets, defined responsibilities, financing and investment needs, and transparent monitoring and accountability mechanisms. Roadmaps should serve as implementation frameworks, not merely as reporting exercises or compilations of existing policies.
- **Germany should lead by example:** Germany should announce its commitment to developing a national TAFF roadmap ahead of COP31, linking TAFF to its existing climate, energy, and industrial policies. The roadmap should include a comprehensive national electrification strategy aligned with the EU Electrification Action Plan, including an ambitious electrification and renewable energy target. Announcing the process as early as September 2026 – for example at United Nations General Assembly (UNGA) – would provide a concrete demonstration of domestic implementation ambition and strengthen Germany’s international credibility in advancing its energy transition. Similarly, other EU member states should announce ambitious national strategies for renewable electrification, aligned with European and global targets.

Action 3: Provide finance for poor countries

Broad international support for speeding up the electrification agenda will ultimately depend on whether poor countries receive adequate financial, technical, and capacity support. Expanding electricity access, modernising grids, and integrating large shares of renewable energy require investments that many countries cannot mobilise on their own. Poor countries should receive dedicated support to ensure electrification does not deepen inequalities or increase debt burdens.

- **Overall climate finance agenda:** The widening gap between the NCQG commitment of USD 300 billion, the Baku-to-Belém Roadmap's goal of mobilising USD 1.3 trillion, and the actual delivery of climate finance, which has declined over the past two years, has led to growing contention around finance obligations, particularly in relation to Article 9.1 under the Climate Finance Work Programme. A strong support package for electrification and adaptation could help to avoid an extremely poisoned debate. The support package for electrification should offer risk management actions for renewables and electrification, financial support so that poorer countries can benefit from it as well, and North-South or South-South capacity-building. This would help to build trust.
- **IFA reform and the Xingu Finance Talks:** The Xingu Finance Talks, held in parallel with the World Bank Annual Meeting in Bangkok in October 2026 are an important moment to prepare the ground ahead of COP31. They should:
 - Treat cost of capital as a design target: The Xingu Finance Talks should ideally move beyond ensuring that finance reform does not raise the cost of capital for electrification and instead set the explicit goal of lowering it. Falling solar, storage, and EV costs already make renewable-based electrification the rational economic choice; what remains artificially expensive is the finance to implement it.
 - Reform how debt sustainability assessments treat electrification investment: Public investment in grids, storage, and renewable generation should not be scored the same way as ordinary consumption expenditure in debt sustainability assessments. The Xingu Talks should result in a methodological distinction that allows electrification-related borrowing to be assessed on its long-term productive and fiscal returns, so that countries are not penalised in debt metrics for expanding the infrastructure required by their '35 by 35' and TAFF roadmaps.
 - Open up risk pricing to scrutiny: Sovereign and sector risk premiums, including how credit rating agencies price electrification projects, should become a substantive item of discussion rather than a black box. Clearer, evidence-based risk pricing would help unlock lower-cost capital for grid and renewable investment without unrealistic conditions on recipient countries.
 - Prioritise concessional, non-debt inducing finance for the most constrained countries: For countries with the least fiscal space, electrification support should come as grant-based and highly concessional finance rather than market-based instruments that shift risks back to them. This finance should be demonstrably additional to development support and not a repackaging of it, so that electrification eventually builds fiscal resilience rather than compounding debt. This is an area that should be actively pursued in the climate finance work programme; however, this should not come at the expense of adaptation as well as loss and damage finance

Action 4: Anchor just transition

COP31 should ensure that the electrification agenda is underpinned by strong just transition and circular economy principles. As demand for critical minerals and renewable-energy technologies grows, the transition must generate development benefits, strengthen resource security, and avoid reproducing extractive patterns.

- **Just transition across value chains:** The Turkish presidency should ensure that the TAFF and electrification agenda embed just transition principles by promoting responsible and transparent critical mineral supply chains, supporting local value creation and industrial development in producing countries, and investing in skills, decent work, and the meaningful participation of workers and affected communities. In addition, advancing electrification through distributed renewables will ensure that the energy created reaches the communities that need electricity first, directly helping to solve energy access problems and establishing a foundation for equitable development.

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