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Energy

We need action on the low-carbon technology targets – Tor Ivar Eikaas

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by Jon Cartwright



Tor Ivar Eikaas says there have been continuous improvements and rollout of low-carbon technologies over the last 10 years. Credit – Tor Ivar Eikaas

It is critical that we deliver on the targets for low-carbon technologies in the 2020s, 2030s and beyond which have been set as part of the EU's Strategic Energy Technology (SET) Plan, according to Tor Ivar Eikaas, a special adviser at the Research Council of Norway and a long-standing representative of the SET-Plan steering group.

The SET-Plan began 10 years ago with the aim of accelerating the development and deployment of low-carbon technologies. Are we on our way?

‘You do see continuous improvements and rollout of new technology. You see it for photovoltaics and offshore wind, you see smart cities and energy storage. These are all good examples.

‘Hopefully what we are now seeing is a clear change from planning to action, and from technology development towards more innovation. We are also seeing a more holistic view of the whole energy system where the whole system (is) interacting in a much stronger way. Like computer systems – in the past they were small and isolated, then we got the internet and they all became connected. It’s a similar shift.



‘You see continuous improvements already – small photovoltaics, offshore wind, smart cities and electric cars.’

Tor Ivar Eikaas, Research
Council of Norway



‘Likewise, we are recognising the role of the individual citizen. He or she can actually participate in the energy system, by selecting what to use and when. For instance, you can choose to have solar cells on your roof, so that you provide energy to the grid, becoming not just a passive consumer but also an active provider.

‘More generally, cooperation has improved between the member states and associated countries. The SET-Plan is now using new funding mechanisms outside the traditional framework programmes, such as the innovative financial instruments used in first-of-a-kind, commercial-scale energy demonstration projects. But while there is a move towards demonstration and close-to-market activities, I want to emphasise that research activities must still be a main priority of the SET-Plan in the future.’

How is the SET-plan changing the energy system in Norway in particular?

‘In Norway, clean energy from hydropower has always been the main source. The difference now is that our energy system is more linked to the rest of the European energy system via the electricity interconnectors, both importing and exporting energy. With its hydropower and gas, Norway is a major and stable contributor to energy in Europe. We think that, together with carbon capture and storage, and hydrogen, these are key elements for a sustainable Europe-wide energy system, especially in this transitional state from a general reliance on fossil fuels.

‘We have what is called Energi21, which is the Norwegian Ministry of Petroleum and Energy’s permanent strategic body and national strategy for research, development, demonstration and commercialisation of new energy technology. This is actually well-aligned with the SET-Plan, and so the SET-Plan reinforces to a large extent our national strategy, with common energy and climate goals.’

What else has the SET-plan achieved so far?

‘An important aspect of the SET-Plan is how it brings the SET-Plan countries closer together, building trust and contributing to better aligned national strategies and more joint activities. Together with the research actors, industry and other stakeholder groups, SET-Plan countries have also agreed on specific targets and endorsed specific implementation plans to reach these targets.

‘But perhaps one of the most significant achievement is the establishment of the European Energy Research Alliance (which) brings together more than 250 research institutes and universities and more than 50 000 researchers, working together on 17 joint programmes. This is really unique, worldwide.’

Looking forward, what are some of the major challenges?

‘We still need to reduce the fragmentation of research, and create more and better synergies between EU-funded activities and national programmes. We need to involve industry more widely. Most vital, we still need to address the whole chain of activity, from technologies at low readiness level to those ready for demonstration and then market uptake.’



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(We have set) really clear targets and key performance indicators, for the 2020s, 2030s and beyond, and (it is critical that we) deliver on these. We all know the EU climate and energy targets, and the relevant UN sustainable development goals. We really need the SET-Plan. It brings together the best people, and it is in continuous development. But for sure, in 10 years it will look different to how it looks today.’

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10 years of the SET-Plan

The Strategic Energy Technology Plan (SET-Plan) was set up in 2007 with the aim of accelerating the development and deployment of low-carbon technologies.

In 2015, when the EU introduced its Energy Union strategy, the SET-Plan was updated to effectively accelerate the transformation of the EU's energy system.

The idea of the revised SET-Plan is to tackle the energy system in Europe as a whole and go beyond the technology silo concept.

It has set research and innovation priorities in each of its 10 key actions, including reducing the cost of renewable technologies, developing energy efficient materials for buildings, increasing the resilience of the energy system and improving safety in the use of nuclear energy.

More info

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