

Heatwaves and climate support measures:

beyond isolated measures, Luxembourg finally needs a coherent climate protection and adaptation policy, also with a social dimension

The unbearably hot heatwave is leading Europe — and Luxembourg — to discuss more intensively the consequences of the climate catastrophe.

It is truly alarming how unprepared our country was for this heatwave. The fact that measures to protect against these scorching days have not been taken at various levels by public authorities for a long time is difficult to understand.

That even hospitals, schools, nursing homes and care facilities were left virtually helpless in this situation is unacceptable.

At the very latest after the recent warm summers, climate protection policy should have been pursued more consistently and climate adaptation — i.e. adjustment to climate change, including an emerging water shortage — should have been implemented systematically.

As is unfortunately so often the case in Luxembourg: initiatives are indeed taken in the area of climate protection, but they fall far short of meeting the requirements of a truly effective climate policy. The mere fact that the Google project in Bissen plans to release large quantities of waste heat into the atmosphere instead of using it sensibly for heating purposes says a great deal about the state of policy in this area in Luxembourg.

As regards climate adaptation, a new version of a climate adaptation strategy with a catalogue of measures was drawn up in the first years of this legislative period. Even if this new version certainly contains additional instruments compared to the previous one, the essential measures have been known for years... and are still waiting to be implemented. Moreover, this second version also risks not being an effective instrument: insufficiently clarified responsibilities, missing deadlines for the implementation of individual measures, unresolved financial resources — all these shortcomings bear witness to the fact that the implementation of the second climate strategy is not being pursued with the necessary vigour.

If one wanted to find something positive in the current situation, it would perhaps be that everyone is once again clearly reminded of how imperative consistent action is. One can hope that politics and society will finally grant climate protection and climate adaptation the importance they need to also protect human beings.

We can still contain the effects of the catastrophe climate! For this, everything must be done, both by politicians and by individuals.

1. Climate protection and climate adaptation must go hand in hand!

If one follows current discussions, one gets the impression that technical, sometimes isolated adjustments to climate change are dominating the debates too much.

It is certainly necessary in the short term to do everything possible to cushion the now unavoidable climate warming as much as possible. In this sense, it is also legitimate and important to take targeted technical measures, such as installing air conditioning where it is essential.

But: the primary objective must remain to combat the causes of the catastrophe climate itself far more consistently and to contain them as much as possible.

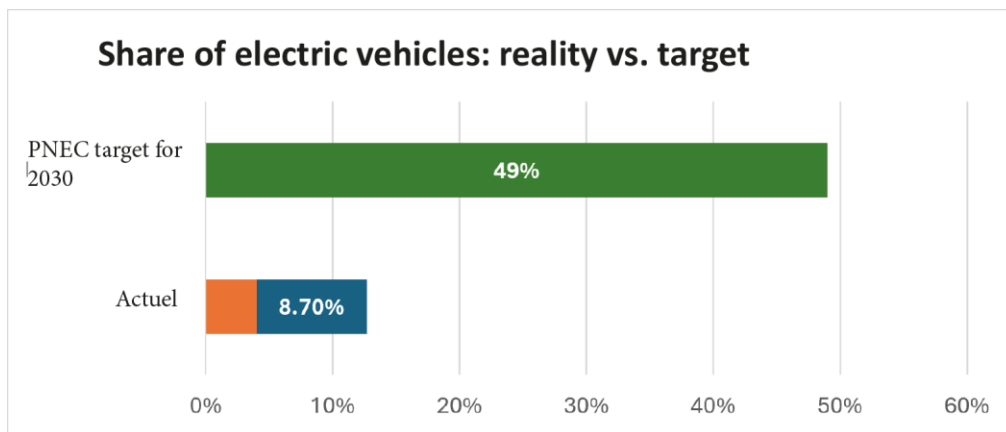
In people's concerns and fears, it still holds a very high place. It comes third in a recent ILRES survey on the main concerns of people in Luxembourg — conducted even before the heatwave days — after the housing crisis and the geopolitical situation, which is quite understandable.

Climate adaptation without climate protection is like a plaster on a gaping, mortal wound. The causes of warming must be combated, as this is the only way to limit an ever more problematic increase. With rising temperatures and extreme weather events, adaptation becomes ever more complex and expensive, and ecosystems are increasingly burdened.

And here Luxembourg unfortunately still lags far behind the targets set.

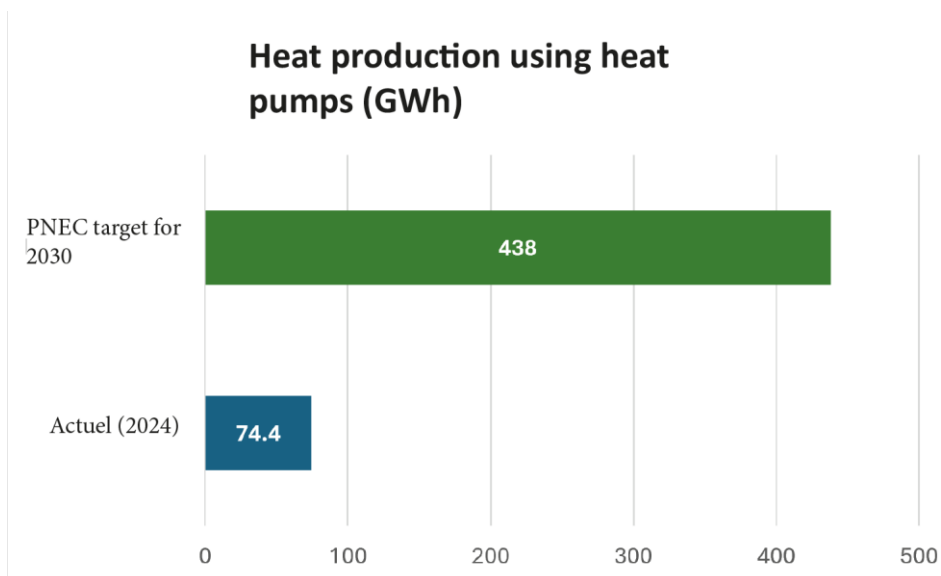
Four facts speak volumes:

Fact 1: The expansion targets for electric mobility by 2030, set out in the national climate and energy plan, can no longer be achieved.



According to SNCA figures, only 12.7% of Luxembourg's vehicle fleet is currently electric, of which 4% is hybrid and the rest fully electric.

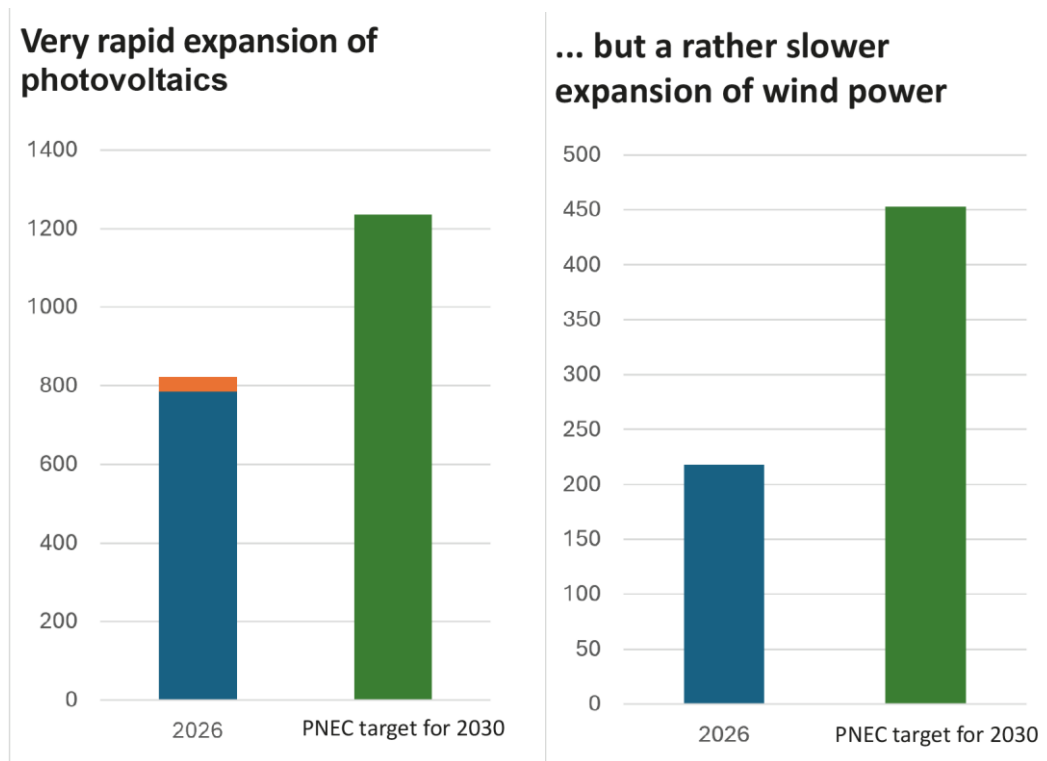
Fact 2: While other countries have concrete scenarios for the energy transition in heat supply (which accounts for 80% of household energy consumption), in Luxembourg both planning and the switch to heat pumps are stagnating.



According to STATEC calculations, heat production from heat pumps would be less than 20% of the PNEC projections for 2030.

Fact 3: Renovation is not really progressing: the current renovation rate of residential buildings in Luxembourg is only 0.7 to 1%, well below the national target of 3% per year.

Fact 4: The expansion targets for solar energy still seem achievable, but those for wind energy production hardly so.



The expansion of photovoltaics is progressing by June 2026, 42 MW of additional capacity had already been added.

This year too, the government must present an interim emissions report by 31 July at the latest. In recent years, national targets were barely met, largely thanks to a reduction in fuel tourism due to the CO₂ tax and the crisis in the construction sector. However, fuel tourism has already picked up again at the start of the year, and the tripartite decisions — subsidies on diesel and petrol with correspondingly particularly low prices even compared to neighbouring countries — are likely to contribute to it not decreasing to the required extent. Declining emission quotas and insufficient measures in structural areas such as the building sector and "smaller" industry could further jeopardize compliance with climate targets. This too shows how much action is needed and how important it is to quickly introduce effective measures.

It is therefore essential that Luxembourg combats the climate catastrophe far more consistently.

It is the responsibility of this government to contribute to shaping the transition of the economy and society at the national level in such a way that we meet our

climate commitments and that even more serious consequences than those we already know today are prevented!

We do not need a policy of the "easily achievable", but of the "necessary".

For there is an extreme difference between temperatures rising by 2 or 4-5 degrees. If temperatures continue to rise unchecked, we as a society will never be able to implement all the necessary technical measures. The consequences will be somewhat limited, but never to the extent necessary for a good life for everyone on this planet to remain possible.

2. Targeted technical measures yes — but what is needed is a climate-resilient design of our settlements and buildings!

Currently, in the context of dealing with heat, people are talking about "cool islands in schools", additional air conditioners, etc. Instruments with which one tries to improve the situation in isolated ways.

As important as such initiatives are to make the heat at least somewhat more bearable, it is well established that we will only truly make progress if we fundamentally rethink construction, housing and community living. A holistic approach is needed, bringing together all relevant planning aspects.

For a design of cities and towns oriented towards people's quality of life and biodiversity — a future-oriented urbanity.

Even if all localities have some green spaces: public space is still too much dominated by sealed surfaces and car-friendly design!

The result is overheating of our towns, a decline in biodiversity, but also problems in dealing with water ("too much" water at certain times, i.e. heavy rainfall and flooding, as well as extreme drought at others). Streets and squares are often far from being places of social encounter.

This situation has increasingly entered the consciousness of people and politicians in recent years. The time is therefore more than ripe to reorient planning — both in existing areas and in new districts — towards people.

Only a consistent transformation of our localities will make it possible to protect the people living there from heatwaves, to improve the quality of living and being together, and to promote the preservation of biodiversity. This is a must for the future

— for in the heat, every degree less counts, and the retention and infiltration of water protects against flooding and is essential for the maintenance of green structures in localities.

It is not primarily about parks, but rather about pedestrian paths and squares that are frequently used in everyday life, where shading would make a big difference for residents and could greatly improve quality of life.

A faster and more systematic transformation and greening of settlements must be driven forward:

- Every municipality needs a **coherent greening concept**, i.e. a **strategy** for how, where and when more green space can be created to adapt to climate change, improve quality of life especially in cities and counteract biodiversity loss: **integrated planning at (inter-)municipal level** — beyond priority but spatially limited measures for heat islands — requires a coherent package of measures: widespread unsealing, greening of public squares and streets, greening of facades and rooftops in the private sector as well. In addition, areas that generate fresh and cool air must be preserved or, if not sufficiently present, created.
- **Water management** at local level will take on increased importance in this context: the combination of "**blue-green**" **infrastructure** at neighbourhood level can lead to microclimatic improvements through evaporation effects and also serve for irrigation of plants/trees during periods of low rainfall (principle of the "sponge city"); the prevention of flooding from heavy rainfall is also part of this.
- **Quick and effective concrete measures must also be taken in the short term**, such as the planting and maintenance of healthy, site-appropriate urban trees; the creation of specifications for greening within activity zones; far more consistent promotion and advice for private households wishing to take action on their property.
- The **implementation of a national building regulation** by the Ministry of the Interior, which promotes the energy transition as well as greening and rainwater management, is an essential component for the future.
- The **reform of the Nature Protection Act** must not be carried out as planned, as it would lead to a further loss of green spaces in municipalities.

For these green spaces to be effective in the (near) future, when heatwaves become even more frequent, they must be created now!

A similarly consistent rethinking is required at the level of building policy:

specifications for greening, promotion of measures such as facade or rooftop greening, orientation of houses that counteracts warming; external shading of windows; better

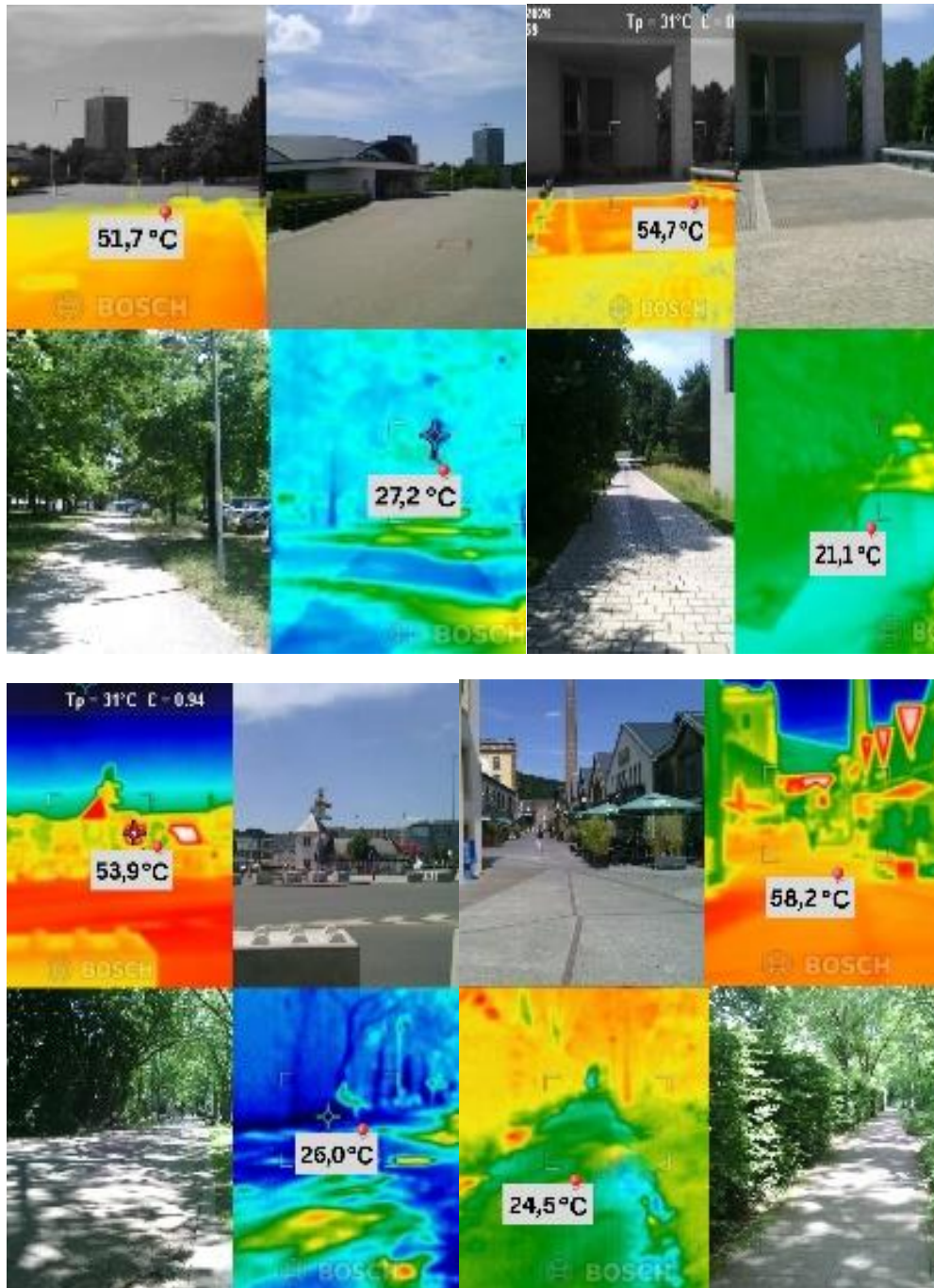
insulation and possibilities for passive cooling via heat pumps... are essential keywords in this context.

All these measures (known for quite some time) must be reflected in a legal and regulatory framework, goal-oriented support programmes, guidelines and advisory services.

The 3-30-300 rule for green cities

- 3 trees visible from every house
- 30% tree cover in every neighbourhood
- 300 m to the nearest park or larger green space





At the beginning of the heatwave, the Mouvement Ecologique visited several locations in Luxembourg City with a thermal imaging camera. With its help, one can impressively show how much concrete and asphalt heat up and how, in contrast, shady greenery can reduce these temperatures.

Thermal images of these squares were juxtaposed with thermal images of adjacent greened areas to illustrate the importance of trees and other green spaces.

3. Justify support schemes on professional grounds and make them more targeted – focus on people with fewer financial resources

The Department of Health advised people living in homes that became particularly hot to spend time in supermarkets, shopping centres, cinemas and libraries during the heatwave ...

The fact that it had to come to this is an admission of failure on the part of this government's climate protection and adaptation policies to date, as well as those of the Ministry of Health!

The results of the study on living conditions in Luxembourg also show just how much people with fewer financial resources in particular are at the mercy of the situation: in 2023, 37.4 per cent of households stated that they were unable to cool their homes (compared with just 10.7 per cent in 2012). The EU average stands at 26 per cent.

The fact is that it is precisely those with fewer financial resources (low-income households, tenants, older people or students, who are regarded by banks as less 'creditworthy') who are particularly vulnerable to the climate and biodiversity crisis and its consequences.

- The rise in energy prices, for example, places a disproportionately greater burden on them than on households with greater financial means. (Although Luxembourg has social support mechanisms in place, the disadvantage persists);
- They lack the financial resources to make investments in line with the energy transition, such as installing heat pumps or renovating their homes (they also tend to live in rented accommodation to a disproportionately high extent). The latter means that they live in homes that, amongst other things, heat up more quickly and to a greater extent (poorly insulated houses, attic rooms, etc.).
- Furthermore, they often live in homes that are more likely not to have a shaded garden. As there is still a severe lack of public green spaces, it can be assumed – as was the case during the Covid- pandemic – that they also have less access to green spaces in their immediate neighbourhood.

A more consistent climate and greening policy is therefore also a key issue of social justice! Luxembourg has a considerable amount of catching up to do in this area.

The measures mentioned in points 1, 2 and 3 – climate protection policy and a reorientation of the planning of our towns and villages – are therefore essential measures, not least from the perspective of a coherent social policy.

However, subsidies to promote the energy transition also play a key complementary role. And there are certainly shortcomings in the current approach in Luxembourg in this regard!

An analysis carried out by the Öko-Institut on behalf of the Mouvement Ecologique highlights clear shortcomings and considerable scope for improvement in the design of funding schemes from a social perspective.

But there is also considerable scope for improvement in terms of general goal-orientation, technical expertise, etc.

The Öko-Institut Berlin's assessment of current instruments and recommendations

Based on an analysis of 17 funding instruments in the climate and energy sector in Luxembourg, the Öko-Institut has reached the following conclusion:

“The main potential for further development lies not so much in the development of additional instruments as in a stronger focus on objectives, social differentiation, predictability and strategic coordination of existing measures.”

The Öko-Institut's analysis reveals fundamental shortcomings in the design of the subsidies: from a social perspective, but also in the technical approach, as the following quotations illustrate (bold text by Mouvement Ecologique):

- **Regarding the objectives to be pursued / interaction with other instruments**
 - “The analysis suggests that one challenge lies in the **targeted design of the instruments and their coordination with other instruments**. For many instruments, there is a need to examine more closely **what specific emission reductions** are expected, what **contribution the instruments** are intended to make **towards the objectives of the National Climate and Energy Plan**, and which **indicators** will ultimately be used to measure their success.”
- **Regarding the target group**
 - “The analysis reveals **differences in the (vulnerable) target groups addressed**. In the buildings sector in particular, many instruments are aimed at owners and thus presuppose **the ability to invest**. This is particularly relevant because vulnerable groups often have no direct means of taking action or making decisions regarding energy-related investments. This creates **barriers to access for low-income households, for households without sufficient own funds or with limited creditworthiness, and for tenants.**”
 - “Looking ahead, consideration should be given to how **social aspects** can be **integrated more effectively right from the design stage of new schemes, rather than compensating for disadvantages only after the fact.**”
- **Regarding the level of funding and social banding**
 - “Furthermore, it should be examined whether the **specified funding levels are sufficient to achieve the necessary renovation rates**, or what level of funding would be required to actually enable vulnerable groups to make investments. There is a lack of instruments that are **more socially tiered** in terms of funding and support intensity, and which thus take account of **different financial starting points**. Measures are needed, particularly for lower-income or less creditworthy households, to break down existing

barriers to access. Otherwise, there is a risk that the benefits of the transition will primarily be reaped by households that already have sufficient financial resources.”

- *“We must also discuss how **different levels of funding** affect **the achievement of objectives**. In this regard, a stronger link between climate targets, social objectives and the level of funding could be beneficial.”*

- **Regarding predictability and planning**

- *“Most of the instruments examined have **long-term effects**. This applies in particular to building renovations, heating system replacements, the installation of photovoltaic systems and the adaptation of charging infrastructure. At the same time, the analysis shows that **it is often unclear how long funding programmes will continue, whether and how funding levels will be adjusted, and what long-term strategy underlies the instruments**. For households and businesses, however, **reliable framework conditions and planning certainty** are important for making **investment decisions**.”*
- *For households and businesses, **reliable framework conditions** (clear timetables, stable funding levels) are crucial for being able to make **long-term investment decisions** ...*

- **Regarding socio-economic impacts**

- *“In addition to environmental impacts, particular attention should be paid to the **assessment of socio-economic consequences** in all measures.”*

- **Regarding the need for a mix of instruments**

- *Effective policy management can only be achieved through the strategic coordination of policy instruments. Price-based instruments must be embedded within a mix of targeted support schemes, social compensation and infrastructure development in order to guarantee both environmental effectiveness and social justice.*

Side note: Lack of technical expertise in determining subsidy levels

It is, unfortunately, a sad fact that the setting of subsidy levels in Luxembourg is based on very little technical expertise.

The Tripartite’s decision simply to contribute an additional 2,000 euros per heat pump for all households is evidence of this. No attempt whatsoever was made to investigate whether this additional flat-rate increase in the subsidy would actually encourage more people to buy a heat pump, whether there might be more appropriate measures, or whether, instead of a flat-rate increase, more targeted support for specific households would have made more sense (in this context, the question arises as to why – if this increase is effective – the subsidies were set ‘too low’ when the draft bill was tabled).

Furthermore, the level of funding for heat pumps in multi-occupancy dwellings appears to have been based primarily on the level of funding approved in previous years. However, according to information from the Mouvement Ecologique, only

3 blocks of flats received support! Deriving the subsidy level for the future from this, capping it at 5 residential units – and, in the view of the Mouvement Ecologique, setting it far too low – does not constitute a technically sound basis, and the effectiveness of this method must be questioned.

It also appears that, particularly in blocks of flats, hybrid systems might still be useful for a few more years under certain circumstances. Why these subsidies have been completely scrapped is incomprehensible and has not been justified.

At the same time, the state continues to subsidise fossil-based insulation materials, namely, in some cases, recycled polystyrene. On the one hand, this amounts to an absolute fiscal policy blunder; on the other, it is also a complete mistake from an environmental perspective. After all, there are plenty of alternatives that are genuinely worthy of support. Here, too, there is a complete lack of any technical justification.

The ‘Klimabonus Wunnen’ draft bill is certainly welcome in essence, but it contains key shortcomings due to an unsatisfactory technical approach .

With regard to the specific subsidy for heat pumps, the Öko-Institut also puts forward the following additional proposals:

- *‘Reducing electricity prices for heat pumps, e.g. by lowering VAT to zero’*
- *Increased funding for refurbishments in social housing to create energy-efficient and renewable-energy-heated flats (e.g. with social housing or rent control)*
- *Advance or instalment payments, as well as supplementary loans to cover remaining personal contributions*
- *Improved creditworthiness criteria for certain target groups, e.g. older people*
- *Establishment of a support programme that obliges owners not to raise the rent above a certain level following refurbishment.”*

and further (excerpts)

- *Subsidy levels must be more strongly means-tested to actually enable lower-income households to make investments.*
- *Approaches to the direct pre-funding of grants, guarantees or interest-free loans should be consistently expanded to protect low-income owners from energy poverty.*
- *As tenants have little influence over the heating system but bear the rising CO₂ costs, social compensation mechanisms such as the CO₂ tax credit and an energy bonus should be regularly evaluated and, where necessary, adjusted in line with price trends. It must be examined whether vulnerable target groups, such as students or apprentices, are also enabled to participate.*

Key demands: Introduce greater technical rigour and social impact assessments

- **Greater technical rigour**

Future funding programmes must be defined on the basis of far more robust data and objectives.

The Öko-Institut recommends the following evaluation categories for a funding measure:

- *Reduction of greenhouse gases*
- *Scope of the target group addressed*
 - *Is the vulnerable target group affected?*
 - *Is energy poverty prevented?*
- *Duration of impact*
- *Employment effects*
- *Investment incentive*
- *Is technology transfer / innovation supported?*
- *Incentive for behavioural change*
- *Administrative burden on the target group and the administration.*

- **Greater technical rigour, a more selective and targeted social focus**

According to the Öko-Institut, a prerequisite for better (social) support programmes is: “**the establishment of a structured socio-economic impact assessment**, carried out both **ex ante** – that is, before a measure is introduced – and **ex post** – after its implementation – or concurrently, in the form of monitoring.

In the Öko-Institut’s view, these offer the following advantages:

- “... **clear and verifiable objectives** should be **set and suitable indicators** defined right from the design stage of a measure. (...) During implementation, it is necessary, amongst other things, to regularly assess whether the **intended target groups** – in particular vulnerable households and people with limited capacity to adapt – are **actually being reached**, the extent to which the measure is being utilised, and the extent to which the **living and income situations of those affected are changing in line with the intended objectives.**”
- “**Impact assessments** are necessary to **evaluate** the **effectiveness of energy and climate policy measures**. It is recommended that, in addition to setting clear objectives, **the potential impacts** of the measures be assessed at an early stage. This applies in particular to possible social consequences. Where necessary, accompanying measures should be identified and assessed to determine whether any potential negative social consequences can be prevented or mitigated. Furthermore, it should be outlined how the **expected outcomes** will be **systematically monitored, measured and evaluated.**”
- “The advantages of an early and systematic social assessment of measures lie in **highlighting potential social and, in particular, distributional effects at a preliminary stage**. On this basis, the measure can be further developed in such a way as to reduce, or in the best-case scenario avoid, adverse impacts.”
- “To continuously monitor progress towards achieving climate targets and the effectiveness of the measures implemented, it is recommended that **a systematic**

*impact assessment be carried out **at least every two years**. This should cover both the status of implementation of the measures and their social, environmental and economic impacts, and compare these with the originally defined targets."*

Furthermore, the greatest possible transparency is needed to ensure planning certainty, both for private households and for economic actors (e.g. how long will a support programme 'run', when will it be adjusted, etc.).

To effectively accelerate the transition, **a bundle of regulatory, market-based, funding policy and information-related measures** is required, **rather than individual measures**

Or, as the Öko-Institut puts it: alongside, or as part of, the impact assessment, the following suggestions should be formulated:

Conclusions

As Prime Minister Luc Frieden said in his state of the nation address:

"Do we want to enjoy the sun in summer, or endure heatwaves? Do we want a regular daily routine, or extreme weather events? Do we want fresh air, clean water, healthy forests?"

His answer was:

"For the government, the answers are clear: we want to protect the environment and tackle climate change."

Whoever harbours this wish must finally pursue real climate protection, energy, climate adaptation and biodiversity policy. We are still far from this. It is time to "turn the wheel around" and finally take decisive action.

From "not bothering" and "pragmatic" towards a structured, scientifically sound, effective, targeted and social policy, for which the necessary financial resources are also available.

July 15th 2026