



Delivering the Green Transition in Network Sectors: Opportunities and Challenges for Economic Regulators

Conference report

Conference co-organized by the Club of Regulators
and the Network of Economic Regulators of OECD

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Delivering the Green Transition in Network Sectors: Opportunities and Challenges for Economic Regulators

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Introduction

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Éric Brousseau | Director of the Governance and Regulation Chair and of the Club of Regulators, Dauphine University

Research conducted by Dauphine University has highlighted the negative relationship that exists between regulatory independence and the development of renewable energies in OECD countries, especially European countries, between 2013 and 2018. Although it would be possible to conclude that independent regulators are the root of the issue, the truth is different. In fact, regulators in the EU were faithful to their mandate: to liberalise the energy sector on the basis that increased competition would, in turn, increase investment in electricity networks. The mandate of regulators turned to sustainability only after 2016, when the Paris conference introduced a new vision which governments then translated into new policies.

Before this turn, the independent regulators kept to their mandate, namely, to ensure lower prices for users and more competition in the market. If regulators have failed to drive the greening of the energy mix or more general sustainable development goals, it is because they have had, neither the tools, nor the mandate to do these things.

Some regulators have, nevertheless, tried to encourage more environmentally sustainable practices in their sector, even in the absence of a specific mandate or a lack of control over the levers necessary to effect change.

Today, we will analyse how regulators, with an explicit mandate to do so, or not are acting to favour the reinforcement of environmental sustainability in the industry they are overseeing. Thank you all for your presence here today. We look forward to hearing your contributions to this debate.

Keynote: The Role of Economic Regulators in the Green Transition - findings from an NER survey

Alexander Roberts | Policy Analyst, OECD

A new report: the role of economic regulators in the green transition

In October, the OECD published a report called *The role of economic regulators in the green transition, driving sustainable change in network sectors*. It has three main objectives: to establish the state of play around regulators' current activities and their contribution to their sector's environmental sustainability; to map how regulators and regulatory tools contribute to environmental sustainability and the green transition; and to highlight the importance of internal and external governance arrangements in enabling regulators to contribute to green transition.

The primary evidence base is a quantitative analysis of survey data, referred to as the Green Governance Survey, which covered a number of topics, including the objectives and powers of regulators, environmental mandates and targets, regulatory functions and coordination, stakeholder engagement, the collection of environmental data, and impact assessments. Survey data were collected from 42 countries and 151 different institutions. Three key opportunity areas were identified.

Opportunity 1: Setting objectives and empowering regulators to act

Due to differences between institutional and regulatory arrangements across sectors and countries, there are significant variations in the degree and scope of regulators' contributions to the green transition. 58% of regulators do not have legally defined objectives on environmental sustainability; when objectives exist, they are sometimes vague or do not provide a clear mandate. 42% of regulators lack the legal power to consider environmental sustainability in regulatory decisions. When regulators do have powers, they often fail to cover the full range of the regulator's functions or the whole spectrum of environmental issues. There is an opportunity here to improve outcomes by setting clear laws and responsibilities and ensuring that regulators have the necessary powers to deliver on their mandate.

Opportunity 2: Shaping a co-ordinated, whole-of-government approach

Regulators could support the development of a more coordinated approach to the green transition across government and within sectors. Greater clarity on roles and responsibilities would be a helpful enabler of effective coordination in this matter. A broader agreement would require regulators to produce multiple objectives and could increase the complexity of their tasks. 43% of regulators with legal powers to consider environmental sustainability reported that they encounter or anticipate trade-offs between environmental objectives and other policy objectives, mostly in relation to the improvement of cost effectiveness.

Coordination between economic regulators of public institutions is particularly important in the context of government mandates that relate to both economic regulation and environmental objectives. 61% of regulators lack formal coordination mechanisms that connect them with the public authorities that are responsible for environmental sustainability issues, and that support more efficient and less siloed decision-making. Although over-arching targets can be useful to guide action, and although 30% of regulators take account of quantitative sector targets for environmental sustainability in their decision-making, 45% of regulators do not have quantitative targets for their sector.

Opportunity 3: Building capacity and informed decision-making for green transition

If regulators are empowered to consider environmental sustainability more broadly in their regulatory decisions and across their functions, there is a need for decision-makers to be appropriately informed, which requires the data on the environmental sustainability of the sector and the capabilities to make sense of this data. Even for those regulators with the relevant objectives today, there are still opportunities in this area, to build capacity and data-driven decisions, informed by stakeholder participation .

At present, 55% of regulators do not have the power to collect sustainability data, including more than a quarter of regulators who have defined environmental objectives. Furthermore, of the regulators that do have data-collection powers, around half regularly exercise those powers but around one third do not, possibly due to the scope of those powers or the way in which they are defined. 80% of regulators are not required to assess the impact of regulatory decisions on environmental sustainability, although they can use impact assessments, ex-post evaluation and additional risk analysis to identify solutions that offer net benefits for the environment. In terms of stakeholder engagement, 22% of regulators invite environmental CSOs to contribute to their consultation processes; the majority simply issue open calls for comments to which environmental CSOs can respond. The transition will also require new skills and tools to support regulatory delivery. At present, many regulators are providing or building these capabilities, but 47% have not hired or planned to hire staff, nor are they using external professionals to fill the scan. Like other public social institutions, regulators face budgetary issues and competition for resources.

Round table 1: Delivering on mandates for sustainability

Chair: Éric Brousseau | Director of the Governance and Regulation Chair and of the Club of Regulators, Dauphine University

The example of Latvia

Alda Ozola | Chair of the Board at the Public Utilities Commission (PUC), Latvia

Regulator in Latvia is obliged to take account of sectoral legislation on environmental sustainability, but does not have an explicit legal mandate to consider these issues. Environmental sustainability can be a consideration in the context of tariffs and companies are allowed to make investments to prepare for forthcoming and draft EU legislation. Limited but positive progress has been observed in water regulation. There are 57 regulated water utilities in Latvia. 56 of them take a cost-plus approach; the 57th uses return on capital.

Following dramatic increases in energy prices in 2022, regulator decided that it was necessary to ensure service-provision sustainability as well as environmental sustainability. As such, a 'fast' procedure was introduced that allowed water utilities to seek assistance from the regulator if they incurred unplanned costs or revenues as a result of these huge fluctuations in energy prices. For example, significant price increases in an electricity contract could be recovered through the tariff. Equally, unforeseen revenues had to be used to reduce the tariff. The regulator tried to balance the economic sustainability of the service to ensure consumers were protected.

In late 2023, the regulator updated its methodology to allow these utilities to recover capital investment costs and interest payments on sustainability investments, such as the purchase of solar panels to generate electricity in-house, the implementation of energy efficiency measures, equipment upgrades, and the writing off of intangible assets. The aim was to incentivise the utilities to adopt energy efficiency and neutrality measures, in line with EU and national legislation, through a flexible regulatory approach. Thus far, two utilities have received permission to include extra capital costs and interest payments related to purchase of solar panels, but many more requests are expected. This system should help the utilities to respect their environmental obligations while maintaining their core functions.

These changes were introduced in an ad-hoc way, through informal coordination with association representing the water utilities. An open call for comments was made when the methodology was changed: no environmental organisations responded but the utilities did provide positive feedback.

Vera Eiró, Executive President of the Board of ERSAR

What was the impact of the tariff increase due to environmental sustainability?

Alda Ozola

Clarification after the conference considering existing examples - the impact on water management service tariffs was 0.5 to 1.5%. We have only received two applications thus far. Many water utilities are owned by municipalities; it is possible that they are waiting until after our upcoming [municipal] elections to submit applications.

Éric Brousseau

Did the geopolitical climate play a role in this? Is energy independence a key consideration in Latvia?

Alda Ozola

The drastic increase in electricity prices in 2022 had a huge impact on water utilities, which started to explore different ways to cut costs, increase energy efficiency and generate their own electricity with solar panels. This interest continues as some utilities entered into contracts for 1-2 years at those higher prices. Self-sufficiency and efficiency are key considerations.

The example of Great Britain

Gavin Knott | Chief Economic Advisor at the Office of Gas and Electricity Markets (Ofgem), Great Britain

OfGem's principal objective is to protect the interests of current and future energy consumers. It regulates energy provision for 29.5 million households and 5.5 million non-domestic customers. In 2023, the government's 2050 net zero target was integrated into OfGem's official responsibilities, placing the green transition at the heart of its activities. OfGem received this sustainability mandate at a time when business and residential customers were still recovering from massive price shocks. Although the importance of the green transition is generally well understood, people's ability and willingness to participate is affected by their financial situation. Many consumers continue to face high bills and consumer debt remains high.

OfGem is one of three public institutions that are working to drive change across the UK energy sector. The others are the UK government and a new future system operator, the National Energy System Operator (NESO), that was incorporated in autumn 2024. The NESO is an expert, impartial body that will provide independent advice on the future planning of the energy system, including the construction of a clean energy grid and its connection to other elements of net-zero infrastructure. It will also manage the system's balance and operability, facilitate competitive markets and ensure whole system outcomes. The coordination role that NESO will fulfil should work alongside but be different from an independent regulator like OfGem.

The green transition offers real opportunities but also poses significant risks. There is significant potential to reduce pricing volatility and reduce bills by generating electricity with zero cost at the point of production, notably through offshore wind and, to a lesser extent, onshore wind and solar. OfGem is adopting a 'whole bill' approach that seeks to spread the costs for consumers over a long period while highlighting the long-term benefits of these investments and the minimal impact they should have on consumer bills. The transition also offers plentiful opportunities for innovation.

Among the risks, network deliverability is key: networks have been regulated for efficiency and cost for the last 20 to 30 years; operators are now being asked to build a lot of new network but they lack experience and skills in this area. As a result, a different approach is required, particularly in transmission. A number of existing regulatory mechanisms are being bypassed in favour of new systems that will support the rapid construction of big wires. Efficiency is still valued, but competitive procurement, advanced procurement and supply chain competition are being encouraged to lower costs. The concept is similar to cost-plus.

OfGem is also considering the retail market, notably pricing-for-demand to encourage consumption at times that match increased generation from daytime wind. Tariffs that incentivise consumers to use energy during these times are available but uptake is low. The regulator must ask itself if utilities are innovative enough to manage this transition independently, if it should take steps to actively promote innovation, or even if it should prescribe a vision of innovation for utilities to follow.

The example of Italy

Elena Gallo | Deputy Director Investments and Environmental Sustainability at the Regulatory Authority for Energy, Networks and Environment (ARERA)

Andrea Guerrini | Board member at ARERA

Elena Gallo

Arera is the National Regulatory Authority for Energy, Networks and the Environment in Italy. This presentation will focus on the water and wastewater sectors. The final goal of economic regulation is to protect the long-term interests of users, which means that questions of environmental sustainability and quality must be taken into consideration alongside tariffs. The regulation of technical quality is particularly important in the context of the green transition.

The core of Arera's technical regulation is a set of seven macro indicators, which are output based and technology neutral. These technical indicators assess water resilience, water losses, service interruptions, drinking water quality, sewerage adequacy, sludge disposal, and wastewater quality. Operators collect their own data thus selecting a starting level or class that reflects their performance. Operators that start in the top class must maintain their position; those in lower classes have annual targets. Improvement is incentivised through a multi-stage performance evaluation and award/penalty mechanism. The incentive system is used to identify the best and most-improved operators in Italy. In 2020-21, awards for improvement totalled around €130 million while penalties amounted to €14 million. The 2022-23 performance evaluation is in progress. Penalties are less than awards as the focus is mainly on incentivisation.

Water resilience, which aims to ensure that the supply system is able to satisfy demand, is the main macro indicator supporting the green transition. Other indicators are designed to save water resources, avoid water scarcity, prevent flooding, and incentivise water recycling and sustainable sludge disposal. The four main pillars of sustainability that are supported through tariffs, coherently with the said indicators, are energy efficiency; recovery of energy and raw materials from wastewater; reuse of wastewater; and reduction in the use of plastics. They aim to create a more favourable split for operators that save energy and generate their own energy. Two additional incentive mechanisms target the re-use of treated water and reduced energy purchasing.

The evidence indicates that this approach to technical quality regulation is having a positive effect on the main performance indicators for the sector: more operators are meeting their goals and more progress is being made towards those targets that have yet to be achieved.

Andrea Guerrini

Environmentally sustainable activities have been incentivised at Arera in two main ways. First, through the introduction of sustainability KPIs that are coupled with performance-based financial rewards. Second, through a hybrid accounting methodology that ensures that tariffs cover all activities and investments and that any revenues from collateral activities can be used to cover costs incurred across the whole sector.

The example of France

Dominique Jamme | Managing Director of the Energy Regulatory Commission (CRE), France

Anne Yvrande-Billon | Director of Economics, Markets and Digital Affairs French Authority for electronic communications, postal and print media distribution (ARCEP), France

Dominique Jamme

The Energy Regulatory Commission (CRE) has three main missions: to regulate energy networks to ensure the performance of network operators; to monitor and survey energy markets and encourage innovation for the benefit of consumers; and to serve the energy transition. The CRE advises the government but has no direct responsibility on the energy policy of the country. The green transition is the driving force behind all of the CRE's activities: reaching net zero will require a huge transformation of the energy sector. Open markets and market coupling at European level plus an efficient framework should make it possible to deliver the necessary level of innovation.

The energy transition is a physical challenge and a financing challenge. In the electricity sector, the CRE's focus is on network issues as most markets operate at European level. Extensive electrification will be required to overcome the country's historic reliance on fossil fuels. New generation capacities will be required to replace carbon-based production and cope with growing demand. The increased penetration of renewable energies and growing electrification will reshape grid capacity needs; networks risk becoming a blocking factor in this transition. Connections to new consumers and producers are also a huge issue. In addition to the physical challenges of this transition, the long-term investment plan will require around €100 billion in financing over the next 15 years for the electricity transmission network alone.

Rather than seeking to adapt the network as new needs arise, it is necessary to identify and anticipate future network demands. This is risky, as it relies on predictions around sites of demand and production, but it is the only way to move forward in the current environment. Local flexibility tenders and trade-off criteria must also be used as an alternative to reinforcing networks in order to accelerate connections and enhance grid flexibility. Ambitious goals attached to financial incentives are being used towards TSOs and DSOs. The next network tariffs will incentivise the use of flexibility, with successful operators receiving 20% of any economic gain and the remaining 80% being passed to the consumer. Work is underway to reallocate unused network capacity that had been reserved by industrial consumers but could be used to serve new consumers; the original customers can apply to reclaim unused capacity if they require it in the future. Although some customers are unhappy with this approach, it will make it possible to connect more data centres to the grid more quickly.

Dynamic pricing for mass-market consumption does not exist in France as it does in the UK. Instead, consumers can benefit if they use energy at less expensive non-peak hours during the night. In the coming years, the non-peak hours will move to the afternoon, to coincide with the solar peak. People will be incentivized to adjust their consumption habits accordingly. A full consultation will precede any change.

The green transition requires an exit from fossil gas and a move into green gases like biomethane. Although gas consumption will decrease, the network is not going to decrease at the same rate. As an example, due to the recent energy crisis gas DSOs did not receive the revenues they expected in 2022 and 2023, and so new gas distribution tariffs started with a huge backlog which will take time to clear, especially as gas consumption will stay low during the next regulatory period. Revenues for the next four years are broadly similar to those for the last four years, even though the tariff in euros per megawatt-hour has increased by 27%. This scissor effect, which was expected to occur in the future, is taking place now because the gas crisis resulted in a huge decrease in gas consumption.

Anne Yvrande-Billon

The sustainability issues associated with the digital and ICT sectors are not always immediately obvious. Arcep, the French telecoms regulator, is moving beyond its traditional regulatory mandate, which focuses on the regulation of network infrastructure, market liberalisation and the incentivisation of investment, to promote greater environmental sustainability.

Until the late 2010s, digitalisation was only seen as a way to decarbonise other industries. However, since then, it has become apparent that digital technologies also have a significant environmental impact, particularly due to rapid growth in data consumption, telecoms networks and data centres, and low recycling rates for tech devices. There is increasing social awareness around concerns about e-waste, climate resilience, the circular economy and broader environmental issues associated with ICT. There is also a lack of reliable data and methodologies to assess the social and environmental impact of these technologies.

In 2020, Arcep was mandated by the government to collect environmental data from telecoms operators and share this information with decision-makers and consumers. The survey based on the collected data, *Achieving Digital Sustainability*, has been published annually since 2022. Arcep was also asked together with the French Environmental Agency (Ademe) to develop a macro-assessment of the country's digital environmental footprint, produce estimated trajectories for 2030 and 2050, and identify effective levers of action. The report published by Arcep and Ademe in 2023 shows that digital services account for 10% of annual electricity consumption in 2020, equivalent to 2.5% of the French carbon footprint, and that the sector's greenhouse gas emissions will triple by 2050 unless action is taken.

The environmental footprint of the ICT sector includes networks and data centres, device and terminal manufacturers, users and digital service providers. Measuring the environmental impact of users is a significant challenge, particularly for digital services and content providers, because it requires action from a wide range of stakeholders. Nevertheless, it can be estimated that in 2020 devices account for 79 % of the French digital carbon footprint, networks 5 %, and data centres 16 %. The use of metals and natural resources to produce tech devices that have a lifespan of 10+ years but are renewed in average every 3 years has both environmental and geopolitical consequences. Efforts are being made to reduce the demand for water to cool data centres but this remains a significant challenge.

Before receiving its new mandate on environmental and sustainability indicators, Arcep used its general mandate to collect basic data covering carbon footprint, electricity consumption, and volume of second-hand devices sold by telecom operators on the basis that improved measurement was the first step to making clear and robust diagnoses, informing decision makers and identifying levers of action. Publishing indicators aims at incentivising actors to be virtuous, and empowering users and companies to make positive choices around their own energy consumption. Arcep's new legal mandates allow it to collect data from digital players across the broader ecosystem, including terminal manufacturers, network equipment manufacturers, content application providers and data

centres. Collecting and analysing these new data will require additional resources and expertise but the process is underway. Terminals and data centres were prioritised as they have the largest impact. Data from mobile antenna manufactures is now being collected and fibre manufacturers will be included next year. Indicators will be tracked over time to identify effects of innovations and monitoring.

Collecting data and sharing information is not sufficient to achieve real change: all stakeholders and service providers must commit to objectives and improvement trajectories. The French government has issued an environmental roadmap for the digital sector but has yet to set objectives. Given the scale of the challenge, a collective effort is required at the European and international level, involving both private and public actors. To this end, the BEREC (Body of European Regulators for Electronic Communications) has established a sustainability working group and works and cooperation are also engaged with the International Telecommunication Union (ITU), the World Bank and the OECD.

Open discussion

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Alda Ozola

Regulators are often seen as conservative and cautious, but the British and French regulators mentioned that they have a mandate to support innovation. Some innovations fail; others do not work as intended. Do you make decisions based on common sense or specific analyses? How do you judge what level of investment in innovation is justified? How do you balance consumers' interests and potential benefits?

Gavin Knott

There was very little spending on innovation on the network side for about twenty years. Over the last ten years, we have set up innovation-specific funds and have partnered with other government bodies to create mechanisms and funds to support innovation and evaluate outcomes. Companies that want to innovate appreciate this approach; those that are less interested in innovation participate less or focus on areas that will allow them to reduce costs. On the retail side, companies tend to be less innovative because they do not want to risk having to pass on costs – or being unable to pass on costs – to consumers in a competitive market. Our approach is bearing fruit but it takes time and requires significant cooperation and effort.

Dominique Jamme

French TSOs and DSOs are allowed to do research and development to improve their business, but any savings on these expenses must be passed on to consumers. Electricity TSOs must promote flexibility to enable competition on every kind of market, which is not particularly easy as they must aggregate electricity that enters the network from a large number of small sources. Incentive regulations use the stick and the carrot to encourage innovation because it is important to ensure that the market functions correctly and that performance improves.

Barbara Acs (OECD)

In the UK, is there an inter-temporal issue with the investment coming ahead of the benefits? Australia is also seeing an accelerated depreciation in gas. Is the opposite occurring with electricity because of the profile of the costs coming ahead of benefits? Second, are you seeing distributed network service providers (DNSPs) blurring the lines of what they had historically been constrained to provide, namely network services, and seeking to innovate by moving into distributed generation under guise of network efficiency?

Gavin Knott

Investment coming ahead of demand is not really an issue for transmission: the risk is relatively small due to the time lag between setting the investment in motion and the expected rise in demand. The question is primarily about how much demand will actually grow, but we doubt that companies will be able to build enough to create an environment of over-supply. There are more risks with distribution. It is possible to wait because it takes less time, but there is potential for a large spike in distribution build, at which point there is more potential for companies to struggle to deliver. The question of whether we should proceed based on best estimates or rely on innovation is being explored in our next distribution review, but I believe that some advance investment is likely to be appropriate.

Our investment framework is currently rather narrow when it comes to blurring the lines, but it is relatively clear that they should partner with others.

Barbara Acs

Is there competition in the markets for these services?

Gavin Knott

That is the intention. Distributed generation should involve independent actors building local networks. None of this would be done by our existing electricity distribution network operators.

Vera Eiró

Do you ask for any type of bond from the users of this future green capacity? We have found that, if we rely on utilities to build the power and water infrastructure that is required for new data centres, the infrastructure is never built. How do you deal with this kind of situation?

Gavin Knott

We are still developing mechanisms for this. We see two types of grid build: point-to-point construction does not involve this kind of risk, but major new connections, for example to prepare for expansions in offshore wind, do present a real risk. We try to identify the level of risk at an early stage and make sure that this is accounted for and mitigated during the contracting and procurement phases.

Vera Eiró

As regulator, do you have oversight of the utilities' contracts?

Gavin Knott

We did not have oversight in the past, but if we are agreeing that consumers will take on a portion of the risk, we need to ensure that the contract is set up to mitigate that risk.

Dominique Jamme

The end user makes a commitment by paying for their connection; therefore there is little risk regarding newly created connexion capacity, except if a company goes bankrupt or there is a plant closure, but this is not a common occurrence. However, the risk involved in reinforcing the network is socialised, as this has always been the case. So there is a fine balance to find between the anticipation needed for electrification and the risk of sunk costs.

Round table 2: Alternative approaches for driving sustainability

Chair: Giuseppa Ottimofiore | Head of Delivery Effective Regulatory Unit, Regulatory Policy Division, OECD

In Italy

Luisa Perrotti | Head of European Affairs and International Relations at the Transport Regulation Authority (ART), Italy

Transport is a major source of environmental concern: in Europe, it accounts for nearly one third of all greenhouse gas emissions and the relevant industry decarbonises more slowly than in other sectors. Road transport accounts for 90% of emissions while rail, excluding the construction of new infrastructure, is the least polluting form of transport.

ART is one of three public utility regulators in Italy. It was established in September 2013, several years after the energy and communications regulators with which it shares the same umbrella law.

While ecological transition is a key axis of the national recovery and resilience plan and 2030 energy and climate plans, the Italian transport regulator has no specific duties or mandates on environmental sustainability. However, it can rely on a number of regulatory tools to promote environmentally sustainable behaviour. Notably, in several instances, to be implemented, regulation must be translated into contractual agreements between the relevant parties. The nature of these agreements changes depending on the sector and the industry concerned.

Reference to environment-related standards recurs in each of ART's horizontal areas of competence, which include access to infrastructure, regulation of services, and users' rights. ART also has sectoral responsibilities, covering rail, motorways, airports, ports, maritime, local and regional transport, and taxis. Additional competencies concern the enforcement of EU regulations on passenger rights.

Regulatory tools involving reference to environmental targets apply to both the costing and pricing elements of access to infrastructure regulation as well as to the planning, tendering and contractual stages of the award of PSO service contracts.

As for the former, for instance, in the regulation of airport charges, an extra weighted average cost of capital (WACC) may be granted, under conditions, for environment-related investments. Tariff modulation based on environmental targets, too, applies to tariffs in several areas. For example, rail infrastructure and airport managers may modulate tariffs based on the reduction of noise and gas emissions; similarly, motorway concessionaires can modulate tariffs depending on vehicle types. Tariff incentives and penalties can also be used to reward or sanction progress towards targets contained in environmental protection plans.

When planning PSO services, the most sustainable multi-modal solution should be preferred. In tenders, efficiency KPIs may include environmental standards. In public service contracts, environmental standards must be considered in the definition of minimum quality indicators.

In Ireland

Lara Connaughton | Sustainability Lead at the Commission for Communications Regulations (ComReg), Ireland

The Irish communications regulator, ComReg, views sustainability issues through two related lenses: adaptation to the reality of climate change; and mitigation of the environmental impact of activities. The regulator does not have an explicit remit to consider environmental sustainability and, as such, does not have powers to collect environmental data from industry providers. It is, however, included in the 2021 Climate Action and Low Carbon Development Act, which states that relevant bodies shall, in so far as it is practicable, perform their services in line with environmental targets.

In 2019, ComReg called for inputs on connectivity and decarbonisation. Given the regulator's lack of a direct mandate on environmental sustainability, this was a voluntary measure. Responses highlighted the enabling potential of the electronic communications sector to decarbonise transport, industry, energy and agriculture. This was before the Covid-19 pandemic, so the potential of what could be enabled by connectivity was perhaps underestimated at the time. The electronic communications sector itself has an environmental impact, particularly in terms of raw materials, energy and emissions. There is significant debate about the exact numbers and overall impact, but the trend is increasing as data consumption increases and the proliferation of AI applications.

ComReg is responsible for ensuring the resilience of networks, which drives its work on adaptation. In 2022, a report on climate change and its effect on network resilience focused on adaptation, preventive maintenance, responses to outages and monitoring. These same measures can also be viewed in the context of mitigation. For example, integrating renewable energy sources into the network increases resilience but also helps to mitigate climate impact. Adopting this view, which focuses on resilience, can open the door to conversations about mitigation activities.

The National Adaptation Framework is a national strategy that seeks to reduce the negative impact of climate change by obliging each sector to have an adaptation plan and roadmap to ensure operation and implementation. Although the regulator is independent, it provides support to the ministry on this plan and is also involved in the national climate change risk assessment, which is a large project that is examining climate-related risks at the national level.

ComReg will chair BEREC in 2025 and is already an active participant, with a particular focus on indicators to measure and monitor the environmental impact of networks, the European Commission's forthcoming Code of Conduct for electronic communications measuring environmental impact, infrastructure sharing, and end-user empowerment. Based on conversations with European colleagues at BEREC, it is clear that voluntary data collection and industry initiatives are good but that they do not provide a complete and accurate picture of the sector's overall environmental impact. It is hoped that a revision of the relevant EU legislation will provide more clarity on the regulators' remit. It can be interesting to think of regulatory issues as a triangle, with regulators, industry and consumers at each of the three points. With regards to environmental sustainability, there is currently an enforcement gap between regulators and industry, an explanation gap between industry and consumers, and an empowerment gap between regulators and consumers.

In Australia

Nicole Ross | Executive General Manager, Infrastructure Division, Australian Competition and Consumer Commission (ACCC), Australia

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The ACCC is responsible for administering and enforcing Australia's Competition and Consumer Act. Its mission is to enhance the welfare of Australians through the promotion of competition, fair trading, and the provision of consumer protection, including prohibitions on misleading and deceptive conduct. Its role includes competition, fair trading, consumer protection, product safety and economic regulations. Although it does not have a specific mandate for environmental regulation, it does have a responsibility to ensure that markets operate effectively during what is a very fast, very extensive green transition.

Businesses all over the world are increasingly responding to drivers of sustainability. In March 2024, the ACCC published its 2024-2025 Compliance and Enforcement priorities, which included consumer product safety, fair trading, and competition concerns in relation to environmental claims and sustainability. As the ACCC has a responsibility to combat misleading and deceptive claims in trade or commerce, including greenwashing, an internet scrape was used to identify the types of potentially misleading green claims that are prevalent in Australia. Together with stakeholder consultation, this information was used to develop guidance to support better business practices. The resulting 'green claims' guide published in December 2023 made eight recommendations, advising companies that they should only make accurate and truthful claims, have evidence to back up those claims, not hide or omit important information, explain any qualifications or conditions, use clear language, not use misleading visual elements, and be direct and open about the business's sustainability transition. Potentially problematic claims identified during the internet sweep are being followed up through a compliance and enforcement work programme, with penalties being applied as appropriate, some litigated outcomes achieved, and a number of ongoing enforcement investigations. The ACCC works closely with fellow regulators, such as the Australian Securities Investment Commission and the Clean Energy Regulator, on these matters and is also engaging with environmental non-government organizations, industry bodies, and other regulators.

Competition has an important role in driving dynamism and innovation in markets, particularly during the green transition. It is important to ensure that changes in markets and arguments about sustainability changes are not misused or exploited by businesses to build market dominance, inhibit competition or prevent new entrants into markets. The challenge is to support the benefits of the transition for consumers and the economy while also protecting the long-term benefits to consumers that are provided by vibrant, competitive markets. For this reason, the ACCC actively seeks to identify competition issues that arise in green transition markets, including situations where exemptions to competition might be necessary. It is common to hear that collaboration is necessary to overcome systemic environmental challenges or address sustainability-related market behaviours, such as a first-mover disadvantage or technical or capacity areas that may prevent businesses from addressing sustainability issues. The ACCC aims to weigh environmental benefits against harm to competition, recognising that in certain circumstances, conduct might breach competition law but would not substantially harm competition, or may give rise to benefits to the public that outweigh the public detriment. The concepts of public benefit are not defined in the ACCC's mandate and have traditionally been interpreted quite broadly. Sustainability benefits, including reduced carbon emissions, have been given significant weight in past decisions and, over the past five years, one in four of our authorisation decisions to enable certain cooperative behaviours has had a connection to environmental sustainability. It is expected that the number of proposed sustainability collaborations will increase and that, over time, increasing efforts will be required to properly scrutinise claimed environmental benefits, assess their impact for consumers, and understand how they relate to the competitive detriment aspect of the authorisation process. To ensure that actual perceived competition law risk is not a barrier to collaboration, the ACCC this year prepared guidelines to assist businesses and industry groups to better understand

competition law risks, exemptions and processes. Over 30 written submissions were made to the draft guidelines; these are now being assessed with a view to publishing a guide by the end of the year.

Sustainability is no longer a single, siloed activity in the service of corporate social responsibility indicators. It is an integral part of corporate risk management and performance, and an increasingly important driver of decision making and consumer markets. As such, the ACCC expects that sustainability and environmental considerations will be incorporated across all aspects of regulatory decision-making and is keen to build capacity in anticipation of future challenges. As this is a very dynamic, fast-paced area, and it can be difficult to stay up to speed and disseminate important information across a relatively large agency, the ACCC has established an internal sustainability task force with a view to developing broader understanding, external engagement, and capability development.

Open discussion

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Barbara Acs

Following our discussions about energy, I wanted to mention a merger authorisation that was approved last year on the basis of a net public benefit. The owner of the transmission system in one of the states wanted to buy renewable generation. In electricity, it is frowned upon for networks to own generation. The merger was authorised after a very balanced consideration because it was going to deliver the green transition faster and the benefits associated with that were deemed to be less than the detriments from the reduction in competition. The deal subsequently fell through for unrelated reasons.

Giuseppa Ottimofiore

Thank you for sharing this.

Gavin Knott

We had a similar situation, whereby we spent a lot of time developing a regime for competition in onshore transmission networks to help tackle issues with delivery and drive a long-standing objective to introduce more competition into this sector. We have accepted the trade-offs associated with that are likely to mean that there is a greater risk that some investment isn't delivered or is delivered later and that, as a result, we have prioritised accelerating investment by existing networks rather than promoting competition. My former employer was the Competition and Markets Authority (CMA), who have done similar work around trying to resolve inefficiencies in markets and communication. The issues are often about situations where competition is not delivering, rather than where competition is creating a detriment.

Dominique Jamme

In Europe, the TSO is also the system operator and has a number of contractual obligations that mean they cannot be involved in production. The TSO must be above suspicion when it comes to principles of non-discrimination. For this reason, the separation is very rigid.

Gavin Knott

Your comments on the link between adaptation and mitigation and its impact on adverse environmental impacts were interesting. Does this link between adaptation and mitigation also exist in network resilience? How do you measure changes in the current level of risk versus expected future levels, and how do you invest in that?

Lara Connaughton

Discussions about the twin transition within EU make it sound like digital and green go hand-in-hand, but in practice they do not, unless there is cross-sectoral and international coordination and leadership to ensure that the right decisions are made to enable it to happen. The same is true for driving network resilience: it is entirely possible to choose non-environmentally sustainable ways of doing this.

We should consider this when we think about our reliance on digital connectivity. For example, if energy networks are interrupted due to climate-related issues, teams will need to be able to talk to each other or access a digital twin to support maintenance and prevention. Decisions need to be made through this lens. I would be interested to learn more about the calculations and methodology that the ACCC used to weigh net benefit against competition.

Anne Yvrande-Billon

There is a trade-off between competition and sustainability. Some telecoms regulators in France and elsewhere in Europe are pushing for the introduction of an obligation on national regulators to mutualise mobile networks, particularly in terms of infrastructure and networks. This is not necessarily favourable to competition but it could mitigate sustainability risks. This will be pushed as a European measure.

Conclusion

Giuseppa Ottimofiore | Head of Delivery Effective Regulatory Unit, Regulatory Policy Division, OECD

Éric Brousseau | Director of the Governance and Regulation Chair and of the Club of Regulators, Dauphine University

Giuseppa Ottimofiore

I am a relative newcomer to this topic and, as such, am still observing and learning. It is interesting to learn about the differences in environmental mandates between sectors and countries and the ways in which those without a mandate are finding ways to work around this. But most importantly, I find that there is quite a bit in common in the challenges that regulators with, and without, environmental mandate, face but also in the solutions and opportunities that they use, be it in the form of tariffs, contracts, flexibility, exemptions and/or coordinated action, that can be deployed to meet these challenges.

I would like to extend my thanks to everyone who participated today or contributed to the organisation and facilitation of this meeting. We look forward to seeing you for another seminar in April.

Éric Brousseau

I would also like to thank everyone who has helped to make this meeting a success.

We are at a turning point: there is an increasingly pressing need to respond to sustainability challenges and, at the same time, growing questions around the idea that competition per se can provide a solution to every problem. The level of investment required to meet the challenges we face is so huge that more coordination is required among participants in the system. We must reconsider the role of independent regulators and the way they work with governments, and ask whether competition is the right way to promote the requested innovations and investments to deliver benefits to the population and reach our sustainable development goals quickly. The geopolitical climate is a key driver of this new approach to sectoral governance, but the ecological transition is also very important. Managing the balance between a new approach to command-and-control and competition will be complex given the variations across countries in the way governments and regulators interact, and also given the different perceptions of the role and responsibilities of independent regulators. We must find a common approach to managing the complex trade-offs that were discussed this morning. I look forward to further debates on these issues.



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