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Energy Union Watch
November 2018/January 2019

The Energy Union back to the origins

Actors \ Dimensions	Security of Supply	Energy Market	Energy Efficiency	Decarbo-nisation	Research
European Commission	3	9	9	9	N/A
European Parliament	6	9	9	9	6
European Council	N/A	9	9	6	N/A
Member States	3	6	3	3	3

About our evaluation

The above tab summarises the advance of the main European institutions and the member states as a whole under the five guiding dimensions of the Energy Union, as delineated in the Communication on the Energy Union of the 25th of February, 2015. Thus, the marks do not represent an evaluation of the state of the Union in the related sectors, rather a general assessment of the number and quality of actions which have been taken to address them from November 2018 to January 2019 (included), ranking from N/A (no action) to 12 stars (full action). The elements which have been considered are the following:

- *Number of initiatives.*
- *Level of initiatives, evaluated by budget, number of involved member states, time frame, urgency of the situation, engagement of the private sector and other factors.*
- *Coherence, both with other European programmes and institutions and with the Energy Union project as a whole.*

In the ensuing pages, we included a brief list of events and actions which have influenced the evolution of the Energy Union, divided per guiding dimension.

Foreword

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Those are complicated times for the Energy Union. A changing geopolitical and economic landscape, as well as issues specific to the energy and climate sectors, put pressure on the project and on the EU as a whole. Particularly from an energy perspective, the EU seems more and more suffocated in a proxy war over gas between the US and Russia, while the Union itself is far from being cohesively decided towards a common direction to take. However, this happens in a time when some of the major Energy Union projects and ambitions are coming a step closer to reality: while many of the Clean Energy Package measures are finalized, the Commission is pushing towards a greater advancement of the energy market and of its governance. The Commission's efforts in the Decarbonization dimension are also supported by a particularly favourable moment for renewables, as solar and wind help to push prices down, thus confirming the maturity of the ongoing energy transition. Yet, despite such positive advances, the European picture of the involvement of Member States in decarbonization is still divided, and the success of the Energy Union as a whole is threatened by this pervasive internal clash over many fundamental topics.

The presence of Russia still looms heavily over Europe, either as a threat or as a complicated partner, and recent geopolitical events further muddle the many unresolved issues on the Eastern energy front, which were at the very basis of the birth of the Energy Union. The Russian seizing of Ukrainian ships in the Azov Sea in December heightens tension on the still-hot front between the two countries, and sparks further opposition in the European groups against an increased reliance on Russian gas – i.e., on the highly debated Nord Stream 2. Such opposition takes place in the European Parliament, which again condemns the project as a "threat to European security", as well as in Germany, through the words of Annegret Kramp-Karrenbauer, the new leader of the Christian Democratic Union (CDU), who proposes a tougher stance on the projected pipeline. Yet, the growth of EU demand and the fall of domestic production counterbalance these positions, increasing the reliance on Russian gas (up to a record 47% of extra-European gas imports) and thus incrementing the economic case of an expansion of Russian supply.
Yet, despite this renewed power of Russia on the European energy sector, another player is gradually, yet powerfully, making its entry: the US. Indeed, as several Member States look at increasing LNG supplies to counterbalance Russian imports, incoming liquefied American natural gas could pose a threat to the dominance of Eastern gas. Indeed, while Poland has signed a 24-year contract for LNG from the US, the latter is increasingly targeting the European gas sector as part of its geopolitical strategy. The US has even suggested it could sanction European countries supporting Nord Stream 2 and other Russian-sponsored pipelines, such as Turkish Stream – a move which is highly unlikely to be finalized, but which shows the growing involvement of the US in EU energy matters.

Such a delicate situation for the EU arises both from a still-incomplete diversification of supplies for some MS, and from a rapidly declining domestic production. The closure of the Groningen fields has indeed quickened, also due to pressure from the Dutch High Court as a response to intense protests by environmentalists and local communities. It is also unclear whether an increase in European gas production is to be expected from other Member States; the UK could potentially boost its reserves if the expansion of shale extraction is confirmed, but widespread protests, an unclear future for domestic legislation and the general political uncertainty due to Brexit cast shadows over the future of unconventional reserves in the country. Meanwhile, further exploration in Italy – whose gas and oil resources are subject to optimistic, yet unclear forecasts – is likewise prevented by political instability and by the opposition of the Movimento Cinque Stelle party to additional upstream oil and gas activities. Nevertheless, the situation for the Energy Union is perhaps less dramatic than it appears. Indeed, the internal market seems to be consolidating, with energy prices on a downward slope, more than it has been in previous years. According to the recently published biannual Commission report on electricity, a mix of increased competition, interconnections and a greater role of renewables have lowered prices almost everywhere in the Union. Such results show that the direction taken in the past decade (at

least) by the Commission is bearing its first and most important results, and that such outcomes are needed now more than ever; indeed, lower electricity prices are balanced by greater cost for fossil fuels, which are also suffering from an increasing reliance on imports, a situation that extends from gas to coal and oil. Speeding up the energy transition in Europe now emerges as one of the priorities for the advancement of both Europe's security and its economic well-being.
The Energy Union appears to be on track to deliver the tools required to achieve this, as some of the most important measures of the clean energy package have been finalized. There are three sectors in which the Council has approved new rules: governance, renewables and energy efficiency. Regarding the first, ACER finally sees its new role confirmed and expanded: despite a lesser degree of ambition in the final proposals regarding the Agency, the streamlining of energy regulations and the possibility for direct Agency approval of rules reduces the dispersion of policies, improves internal coordination and favours energy exchange, thus promoting the still-incomplete European energy market. This ambition is also boosted by newly agreed informal rules for the electricity market, which favour renewables in particular. The greatest obstacle to this objective remains regulated energy prices, often the backbone of entire domestic energy sectors, from smaller economies (Bulgaria) to larger ones (France). The complex intertwining between energy and industrial policy in this regard will make the battle on this issue particularly hard in the months (or, more likely, years) to come.

Renewables, energy efficiency and decarbonization in general also receive a significant push. The new renewables directive helps fight the substantial uncertainty that has afflicted the sector in Europe in the past five years, a concern which likely contributed to the sharp fall in renewable investments in the EU in the same period. The success of this measure is, however, yet unclear. Reaching the binding EU target will indeed depend on the integrated National Energy and Climate Plans for 2021 to 2030 which MS will have to present shortly, and whose level of ambition, available tools and commitment are still to be defined. The success in promoting a higher EU target for energy efficiency is similarly complicated by a mixed behaviour by MS. Indeed, on the one hand the 32.5% target, with a revision clause by 2023 (when the target could be increased, but not lowered), marks a significant step, considering the bitter discussion the topic has generated. Yet, the still-incomplete transposition of the previous Energy Efficiency directive, regulating the target for 2020 by seven MS (Spain, Finland, Germany, Austria, Hungary, Slovakia and Romania) raises doubts on the true ability of European countries to reach European targets.

Generally speaking, as in the case of Security of Supply, the Decarbonization and Energy Efficiency dimensions show a divided Energy Union, also in their declared level of ambition. Ten MS have asked through a letter to Commissioner Cañete for a "clear direction" towards a zero-emission European economy, in a move that is coherent with the clear benefits in terms of imports and reduction of pollution in the energy transition. Others, instead, still cling to coal: the publication of a long-awaited detailed plan for coal phase-out in Germany has been accompanied by increasing coal imports and by a level of coal generation still around 40% of the nation's total. A similarly relevant role is played by the resource also in other MS, the Czech Republic and Poland in particular, with no improvements expected in the short term. This is a generation mix that, in the absence of domestic resources, further increases reliance on Russia, Europe's first supplier of solid fuels.
The long-awaited COP24 in Katowice is perhaps the best indicator of such a complex situation. The event was meant to be a crucial crossroads for the still-debated path for world decarbonization – and, considering the role of Poland as host country, for Europe. Yet, the conference achievements are largely incomplete: despite a significant push for European policies and targets, which have been indeed finalized before the COP, the lack of cohesiveness on the European front and the evident pro-coal stance of the host supported the opposition of Brazil and other countries in defining global carbon market guidelines – probably the most important economic tool to be delivered in order to implement the Paris Agreement. This is a missed chance for both the world and the climate leadership of the EU – which, in an increasingly uncertain and aggressive global energy sector, appears to be still divided and unprepared for the challenges ahead.

Five Guiding Dimensions
Details of the evaluation

1. Security of Supply
Evaluation:3/12

European gas production is at risk due to rising concerns among citizens and institutions regarding fracking, both in the Netherlands and in the UK. The transatlantic conflict over European gas supplies however remains the most pressing issue: the American and Polish position and interests are aligned, both supporting more US LNG supplies to Europe and attacking Germany concerning its position over Nord Stream 2. The debate takes harsher tones following the Russian moves in the Azov Sea, with the EU extending sanctions to Russia. Another strong tension comes from the unimpressive progress in the EU-mediated Ukraine–Russia talks over gas transit.

GROWING DEPENDENCY ON RUSSIAN SUPPLIES

- Despite the Commission's opposition, Gazprom increases its contracted gas supplies to Austria by 1 billion cubic meters per year (bcm/y) for the duration of the contract because of the country's record demand for Russian gas. The expansion of gas supplies to the country is in line with the tendency in the region: Gazprom's export to Europe is growing, partly because EU gas production is falling (5 November, here). The latest report on the gas and electricity market confirms the EU's strong dependency on Russian gas supplies – ensuring 47% of extra-EU gas imports (28 January, here).

TRANSATLANTIC CLASH OVER EUROPE'S NATURAL GAS SUPPLY

- The Polish state-owned company PGNiG closes a 24-year deal to import US LNG with the aim to reduce its dependency on Russian supplies (8 November, here). The deal with the US enters into force in 2019 and is said to include a "competitive price" strategy. The country is also looking at new import possibilities from Qatar and Norway (9 November, here). After having signed the LNG contract, US Energy Secretary Rick Perry returns to the never-ending debate over NS2 during a joint conference with PGNiG in Poland. He considers it a political game rather than a commercial project (9 November, here). On the same occasion, Perry states that the US could keep sanctioning the building of Nord Stream 2, in light of its strong support for a "Pro-Poland" and "Pro-Europe" energy security policy (8 November, here). German Foreign Minister Heiko Maas considers US sanctions to Russian-backed NS2 to be the wrong way to solve the dispute (10 January, here); nevertheless, the US continues threatening to sanction EU companies that participate in NS2 (13 January, here). In turn, German businesses consider this to be an attack on German and European sovereignty (11 January, here). Some European companies participating in the project consider that if the US were to offer competitively priced LNG, the country could be less worried by NS2 (22 January, here).
- For similar reasons, the US also threatens EU companies participating in Turkish Stream (14 January, here). The United States calls on Hungary and its neighbours to reject Russian pipelines, which the US considers an attempt to cement Moscow's grip in the area (14 November, here). However, the offshore part of Turkish Stream is already completed (19 November, here), which turns out to be profitable for Russia and transforms Turkey into a "gas bridge" between the East and the West (27 November, here).

RUSSIAN ACTIONS IN THE AZOV SEA TIGHTEN UP THE DEBATE

- The Members of the European Parliament condemn Russia's recent aggression against Ukraine in the Kerch Strait, demanding that Russia guarantee the freedom of navigation in the Azov Sea. MEPs also condemn the construction of NS2 which bypasses Ukraine, "as it is a political project that poses a threat to European energy security" (12 December, here). Following this parliamentary vote, Gazprom shares drop 1.6 percent (13 December, here).
- Annegret Kramp-Karrenbauer, elected to succeed Merkel as CDU leader, addresses major questions regarding NS2 by taking a harder line on Russia. Following Russian moves in the Azov Sea, she says the EU could apply internal energy market rules to reduce the amount of gas that flows through the new pipeline (3 December, here). Other lawmakers suggest curtailing the project to punish Moscow for its seizure of Ukrainian ships but Germany's foreign minister confirms Germany won't withdraw its political support for NS2 (4 December, here).
- EU extends sanctions against Russia for another six months, until July 2019. The measures regard the financial, energy and defence sector, as well as dual-use goods (21 December, here).

CHALLENGING EU-MEDIATED RUSSIA–UKRAINE TALKS

- Russia and Ukraine meet to talk about Russia's gas transit via Ukraine to Europe, which makes up 3 percent of Ukrainian gross domestic product. As the meeting did not allow for definite conclusions, Russian energy minister Alexander Novak announces a second meeting that will take place in May (21 January, here). Putin says Moscow is ready to keep its transit of gas to Europe through Ukraine once the current deal with Kyiv expires on 31 December 2019 if supplies are economically viable (22 January, here).
- However, Ukrainian state energy company Naftogaz believes Russia is delaying negotiations in order to get its Nord Stream 2 pipeline built first (21 January, here) and a top Ukrainian official considers Russia to be using energy as a lever to weaken Kyiv by depriving the country of 3 billion US dollars a year (25 January, here).

SPEEDING UP LNG PLANS

- Despite strong tensions with the United States over energy, Germany will likely be a buyer of US LNG in the medium term (2 November, here). In fact, Angela Merkel declares Germany will speed up its plans to build an LNG terminal to diversify its energy supplies (2 November, here).
- Thanks to a 40 million fund from Cohesion Policy, Greece inaugurates an upgraded LNG terminal in Revithoussa, promoting a more secure and interconnected energy market (22 November, here).
- Despite receiving few bids for the use of the LNG terminal on the northern Adriatic island of Krk – casting doubts over its viability – according to Energy Minister Coric, Croatia wants to go ahead with the terminal, considering it to be strategic for both Croatia and the European Union's plans to diversify its energy imports (16 January, here).

STRENGTHENING THE EU–ALGERIA ENERGY BOND

- The European Commissioner for Climate and Energy, Miguel Arias Cañete, meets Mr. Mustapha Guitouni, Minister of Energy of Algeria, to strengthen the energy relationship and reopen an EU–Algeria dialogue on natural gas, renewables and energy efficiency (19 November, here).

EU GAS PRODUCTION AT RISK

- In the UK, after a few weeks of fracking operations in northwest England, Cuadrilla extracts the first shale gas and underlines the potential of the site (2 November, here). Indeed, minor earthquakes did not stop UK fracking but are now emerging as a threat to this practice, calling for a governmental regulation (1 November, here). Despite Cuadrilla's demand to "relax" UK regulations, which according to the company are "strangling" Britain's fracking industry "before birth", the UK Energy Minister Perry dismisses pleas for rules to be loosened (13 January, here). A number of MPs are now more critical towards hydraulic fracking (1 November, here) and the high court is ready to hear two legal challenges on the government's planned rules on fracking (16 December, here).
- Gas production from the Groningen field is set to drop by at least 75 percent in the next five years, ahead of schedule towards the projected end of extraction. The Dutch government decided this year to shut down in 2030 what was once Europe's largest natural gas field because of earthquakes from extraction. Production is set to drop below 5 billion cubic meters (bcm) per year from 2023 (3 December, here). Dutch citizens are pleading for an immediate end to production in the Groningen region (17 January, here).The Dutch High Court says it can consider demands of an immediate end to gas production from the Groningen field – in contrast to the government which plans to cut its output gradually, after the protests and objections to end gas production (9 January, here).
- The Italian government wants to block the issuing of about 36 permits to explore for oil and gas in order to cut its carbon footprint, as the ministry says that upstream oil and gas activity in Italy is not of strategic importance. Several believe in significant reserves in Italy, although red tape has prevented exploration for a number of years. The country's gas production accounts for ca. 7.5 percent and its oil production for ca. 7.3 percent of its demands (9 January, here).

FORWARD ON RISK PREPAREDNESS IN THE ELECTRICITY SECTOR

- Co-legislators reach an informal agreement on a proposal to improve the EU's risk preparedness in the electricity sector, aimed at finding new common methods for the identification of possible electricity crisis scenarios at both domestic and regional levels, ensuring maximum preparedness against electricity crises, helping national authorities to prevent and manage crises, setting up a new framework for a more systematic monitoring of security-of-supply issues and ensuring that markets can work for as long as possible (22 November, here).

2. Energy Market

Evaluation:9/12

Significant advances are registered in this domain of the Energy Union. At the policy level, co-legislators have agreed on a proposal to enhance the role of the Agency for the Cooperation of Energy Regulators, have decided to move ahead towards a real European electricity market, and have reached an agreement on a legal framework concerning small-scale renewable energy production. The fate of nuclear within the future European energy mix is a catalyst for national debate in several EU MS, with the UK undergoing a particularly heated debate due to the poor results of its nuclear energy plan. The country is furthermore preparing for Brexit, implying UK solutions and EU27 adaptation on all main instruments of the European energy integration.

LATEST EU ELECTRICITY AND GAS DATA NOW AVAILABLE

- The Commission releases the biennial report on energy prices and cost in Europe (9 January, here) and the latest report on electricity and gas, covering the last quarter of 2018 (28 January, here).
- As for electricity, increasing competition on wholesale energy markets from greater amounts of RES, improved interconnections and a better integrated internal electricity market have led to lower wholesale prices (9 January, here). However, in the Commission's latest reports on gas and electricity markets, covering the third quarter of 2018, the electricity market report confirmed that wholesale electricity prices in the EU are on the rise in the third quarter of 2018, supported by increasing gas and coal prices (28 January, here).
- The EU remains heavily dependent on imports of gas (and oil), and the increase in fossil fuel prices made the cost of EU energy imports in 2017 rise by 26% to EUR 266 billion (9 January, here). Wholesale gas prices in Europe continue to increase and in September 2018 reached the highest monthly average since December 2013. LNG imports in Europe did not pick up, but following the meeting between Juncker and Trump in July 2018, LNG imports from the US picked up in the last months of 2018 and new long-term LNG import agreements were concluded between European and US firms (28 January, here).

PROVISIONAL POLITICAL AGREEMENT ON ACER REACHED

- An informal agreement on the proposed regulation on Agency for the Cooperation of Energy Regulators (ACER) is informally reached. This Regulation adapts ACER competences to the new challenges the electricity sector is facing, in the context of an increased regional cooperation. The approach also streamlines regulatory procedures (by introducing direct approval by ACER instead of separate approvals by all national regulators). (11 December, here). ACER has also recently appointed Clara Poletti, Director General of the Italian energy authority (AEEGSI), as its next Vice Chair (22 November, here).

ELECTRICITY MARKET RULES INFORMALLY AGREED

- EU electricity market rules are informally agreed to tackle barriers and achieve cross-border trade of electricity. This will make it easier to integrate renewable energy in the electricity grid and hence support efforts to reach the EU targets on decarbonization. The measures include increased cross-border flows of electricity from renewable energy, the end of state subsidies to the most polluting coal power plants, and a better deal for consumers, incorporating smart meters and dynamic pricing (19 December, here).

DELICATE GAME ON REGULATED PRICES

- The European Commission renews its push to phase-out regulated energy prices – as agreed in the clean energy package legislation – as they hinder competition, as well as discourage investments and the emergence of new market players. Through a new definition of "energy poverty", the Commission aims to ensure prices are free from public intervention, "with duly justified exceptions". The subject is however very delicate, as 13 Member States still have regulated electricity prices and this appears to be a very sensitive issue (13 November, here).

STATE OF POWER INTERCONNECTIONS

- The Nemo link, a new £600m cable connecting the UK and Belgium, deepens the UK's ties to continental Europe. After the electricity interconnection passed the final stages of testing (5 December, here) it commenced operation. It has the capacity to provide power for more than one million homes (31 January, here).
- The European Commission is facilitating talks on the Euro-Asia Interconnector, a project of common interest (PCI) aimed at putting an end to energy isolation of Cyprus and the Greek island Crete. The project is meant to connect Greek, Cypriot and Israeli power grids through a submarine power cable. The realization of the interconnector is however still uncertain, due to disputes among the parties (8 November, here).
- Germany's energy regulator decides on the route for the first part of a high-voltage line that will send wind power from the North Sea to consumers in the southwest. The Ultranet power line is considered fundamental for the success of the energy transition (21 January, here).
- An EUR 323 million grant is awarded to the Baltic electricity synchronization project. It aims to increase the security of supply and reliability of the power systems in the region through synchronization to the Continental European Network (CEN) (23 January, here).
- As concerns smart grids, the EU supports the ACON SG project to modernize the power grid between the Czech and the Slovak Republic (23 January, here).

STATE OF GAS INTERCONNECTIONS

- Marco Alverà, CEO of the Italian gas infrastructure company SNAM that has 20% stake in the Trans Adriatic pipeline (TAP), confirms the completion of the project in 2020 (7 November, here). TAP also completes its 3.9 billion euro project financing, paving the way for construction to start in 2020 (11 January, here).
- The Baltic Pipe, a 900-km pipeline project to bring Norwegian gas into Eastern Europe, reaches its final investment decision (30 November, here) and receives EU funding (23 January, here).
- Bulgartransgaz plans to take a final investment decision and spend 1.4 billion euros on a new 484-km gas pipeline from the Bulgarian border with Turkey to Serbia, by 2020 (13

December, here). Three companies, including Gazprom, file binding offers for capacity at the gas network, the other two being Bulgaria's state-owned Bulgargaz and Swiss-headquartered energy company MET, winning sufficient bids to proceed with the pipeline (31 January, here).

- The French energy regulator CRE and the Spanish CNMC reject grid operators Terega and Enagas's project to build a gas pipeline across the Pyrenees. CRE considers that the 442 million euro STEP interconnector project doesn't match market needs. It would have formed the central portion of the EU-backed 3 billion euro Midi-Catalonia (Midcat) pipeline project, aimed to double the amount of gas piped between the two states (22 January, here). However, according to the Commission, the project remains a PCI eligible for EU funding (23 January, here).
- Another step is registered concerning the decision over the EastMed pipeline. Technicians define the financial and engineering details of the submarine pipeline, expected to cost 7 billion dollars. The gas extracted will leave from the waters around Cyprus, pass the Greek island of Crete and arrive on the Apulian coast of Italy (25 November, here).

STATE OF EMISSIONS AND EU ETS TRADING

- The newly released Carbon Market report shows that in 2017 the EU power sector reduced its GHG emissions for the sixth year in a row. However, emissions of industrial installations, which receive the vast majority of their emission allowances for free, register a slight increase, leading to an overall increase in ETS emissions by 0.18%, compared to 2016. This breaks the decreasing trend since 2013, but also corresponds with the highest growth in real GDP since 2011. Verified emissions from aviation increased by 4.5% compared to 2016 (17 December, here).
- As allowances not allocated for free in the current ETS trading period (2013–2020) can either be transferred to phase 4 (2021–2030) or be auctioned, Poland intends to auction 55.8 million in allowances from the volume of free allowances that were not allocated in the period 2013–2017 (5 December, here).
- The preliminary carbon leakage list published in May 2018 presents its assessment, establishing a list of sectors and subsectors deemed at risk of carbon leakage for the 2021–2030 EU ETS trading period, and is opened for a 4-week stakeholder feedback period (10 December, here).

FORWARD ON SMALL-SCALE RENEWABLE ENERGY PRODUCTION

- EU negotiators reach an agreement on a legal framework concerning small-scale renewable energy production. The Commission considers that by 2030, more than 50 GW of wind and above 50 GW of solar could be owned by energy communities, representing 17% and 21% of installed capacity. The deal includes the possibility for energy communities – located in the same building/neighbourhood – to own, rent or purchase their electricity distribution network. Network charges won't apply if electricity is being consumed on location. However, network ownership will be subject to consent from national authorities. This is a concession made to EU MS having a monopoly in distribution, such as France (14 November, here).

FUTURE OF NUCLEAR

- French environment minister De Rugy says there will be fewer nuclear reactors in ten years, without however further indication on how and when the country will reduce its reliance on nuclear energy (9 November, here). President Emmanuel Macron says France will reduce the share of nuclear in the power mix to 50% by 2035, down from 75% today (27 November, here). Nonetheless, the President's priority remains phasing out coal (28 November, here).
- Plans for a UK nuclear power station in Cumbria crash as Toshiba announces it will pull out.

Considered that the plant would have provided 7% of UK electricity, this represents a major blow to the government gamble to revive nuclear (8 November, here). Also Hitachi scraps plans to build a nuclear power station in Wales, triggering "a full-blown crisis" for the UK nuclear energy strategy (17 January, here). Ever since Blair rebooted ambitions for nuclear power 13 years ago, one project is under construction, Hinkley Point C project in Somerset, in southwest England (17 January, here).

- A European Court of Justice advocate-general casts doubt on Belgium's decision to extend the life of one of its nuclear power plants, following a complaint, lodged by two environmental associations, alleging that the decision has been taken without adequate impact assessments (29 November, here).
- The Spanish government states it does not plan to extend the lifespan of any of its nuclear reactors beyond their current 40-year shelf-life (15 November, here).
- By contrast, Poland plans to have a total of 6–9 GW of nuclear power by 2043 with the first stations operating in 2033. Piotr Naimski, responsible for energy infrastructures, declares Poland wants to avoid financing them with debt (4 December, here).
- Hungary is at work to modify the financing clauses for a nuclear plant being built by Russia after several delays in the project, partly because of European calling into question its provision of funding. Hungary is thus willing to modify the contract so that it would only start repaying the loan once the reactors begin supplying power. Hungary awarded Rosatom a contract to build a similar-sized plant to replace the existing one that will be decommissioned in the 2030s, sparking international criticism due to the European energy sector's already-heavy reliance on Russia (25 January, here).

ENERGY AND CLIMATE INTEGRATION IN THE TIMES OF BREXIT

- The European Union pushes PM May to accept some far-reaching environmental targets and policing of state-aid rules as part of a Brexit "backstop" plan for the Irish border (12 November, here). Similarly, France wants the UK to incorporate the upcoming European climate change directives into law automatically in order to reach a good trade deal with the EU (17 November, here). Several European energy stakeholders continue to call for post-Brexit continuity (13 November, here).
- The EU's carbon market faces uncertainty, due to the fact that one of its biggest participants, namely the UK, has still-unclear plans over its energy ties with continental Europe (16 November, here). Meanwhile, the Commission says it has temporarily suspended ETS processes related to Britain as of 1 January 2019, until there is clarity on the terms of Brexit (20 December, here).

CALL FOR PCIS NOW OPEN

- The Commission opens a call for gas projects to be submitted as candidates for the fourth European Union 'Projects of Common Interest' (PCIs) list. In accordance with the trans-European energy infrastructure rules, the applying projects must be included in the Ten-Year Network Development Plans (TYNDP) developed by ENTSO-G (20 November, here). Moreover, a new Connecting Europe facility makes EUR 100 million of funding available for projects of common interest in the transport sector (5 December, here).

CONCERNING STATE AID AND SUPPORT MEASURES

- The Commission approves public support for the construction and operation of a 182-kilometre cross-border gas interconnector ("IGB") between Greece and Bulgaria (8 November, here).

- The Commission decides Romania needs to recover EUR 60 million of incompatible aid from energy producer CE Hunedoara, plus interest (8 November, here).
- The UK's scheme for ensuring power supplies in winter months constitutes illegal state aid, according to the European Court of Justice (15 November, here). The judgment foresees a "standstill period" on the country's capacity market (15 November, here).
- The Commission supports innovative solar power installations in France with EUR 600 million financing (27 November, here).
- The Commission approves reductions granted to energy-intensive companies on a surcharge to finance support for renewable electricity production and high-efficiency cogeneration in Greece (18 December, here).
- The Commission approves support to the production of electricity from renewable energy sources and support to electro-intensive users in Lithuania (8 January, here).
- The Commission approves an EUR 320 million scheme to promote biomass energy installations near forests at risk of fire in Portugal (8 January, here).
- The Commission approves an EUR 36 million Polish investment aid to chemical company LG Chem for a new electric vehicle batteries plant in the Dolnośląskie region (28 January, here).

ANTITRUST CASES

- After a formal investigation was opened in March 2018, the Commission imposes obligations on TenneT to increase electricity trading capacity between Denmark and Germany, to ensure that a specific guarantee capacity is available at all times (7 December, here).
- The Commission imposes an EUR 77 million fine on the state-owned Bulgarian Energy Holding (BEH) company for blocking access to key natural gas infrastructure in the country. In response to this measure, the Bulgarian Energy Minister states the country's preference of paying a multi-million euro fine rather than following the injunction to open up the country's gas sector (17 December, here). Margrete Verstager says the fine could have been avoided, as was done in the past when the Commission solved other cases with BEH on the electricity market or other bigger cases via binding commitments (17 December, here).
- After Poland's lower house of parliament passed legislation to cut tax on electricity – likely a move of the ruling Law and Justice (PiS) party to prevent a jump in energy bills ahead of a parliamentary election in 2019 – the Commission indeed expects Poland to submit its new law for scrutiny to see if it observes EU legislation prohibiting illegal state aid to companies (3 January, here).

3. Energy Efficiency
Evaluation: 9/12

The revision of the Energy Efficiency Directive and its target set at 32.5% for 2030 is finally agreed on and came into force in December. Previously conceived for a block of 28 states, the target was preventively recalculated considering the imminent exit of the UK from the Union, to be activated once Brexit actually happens. With concerns regarding the 2020 roadmap, the EU executive considers several Member States not properly chasing their objectives on energy efficiency and on the buildings directive.

ON ENERGY EFFICIENCY TARGETS

- With regard to the 2020 targets, the European Commission decides to send formal notice to Romania, Austria, Germany, Hungary, Slovakia, Finland and Spain for failing to transpose or implement parts of the Energy Efficiency Directive provisions. The directive contains the 20% Energy Efficiency target set for 2020, paving the way for further improvements after that date (8 November, here).
- As concerns the 2030 targets, the Parliament approves an indicative target on energy efficiency (32.5%) by 2030 that is expected to play a crucial role in meeting the EU's climate goals, in reducing consumers' bills and in decreasing imports. The target will be reviewed in 2023, but cannot be lowered (13 November, here). After the revised Energy Efficiency Directive also being formally adopted by the Transport, Telecommunications & Energy Council (4 December, here) it comes into force in December (21 December, here).
- As part of its ongoing Brexit preparedness work, the Commission adopts a decision to amend the EU's energy efficiency legislation, taking into account the imminent withdrawal of the United Kingdom (13 November, here). The equivalent projections for the remaining Member States result in energy consumption levels of no more than 1,128 Mtoe of primary energy consumption and no more than 846 Mtoe of final energy consumption in 2030, according to the Council of Ministers. While other similar adaptation could be needed in the future, the Commission will formally do so only once Brexit actually happens (31 January, here).

DIGITALIZATION OF THE ELECTRICITY SECTOR IS MOVING SLOWLY

- On average, only 37% of EU consumers are equipped with smart electricity meters, well below the 80% objective agreed for 2020 by EU MS. Smart meters are considered crucial to reduce electricity consumption, and the Commission reckons they can help consumers reduce their annual energy consumption by up to 9%. In some countries, the minimum level of innovation is not guaranteed, but the industry is nonetheless optimistic and calls on EU regulators to step in as electric cars and rooftop solar panels are expected to hit mass markets, all requiring smart meters (29 January, here).

MS & ENERGY EFFICIENCY

- In France, several local authorities and citizens are embracing the idea of reducing (or even avoiding) energy consumption. A survey undertaken by the French Environment and Energy Management Agency (ADEME) reports that French people are starting to become aware of this need, with the majority considering that the energy transition has to involve a change in their consumption habits (24 January, here).
- Czechia and Slovenia are referred to the Court of Justice of the EU for failing to comply with the Energy Performance of Buildings Directive, under which Member States should establish and apply minimum performance requirements for every building, ensure the certification of buildings' energy performance and require the inspection of heating and air conditioning systems (24 January, here).

INTERESTING INITIATIVES SUPPORTING ENERGY EFFICIENCY

- ClimAct in Austria is taking steps to support and empower families to adapt to an environmentally friendly life by saving money, setting up a network of volunteers who are coached to show low-income households tailored ways to save energy (13 December, here).
- A new project shows that installing green technologies in extreme conditions can make even off-grid buildings more energy efficient – with around 20% improvements in energy efficiency (14 December, here).

4. Decarbonisation
Evaluation: 6/12

The negotiations on the Clean Energy for All Europeans package are concluded, representing a major step forward towards completing the Energy Union and combating climate change. The EU is considered to be the leading actor of the COP24 negotiations in Katowice, ahead of which it presented a very ambitious net-zero emission strategy for its economy to go carbon-neutral by 2050. The conference sets the agenda for a "Just Transition", also in light of the Gilets Jaunes movement in France. The phase-out of coal remains the most debated issue at the national level, especially in Germany, where the dedicated commission finally decides on an exit date for fossil fuel.

NEGOTIATIONS ON THE CLEAN ENERGY PACKAGE CONCLUDED

- After the new rules on renewables and energy governance are formally adopted by the Transport, Telecommunications & Energy Council (4 December, here), new Renewables, Energy Efficiency and Governance legislation comes into force (21 December, here).
- The European Parliament votes on binding targets for renewable energies, an indicative objective on energy savings and a separate text on the governance of the Energy Union, confirming the provisional agreements reached in June (14 November, here). The Council, the Parliament and the Commission agree on the new electricity market design proposals to adapt the current market to new realities. They introduce a new limit for powerplants eligible to receive subsidies as capacity mechanisms. Subsidies to generation capacity emitting 550gr CO2/kWh or more will be phased out. The rules also foresee an active participation of consumers (18 December, here). Poland agrees to the deal, after its opposition to the 550 rule for existing coal power plants. However, in return Poland wins a clause to protect contracts awarded to energy generators under the country's capacity scheme. The clause will be applied to all contracts approved before 31 December 2019 (19 December, here).
- The agreement indeed comes in the sixth trilogue meeting on 19 December 2018 and combines the main elements of the Council and Parliament positions, introducing regional coordination centres proposed by the Parliament, setting out rules for capacity mechanisms in line with EU climate objectives while protecting existing investments. Coreper also endorses the agreed text in January. The texts of the Directive and Regulation will be prepared in all EU languages. The parliament will vote the text in the March 2019, followed by formal adoption by the Council (20 January, here).

NET-ZERO EMISSIONS STRATEGY REVEALED

- Ten Member States (Denmark, Finland, France, Italy, Luxembourg, the Netherlands, Portugal, Slovenia, Spain and Sweden) ask the Commission for a clear direction towards a net-zero emission pathway, before the launch of the strategy (22 November, here). The Commission strategy is indeed presented ahead of the COP24 in Katowice, setting out a vision for Europe to become the world's first major economy to go climate neutral by 2050 (28 November, here). To achieve this target, the Union will have to spend billions, but it will definitely gain more in competitiveness and reduced imports (29 November, here). Certainly, the overall impact of such a plan is considered to be very positive, with the EU economy expected, as it fully decarbonizes, to more than double by 2050, compared to

1990, with estimated benefits of up to 2 percent of GDP by 2050 compared to the baseline (28 November, here).

UN CLIMATE TALKS IN KATOWICE: WHAT STAKES AND ROLE FOR THE EU?

- The conference closes with the adoption of a rulebook to make the Paris Agreement work around the world, where the EU played a key role. With regard to the EU, all major legislation for implementing the 2030 emissions target has already been adopted, as well as targets on RES and energy efficiency – which if fully implemented could lead to an EU GHG emissions cut of some 45% by 2030 – as well as the modernization of the ETS and the 2030 objectives for Member States to cut emissions in sectors such as transport, buildings, agriculture and waste (16 December, here).
- At Katowice, the EU also pledges a voluntary contribution of EUR 10 million to the Adaptation Fund for 2019, aimed at helping developing countries to build resilience and to adapt to climate change. This support complements the new pledges already made by European Union Member States (11 December, here). The EU also signs a Joint Declaration with the International Solar Alliance (ISA) for cooperation on solar energy (11 December, here).

CUTTING EMISSIONS FROM TRANSPORT

- The Parliament adopts a higher target (35%) than the European Commission (30%) for new lorries to reduce the EU´s greenhouse gas emissions by 2030, setting a 20% intermediate target by 2025. Furthermore, manufacturers will have to guarantee that zero- and low-emission vehicles represent a 20% market share of new-vehicle sales by 2030 and 5% by 2025. The Commission is also expected to come up with plans for real-world CO2 emissions test for on-road emissions before 2020 (14 November, here).
- The EU initially fails to reach a compromise over how to curb carbon dioxide emissions from cars and vans. Car-producing countries and more environmentally conscious lawmakers seem unable to find a compromise. The EU has diverging positions, such as that of Germany, which warns tough targets could harm the industry and cost jobs (11 December, here). Negotiators from the European Parliament and the Council, in the fifth round of talks, agree to a 15% reduction in emissions from cars and vans by 2025, a 37.5% cut for cars by 2030 and a 31% percent cut for vans by 2030. The text still has to be formally approved by the EP plenary and the Council (17 December, here).

DECARBONIZATION AND THE MULTI-ANNUAL BUDGET (2021–2027)

- The European Economic and Social Committee (EESC) considers that the multi-annual budget (2021–2017) should dedicate 40% of spending to the low-carbon economy, also paving the way for high-quality jobs (9 November, here).
- Fossil-fuel-dependent regions of the European Union could benefit from an additional €5 billion under the next EU budget, although this is widely considered a "drop in the ocean", compared to the emission-reduction challenges in the years to come (15 November, here).

SEVERAL NECP NO-SHOWS DESPITE 2018 DEADLINE

- According to the new Energy Union Governance rules, the 28 EU members had until 31 December 2018 to hand in their draft plans to the EU Commission, in order to have their efforts audited and checked against the bloc's new clean energy legislation. Nonetheless, several EU members have missed the deadline. In mid-January, sources reveal that at least

seven countries – Bulgaria, the Czech Republic, Cyprus, Greece, Hungary, Luxembourg and Spain – are not yet on track with the governance timeline (11 January, here). France is probably also another member among those not having handed in their draft plans on time (15 January, here).

WAR OVER COAL – STEPS FORWARD IN GERMANY

- In Germany, a new report detailing the country's failure to cut emissions puts pressure on the "coal commission" – the task force set up to phase-out coal power – to speed up its plans for the phase-out of coal in the country (15 November, here). Several demonstrations spark across Germany in support of the acceleration of the phasing out of the coal industry, calling for the capacity of German coal-fired power stations to be halved by 2020 (5 December, here). Germany finally proposes to phase-out coal in 2038: the roadmap plans, a hard-won compromise, must be implemented by the German government and its 16 regional states. The dedicated commission proposes at least 40 billion euros in aid to regions mostly affected by the closing of coal-fired power plants (26 January, here). North Rhine-Westphalia, for example, one of Germany's coal-mining states, is demanding at least 10 billion euros in order to support the process (11 January, here). Economy Minister Altmaier assures Germany will protect its manufacturing industry from the impact of abandoning cheap coal-fired power (22 January, here). Similarly, the chief regulator of power transport grids states German consumers must not be burdened with higher electricity network fees (25 January, here).
- In the meanwhile, the country is expected to import 45 million tonnes of hard coal this year, up 1.4 percent from 2018 (18 January, here), and economy Minister Altmaier clarifies that he does not want to compensate for a planned phase-out of coal-fired power by 2038 by importing nuclear power from other countries (26 January, here). The country closes its last black-coal mine with the presence of Jean Claude Juncker, but Germany's goodbye to black-coal mining is by no means an exit from coal altogether: the fossil fuel still accounts for almost 40% of its energy mix (21 December, here).

WAR OVER COAL – NEWS FROM OTHER MS

- Despite encouraging rising prices for European coal – reaching a five-year high of $100 per tonne in November – coal still generates around 20% of electricity and is responsible for around 65% of electricity CO2 emissions in the EU, with Germany, Poland and the Czech Republic being the main consumers (7 November, here). However, coal power generation fell by 6% across the EU in 2018, and is now 30% below 2012 levels (30 January, here).
- Spain announces it will close its coal power plants by 2030. Nine of Spain's 14 coal plants will close in June 2020, while the other five will generate until 2030 (15 November, here).
- In contrast, Poland's consumption is still high, to the extent that national reserves are not sufficient. In what appears as a paradox compared to the anti-Russian sentiments over gas dependency, Poland's increasing coal imports are mainly supplied by Russia (3 December, here).

MS & THE TRANSITION

- The Spanish government publishes a new climate plan targeting a 100% renewable power system by 2050. The plan has a mid-target by 2030, that aims at achieving 70% of its electricity from RES (13 November, here). The Spanish government also proposes to ban fossil fuel subsidies and fracking, reducing GHG by 20% by 2030 (37% compared to current levels) and by 90% by 2050 (16 November, here).

- The Dutch government fights against a climate change verdict on reduction of emissions, taking the decision to the Supreme Court (20 November, here). The Dutch Environmental Assessment Agency (PBL) also warns that the Rutte government lags far behind on its climate goals and will need to take immediate action (25 January, here).
- German cities start to introduce bans on older diesel vehicles emitting high amounts of pollutants after the country's highest administrative court confirmed such bans are permissible (15 November, here).
- French President Macron threatens to veto the EU–South America trade deal if Brazilian President Bolsonaro ditches the Paris Agreement (3 December, here). The country also advocates for a more "gendered" vision of climate funding, considering that women's role in the energy transition is still undervalued (14 December, here). Furthermore, France plans to double its renewable energy capacity with a system of regular tenders under a draft 10-year strategic plan (25 January, here).
- The Portuguese government presents a plan to make the country carbon-neutral by 2050 (10 December, here).

FRANCE FACES THE GILETS JAUNES

- In France, the ecological tax sparks protests through the "Gilets Jaunes" movement, as it puts pressure on fuel prices. Many believe the carbon burden is excessively being paid by individuals rather than by most-emitting industries (9 November, here). The tax – thought to hike gasoline by 4 cents, or under 3 percent – sparks weeks of violent protests just as the Katowice conference starts (4 December, here). Edouard Philippe announces a six-month suspension of the tax rise (4 December, here); nevertheless, the French Minister for the Ecological and Inclusive Transition François de Rugy reopens the debate on ecological taxation at the inaugural session of the European energy transition conferences (24 January, here).

INITIATIVES FROM COMPANIES

- Sixteen European energy companies – including EDF, E.ON and Ørsted, propose to introduce a carbon price floor for the transport and the building sector at the European or regional level, as a way to achieve the objectives of the Paris Agreement and reduce CO2 emissions (28 November, here).
- Several business leaders back radical changes to industries such as steel, cement, shipping and aviation to cut their GHG emissions. The Energy Transitions Commission, which includes leaders from companies such as Royal Dutch Shell, Saint-Gobain and Schneider Electric, banks and environmental think-tanks, say net emissions from those sectors could be cut to zero by 2060 at a cost of about 0.5 per cent of world gross domestic product, using technologies including RES and hydrogen fuel (19 November, here).
- Entrepreneurs like the chiefs of Unilever and Danone send a letter to the EU to scrap GHG emissions by 2050 and increase climate ambition in time to stick to the Paris Agreement. They insist that the cost of inaction is greater than the cost of action (26 November, here).
- Even if the percentage of investments in low-carbon technology might look small (7%), European oil majors are better prepared for an energy transition than their American, Chinese and Russian counterparts. However the path ahead is still long, especially on efficiency (12 November, here).
- The supervisory board of VW plans to begin mass production of electric vehicles in Europe, a radical strategy since the VW scandal in 2015. The industry plans to invest 44 billion euros in developing electric cars, autonomous driving and new mobility services by 2023 (16 November, here).

5. Research
Evaluation: 3/12

Small steps forward are registered in this dimension. What appears as the most dynamic sector is mobility, with EU institutions, Member States and companies studying ways to prepare for the production of electric and hybrid vehicles. At the institutional level, the Parliament agrees to further finance the ITER project despite some disagreement among MEPs. In the UK, much attention is dedicated to CCUS plans.

CREATING AWARENESS

- Eight European partners plan to develop an educational Erasmus + programme that delivers hydrogen (H2) education in secondary schools, recognizing the role H2 plays in creating green and emission-free energy for future generations (2 November, here).

THE FUTURE OF MOBILITY – EU, COMPANIES, MS

- The Italian government upgrades the capacity of its green hydrogen filling station pumps, and will be able to upgrade their capacity from 350 to 700. There is currently only one H2 filling station in the country, located in the Bolzano region. Hopes are rising that the new decree will boost the development of H2 filling stations all over the country (7 November, here).
- Germany sets aside 1 billion euros to support battery cell production in an attempt to reduce the dependence of German carmakers on Asian EV battery suppliers and protect national jobs (9 November, here), nonetheless this plan may come rather late to establish a large-scale battery production in Europe, as Asian market leaders are ramping up output. Some analysts also consider that given the current technology Europe, the EU is already too far behind in the race with Asian firms (9 November, here). Willing to protect its car-making industry and related jobs, the German government wants to fund a research facility to offer firms in Germany know-how to develop battery cells for electric vehicles (23 January, here).
- 21 companies funded by the SME Instrument, a strand of the European Innovation Council (EIC), pilot work on sustainable approaches to urban mobility, user experience (airports and toll roads), energy efficiency and new technologies for the construction sector (7 December, here).
- Daimler will buy battery cells worth more than 20 billion euros by 2030 as it prepares for the mass production of hybrid and electric vehicles (11 December, here).
- In response to widespread interest from European consumers, Nikola Motor Company creates a hydrogen electric truck (the first zero-emission commercial truck), projected to cover most of the European market by 2030 (5 November, here).

CARBON CAPTURE, UTILISATION AND STORAGE PLANS

- In the UK, industry experts call on the government to take action on a clear and ambitious pathway for the development of a carbon capture system (6 November, here). Shortly after, Energy Minister Claire Perry announces the government's commitment to dedicate £20 million of the UK industry innovation budget to carbon-capture technology (28 November,

here).

- OGCI Climate Investments agrees with major companies such as Eni, BP, Equinor, Occidental Petroleum, Shell and Total to construct the world's first gas-powered energy plant that will deploy full-chain carbon, capture, utilization and storage in Teesside, UK (28 November, here).

ITER PROJECT

- The European Parliament agrees to extend the funding of an experimental fusion power reactor (ITER) up until 2027, notwithstanding some MEPs' rising concern about the multi-billion euro investment, considering energy control and renewables as priority (16 January, here).

Public debate

- **According to Bruegel's paper "Learning for Decarbonisation",** national decarbonization strategies should start early in order to deploy and develop low-carbon technologies, exploit individual regional strengths and consider the opportunities and limitations of the national innovation system. Thus, almost every country has some potential to specialize in a particular low-carbon technology and could benefit from doing so (8 November, here).

- **A report from E3G – entitled "Funding the just transition to a net zero economy in Europe: opportunities in the next EU budget" –** explores options for funding the just transition to a net zero economy in Europe, through the contribution of several European instruments such as the Cohesion Policy Funds, European Social Fund Plus, InvestEU, Horizon Europe and the European Globalization Adjustment Fund. The study also identifies some options for policy-makers to align such financing with the decarbonization agenda (8 November, here).

- **A study from the Oxford Institute for Energy Studies – "Russian gas transit through Ukraine after 2019: the options" –** reviews the progress of transit diversification, considering it very unlikely for NS2 and Turkish Stream to be operating at full capacity by the end of 2019. The author considers the present state of Russian–Ukrainian negotiations, as well as possible outcomes and implications in case of no agreement (29 November, here).

- **A policy paper by CEPS examines different perspectives on the past performance of the EU ETS,** in terms of its allowance price, assessing if and how recent reform has learned past lessons, and considers the case for introducing a carbon price floor in the EU ETS. The paper – "Five myths about an EU ETS carbon price floor" – identifies and critically assesses five myths in the debate about an EU ETS price floor (17 December, here).

- **The Institute Jacques Delors in its "Clean Mobility: the European Way – a comprehensive approach to electric vehicles in the energy transition"** considers a comprehensive approach to deliver better, cleaner and more socially fair transport for Europeans. Proposals include to elaborate a timeline for phasing out diesel and gasoline cars in Europe; to accelerate the roll-out of fast charging points for electric vehicles throughout the EU as well as to ensure that no territory is left behind; and to create a Social Pact for the Energy Transition, taking into account the social dimensions of the mobility transition (25 January, here).

In-depth: the Italian NECP

Margherita Bianchi

Italy has submitted its proposal for a National Energy and Climate plan – "Piano Nazionale Integrato per il Clima e l'Energia" – on 8 January, shortly after the requested deadline within the Governance of the Energy Union rules. This draft is a starting point for discussion and definition of the final, binding and sanctionable plan to be outlined within the year.

Vision and coherence with the Energy Union dimensions

The vision of the Italian NECP corresponds to a transition towards a low-carbon economy focusing on renewable energies and a rational use of natural resources through a circular economy model. Its priorities on each of the five pillars of the Energy Union can be summarized as follows:

- **Energy security:** diversifying sources of supply, mainly resorting to natural gas also in the form of LNG.
- **Energy market:** supporting a stronger integration, further electrical interconnections and market coupling with other EU MS and third countries, enhancing the resilience of transmission and distribution networks, paying particular attention to the irregular nature of RES and to distributed generation. The draft plan also supports forms of self-consumption.
- **Energy efficiency:** reducing demand through a combination of fiscal, economic, programmatic and regulatory tools. The transport sector is central for this objective, supporting collective mobility and alternative fuels.
- **Decarbonization:** backing a rapid phase-out of coal and accelerating the transition from fossil fuels to RES. Electrification is considered the key, in particular in the civil sector and in transport, aimed at improving air quality and decreasing environmental impacts.
- **R&I:** supporting the development of products and knowledge to support the use of technologies for RES, energy efficiency and networks, as well as using R&I to integrate systems and technologies. No mention is made of technologies to capture carbon from the atmosphere. The Plan specifies it considers 2030 not as an end but as a step in the path towards a deeper decarbonization.

The table on page 23 summarizes the Plan 2020 and 2030 targets for Italy compared to those at the European level. Interesting to note, the plan aims at achieving 30% RES energy in the final Gross Energy Consumption by 2030, divided as follows: a 21.6% share in the transport sector (compared to the 14% target at the EU level), a 55.4% share in the electricity sector and a 33% share in the thermal sector. The overall value lies below the European target of 32% and far from the 35% that the government supported during the European negotiation on the new renewable directive (RED II).
The plan also foresees a reduction in primary energy consumption of 43% against an EU target of 32.5% – although the comparison is made with the 2007 PRIMES scenario (and not with the most recent 2016 scenario).

In addition, the document expects a dense spread of electric cars by 2030, up to six million, of which 1.6 will be "full electric".
A number of horizontal measures are mentioned to pursue these objectives, such as the definition of governance involving the different Ministries, Regions, Municipalities and Regulatory Authorities, with potential participation of the world of research and associations of companies or workers. The text mentions the simplification of the procedures to carry out the plan within the scheduled deadlines and considers, if necessary, the introduction of a reform of the various public bodies operating on energy and environmental issues. Finally, the plan foresees the possibility to evaluate alternative measures, such as the revision of energy taxation, with attention to the weaker sections of the population and to the productive sectors currently lacking alternatives to conventional fuels.

Shortcomings and the way forward

The document mainly contains scenarios (similar to the previous ones developed into the 2017 "Strategia Energetica Nazionale") and only vague measures or instruments to implement them.
Among the worst assessed are unambitious targets on renewables, uncertainty about the strategy for the gradual elimination of coal as well as insufficient steps forward on sectors having important development prospects such as bioenergy, hydroelectric and geothermal.
Furthermore, the proposal contains measures in aggregate rather than in detailed terms, not adequately specifying how to carry out the single objectives or how to provide precise economic coverage for each measure, making evaluation of the potential impact of the instruments a difficult exercise.
A stronger level of detail is expected in these months of consultation and through the so-called "VAS" (a strategic environmental assessment) on the proposal before the definitive version.

	Targets 2020		Targets 2030	
	EU	Italy	EU	Italy (PNEC)
Renewable Energies (RES)				
Share of energy generated from RES in gross final energy consumption	20%	17%	32%	30%
Share of energy generated from RES in gross final energy consumption in transport	10%	10%	14%	21.6%
Share of energy generated from RES in gross final energy consumption for heating and cooling			+1.3% annual	+1.3% annual
Energy Efficiency				
Reduction in primary energy consumption compared to reference scenario PRIMES 2007	-20%	-24%	-32.5%	-43%
Final consumption savings achieved under energy efficiency obligation schemes	-1.5% annual (transport excluded)	-1.5% annual (transport excluded)	-0.8% annual (transport included)	-0.8% annual (transport included)
Greenhouse Gas Emissions				
GHG reduction vs. 2005 for all installations from the EU ETS\	-21%		-43%	
GHG reduction vs. 2005 for all sectors outside the EU ETS	-10%	-13%	-30%	-33%
Overall reduction in greenhouse gas emissions compared with 1990 levels	-20%		-40%	

Roadmap for the Energy Union

The items in this timeline have been listed by the Commission in the 2015 and 2017 States of the Energy Union. Items with a check mark (✓) are the initiatives already taken by the Energy Union since the publication of the documents, and then approved by the Council and the Parliament.

- 18/11/15 State of the Energy Union
- 16/02/16 First Winter Package
- 30/11/16 Second Winter Package
- 01/02/17 Second State of the Energy Union
- 24/11/17 Third State of the Energy Union

Security of Supply

- ✓ Communication on the progress towards the completion of the list of the most vital energy infrastructures and on the necessary measures to reach the 15% electricity interconnection target for 2030
- ✓ Memorandum of Understanding on an upgraded strategic partnership with Ukraine
- ✓ Report on the European Energy Security Strategy
- ✓ Revision of the Regulation on security of gas supply
- □ Review of the Directive concerning measures to safeguard security of electricity supply
- ✓ Review of the Decision on information exchange mechanism with regard to intergovernmental agreements between Member States and third countries in the field of energy Revision of the Regulation on security of gas supply
- ✓ Liquified Natural Gas and storage strategy

Energy Market

- □ Initiative on market design and regional electricity markets
- □ New Deal for energy consumers
- □ Review of the Agency for the Cooperation of Energy Regulators (ACER) and the energy regulatory framework
- □ Review of the guidelines on state aid for environmental protection and energy (beyond 2020)

Energy Efficiency

- ✓ Review of the Energy Efficiency Directive
- □ Review of Directive on the Promotion of Clean and Energy Efficient Road Transport Vehicles
- ✓ Review of the energy efficiency framework for products
- ✓ EU strategy for Heating and Cooling
- ✓ Review of the Directive on Energy Performance of Buildings

Decarbonisation

- ✓ Legislative proposal to revise the EU Emissions Trading System, 2021-2030
- □ Communication on decarbonising the transport sector
- □ Review of Regulations setting emission performance standards to establish post-2020 targets for cars and vans
- ✓ Renewable Energy Package: including a new Renewable Energy Directive for 2030

Research and Innovation

- □ A new European energy R&I approach to accelerate energy system transformation, composed of an integrated Strategic Energy Technology (SET) Plan and a a strategic transport R&I agenda

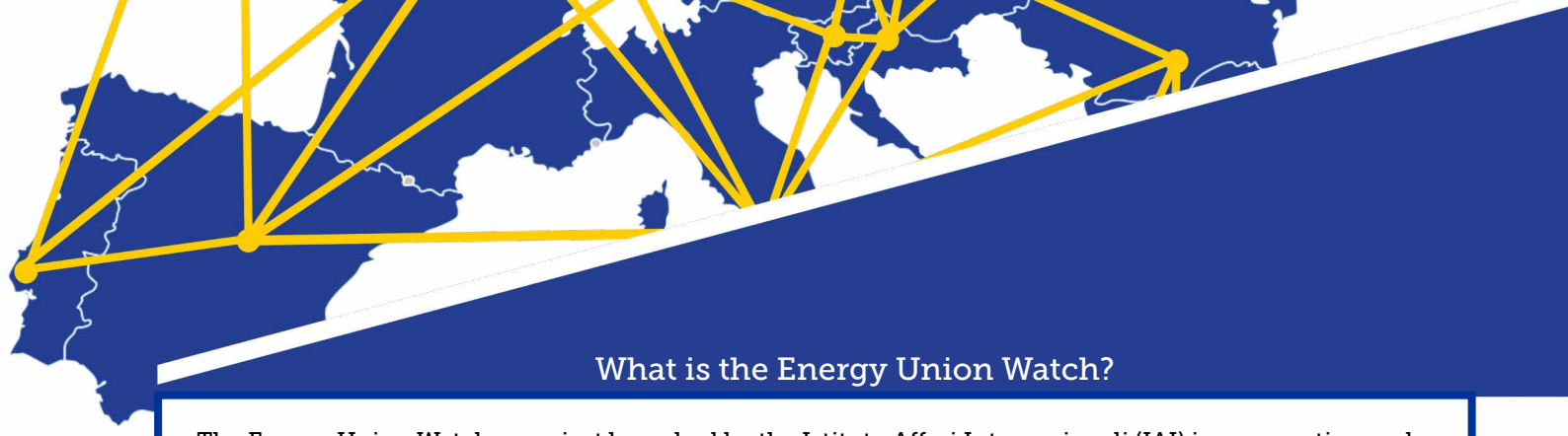
WORLD ENERGY COUNCIL | IN-DEPTH: LNG & SMALL SCALE LNG

Countries, institutions and stakeholders are recognizing the role of natural gas as a back-up fuel for the energy transition, one important source to pursue climate goals agreed at the international level. This source is indeed expanding in several sectors, driven by environmental and economic objectives.

LNG in particular plays a key role in reducing the environmental burden in the transport sector (maritime and heavy), allowing a significant reduction of harmful emissions into the atmosphere. Legislators and regulators at both the European and national levels are thus supporting its use – for example via the Directive on Alternative Fuels.

The first of January 2020 will mark the start of a worldwide ban on the use of marine fuel containing more than 0.5% sulphur. In this scenario LNG – which doesn't emit sulphur – represents a valid solution although the lack of suitable storage facilities together with the long timescale for converting fleets will likely delay the diffusion of this alternative fuel in the Mediterranean area.

Limits to pollutant emissions and CO2 reduction targets put tremendous pressure on LNG technologies. Tech innovation is indeed the key to determine the worldwide success of direct uses of LNG, such as cold storage, cryogenic valves, small liquefaction, hybrid engines (LNG and electricity, LNG and hydrogen with fuels cells), self-service dispensers, ship-to-ship technologies, truck-to-ship technologies, loading arm technologies, emissions prevention and control, LNG digital processes and LNG virtual processes.



What is the Energy Union Watch?

The Energy Union Watch, a project launched by the Istituto Affari Internazionali (IAI) in cooperation and with the support of Edison, responds to the exigency of following step by step the evolution of one of the most ambitious initiatives launched by the Juncker Commission, the Energy Union, and bringing the discussion closer to public opinion and the key stakeholders.
The project aims to monitor the activities of the key EU institutions—the European Commission, the Council of the EU, the European Parliament and the European Council—on the five Guiding Dimensions envisaged by the Energy Union. The Energy Union Watch also covers and illustrates the debate among the key national end European stakeholders, including industrial players, think tanks, and interest groups, on the evolution of the policies and the measures adopted in the framework of the Energy Union. Finally, in order to sensitise the citizens and contribute to the public debate, it offers an analytical assessment of the milestones and results achieved in the framework of the Energy Union, presenting a set of recommendations for the activities to be proposed and implemented.
The Energy Union Watch is produced on a quarterly basis, collecting official documents, public information and open source data, which are processed and analysed by the IAI team. The content of the Watch will evolve over time, integrated and enriched thanks to a process of interaction with experts and stakeholders belonging to the IAI and Edison networks.

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About the IAI

http://www.iai.it/en/
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The Istituto Affari Internazionali (IAI) is a private, independent non-profit think tank, founded in 1965 on the initiative of Altiero Spinelli. IAI seeks to promote awareness of international politics and to contribute to the advancement of European integration and multilateral cooperation. Its focus embraces topics of strategic relevance such as European integration, security and defence, international economics and global governance, energy, climate and Italian foreign policy; as well as the dynamics of cooperation and conflict in key geographical regions such as the Mediterranean and Middle East, Asia, Eurasia, Africa and the Americas. IAI publishes an English-language quarterly (The International Spectator), an online webzine (AffarInternazionali), two book series (Quaderni IAI and IAI Research Studies) and other paper series related to IAI research projects.

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With the contribution of Diana Attanasi-Gregor, trainee at the IAI's Energy, Climate and Resources Programme