

# POLICY BRIEF

## The Net-Zero Industry Act and the reform of the Green Deal State aid rules: A convincing reaction to the Inflation Reduction Act?<sup>1</sup>

On March 16th, the Commission published its proposal on the Net-Zero Industry Act ('NZIA'). This needs to be understood side-by-side with a reform of the relevant State aid rules, published by the Commission on March 10th - notably an update of the Temporary Crisis Framework and a revision of the State aid General Block Exemption Regulation.

Taken together, this package of measures is intended to be the EU's reaction to the US Inflation Reduction Act ('IRA'), as well as China's perceived continued strategic investment push into 'Green Deal' technologies.

### The Reform of the State aid rules

The Temporary Crisis and Transition Framework<sup>2</sup> ('TCTF') extends and updates the existing Temporary Crisis Framework (originally adopted in March 2022), and significantly changes its character. The previous version was focussed on short-term aid measures, essentially to enable Member States to react to the energy price crisis. Many of these measures (such as aid to industry to assist in dealing with exceptionally high energy costs) continue to be allowed until the end of 2023.

However, the TCTF also focuses on aid schemes for the production and storage of renewable energy, the decarbonisation of industrial processes, and aid for investments in "strategic net-zero-sectors":

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<sup>1</sup> My thanks to my colleagues at the FSR who have provided valuable input in drafting this Policy Brief. Any errors and omissions are all mine.

<sup>2</sup> [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_23\\_1563](https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1563)

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- Aid for the production of renewable energy (including renewable hydrogen and its derivative fuels) as well as storage. Investment aid by Member States may take the form of direct grants, repayable advances, loans, guarantees or tax advantages, and notably tax credits (inspired by the investment tax credits that is the basic aid vehicle in the IRA).

Operating aid must be granted in the form of two-way contracts for difference via tenders. The inclusion of this approach in State aid Guidelines *de facto* renders the debate on this in the Electricity Market Design already decided. The Commission has by these Guidelines already established that this is the default manner to provide RES operating aid, and it will be an uphill battle to convince DG Competition to approve aid via another mechanism.

- Aid for the decarbonisation of industrial processes must reduce greenhouse gas (GHG) emissions via a switch to the electrification of the production process or to the use of renewable or low-carbon electrolytic hydrogen (i.e. RES or nuclear, but not fossil gas based low-carbon (blue) hydrogen). Again, aid may be granted in the form of direct grants, repayable advances, loans, guarantees, or tax advantages including tax credits.

To qualify, aid must meet a number of strict criteria regarding the maximum aid level, the GHG reduced via the aid, and the respect of the delegated acts on additionality and GHG savings.

- Aid for “strategic net-zero sectors” concerns sectors previously outlined in the Commission Communication on a Green Deal Industrial Plan, namely, batteries, solar panels, wind turbines, heat-pumps, electrolyzers, and carbon capture usage and storage (as well as related key components and critical raw materials). Support may be granted (capped at 15% of the eligible costs, with the overall aid amount not exceeding EUR 150 million per undertaking per Member State) in the form of direct grants, or other forms such as tax advantages, subsidised interest rates on new loans or guarantees on new loans.

The aid intensity may be increased by five percentage points where the aid is provided via tax advantages, loans, or guarantees. SMEs and companies located in areas eligible for regional aid under the Member State’s regional aid map may also benefit from higher aid intensities.

- Finally, the Commission introduces a new category of aid - ‘matching aid’. On the basis of an individual notification (i.e. on a case-by-case basis), the Commission may approve the grant of aid to a company to “match” the level of subsidy that would be available outside of the EU or the amount needed to incentivise the company to locate the investment in the EEA (the so-called “funding gap”), whichever is lower.

This is an important new development for these strategic energy sectors, and mirrors the approach taken by the EU regarding microchips in the EU Chips Act<sup>3</sup>, which allows matching aid to attract investment in cutting-edge microprocessors. However, a number of rather stringent conditions apply to qualify for ‘matching aid’, including that investments must be in regional aid areas and/or be located in multiple Member States.

The Guidelines regarding these four aid categories are initially valid until the end of 2025 (at which point they may be prolonged). They do not give Member States a ‘carte blanche’ - schemes still must be notified to the Commission and approved on a case-by-case basis. Nevertheless, schemes complying with the Guidelines will be in principle approved under an accelerated procedure.

Thus, the new Guidelines represent an important change in direction regarding State aid to key energy sectors, notably allowing aid in the form of tax credits, and the new ‘matching aid’ category. This represents a significant relaxation of the previous approach, and a positive and strong reaction to the IRA, enabling Member States to design schemes that enable aid as attractive as the IRA.

At the same time the Commission has amended the General Block Exemption Regulation<sup>4</sup>, increasing the thresholds for relatively small amounts of aid that do not need to be notified. For example, operating aid for renewable electricity, with a

3 [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-chips-act\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/european-chips-act_en)

4 [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_23\\_1523](https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1523)

maximum allocation of €30 million per company. Here the thresholds have been increased, but the types of aid schemes that can be granted remain unchanged.

## The Net-Zero Industry Act

The IRA has transformed the investment landscape for Green Deal technologies in the US. It basically grants companies investing in a defined set of technologies (roughly speaking ‘Green Deal related technologies’<sup>5</sup>, on a technology neutral basis, a fixed transferrable tax credit with automatic add-ons depending on a number of variables, notably whether the investment is made in a strategically desirable geographical area (e.g. low income), and whether the project uses a minimum level of US-made technology.

This aid scheme - essentially a rather generous feed-in tariff backed-up with a \$300 Bn federal budget<sup>6</sup> - has caused much consternation in the EU. This is both due to the scale and also the seemingly uncomplicated nature of the procedures required to access the funds. Although certain processes and methodologies for accessing different levels of tax credit are still being drawn up, the US scheme appears much less administratively complicated (and therefore less expensive for companies) than the EU’s State aid procedure. This has given rise to fears that the US could ‘out-compete’ the EU to become the global leader in the manufacturing and deployment of key Green Deal technologies. In parallel, China is investing heavily in Green Deal technologies, most notably wind power generation, batteries and electrolysers. Following the loss of the solar manufacturing industry to China in the early 2000’s, there is a returning sense that the EU’s early climate leadership in the form of targets, production subsidies, and emission taxation will not manifest itself in enduring industrial development for the Union.

The Net-Zero Industry Act is intended to be the EU’s response to this challenge. In summary the Commission proposes to:

- Set a series of high-level targets for the EU in terms of manufacturing key decarbonisation

technologies domestically by 2030: 40% of the EU’s annual deployment needs for ‘Strategic NetZero technologies’, with specific targets for PV, wind, heat pumps, batteries and electrolysers;

- Define several technologies as ‘Net-Zero’ - notably the above targeted technologies, plus CCUS, advanced nuclear technologies and small modular reactors. The manufacture of these technologies must benefit from certain regulatory advantages at Member State level, such as accelerated permitting.
- Define a category of ‘Strategic Net-Zero technologies’ (basically the above, minus nuclear).

An investment project for these technologies may request recognition as a Net-Zero Strategic project by a Member State, in which case it benefits from additional regulatory benefits, plus a potentially important advantage in public tenders and support schemes.

In essence, the NZIA requires Member States to give a certain level of priority to EU manufactured technology in these strategic net-zero sectors when undertaking public procurement procedures or RES support schemes. It does so by requiring Member States to accord a 15-30% weighting to a category called ‘sustainability and resilience’ in such tenders/support schemes.

With respect to ‘resilience’ Article 19(2)(d) provides that this award criteria shall take into account *“the tender’s contribution to resilience, taking into account the proportion of the products originating from a single source of supply .... from which more than 65% of the supply for that specific net-zero technology within the Union originates in the last year for which data is available for when the tender takes place.”*

Whilst not self-evident to understand, this provision appears to mean that Member States shall take into account ‘resilience’ (not formally defined in the draft Regulation, but clearly meaning, in principle, EU manufactured) in assessing tenders under the 15-30% ‘sustainability and resilience’ weighting. Thus, if a bid includes only EU manufactured components

<sup>5</sup> Broadly speaking, these are the ‘Green Deal aligned’ technologies. However, between and across these technologies the scheme is rather technology neutral, as the level of credit per technology is dependent on emission abatement, rather than making an explicit preferencing on process, e.g. preference for green hydrogen over blue hydrogen etc.

<sup>6</sup> Although technically uncapped and other estimates of the total likely cost of the IRA are considerably higher.

it would get 10/10 under this sub-category, reducing to 1/10 as less EU content is included.

Where, however, a tender/support schemes concerns a product where a single non-EU country has 65% or more of the EU market (i.e. China and PV panels), and the bid includes (in this example) Chinese PV panels, the bid would receive 0/10 for this category. In the draft 19(4), a 'get out' clause is included, whereby this requirement can be ignored when the application of this provision would result in significantly increased costs (10%+ uplift).

- Oblige fossil fuel companies that have extracted oil and gas in the EU between 2020-2023 to invest in collectively achieving a CO<sub>2</sub> storage capacity in the EU of 50 million tonnes by 2030. The draft Regulation proposes to impose a direct investment obligation on these companies, pro-rata depending on their percentage of total oil and gas extracted in the EU during these three years. Whilst by no means unique in placing direct legal obligations on companies, such a direct requirement to achieve specific investments by a given date represents an innovative legal measure at EU level.

## Comments

The change to the State aid rules will provide Member States much more flexibility to give the type and level of aid to strategic Green Deal industrial sectors needed to match that foreseen under the IRA. In particular, the ability to give sector-specific tax breaks (which the European Commission has historically taken a very restrictive approach to in the past), and the new 'matching aid' category - even if under stringent conditions, provide a level of flexibility that should enable Member States to 'compete' with the aid offered in the US and China.

Nevertheless, these changes fall short of putting the EU on a totally level playing field with the investment attractiveness provided by the IRA. The Guidelines still require the individual notification of schemes and 'matching aid' projects on a case-by-case basis, which can be expected to take many months and incur considerable expense. Furthermore, there is no EU money behind the Guidelines - that must be provided by Member States.

However, one cannot criticise the Commission for the absence of additional financial resources. The current EU budget is already allocated for the period up to 2027 and there is no political appetite for an additional large 'Green Deal' fund which would be *de facto* financed by the EU budget 'net contributing' Member States. The Commission President has raised the possibility of proposing such an EU fund, but this will be a question for the next EU budget, not the current one. Nevertheless, there are a number of more immediate avenues that the Commission will no doubt be considering, notably increasing focus on the ETS Innovation Fund and redirecting unspent funds from other budget lines (e.g. NextGeneration EU, Recovery and Resilience Fund, or Regional funding).

The Commission has also adopted a Communication formally announcing its 'Hydrogen Bank'<sup>7</sup>. The Commission will use funding from the ETS Innovation Fund to finance tenders for renewable hydrogen produced in the EU. The confirmed initial budget for the Bank is €800 million, and although this may be refinanced in a second round, the relatively small scale of the initial budget rather illustrates the limitation that current EU-level funding faces in reaction to the much larger IRA.

It also seems somewhat unfair to criticise the Commission on the grounds that the State aid Guidelines remain 'more complex' than the US approach, as the Commission must balance the need to facilitate investment in Green Deal technologies with upholding the integrity of the Internal Market. The complexity and rigour of the State aid conditions result from the need to ensure that the Member States with the deepest pockets do not distort the Internal Market through their greater spending power. Equally, the Commission needs to be careful not to further contribute to a global subsidy race to ever higher, and technically unnecessary, aid to Green Deal technologies.

What is interesting is that the Commission takes a more technology-neutral approach than in the past, for example including aid for hydrogen produced from nuclear electricity, even if excluding blue hydrogen (this does not mean that aid to blue hydrogen projects cannot be approved *per se*, just that they are not subject to the 'quasi pre-approval' mechanism of the Guidelines). It is also notable that CCUS technology is again returning to prominence

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7 [https://energy.ec.europa.eu/news/commission-outlines-european-hydrogen-bank-boost-renewable-hydrogen-2023-03-16\\_en](https://energy.ec.europa.eu/news/commission-outlines-european-hydrogen-bank-boost-renewable-hydrogen-2023-03-16_en)

across a number of funding initiatives, not least the (innovative) proposed storage investment obligation on oil and gas companies.

It is true that the investment framework for companies investing in Green Deal technologies remains more complex and scattered in the EU than in the US under the IRA. This, however, is a function of the nature of the EU and its legal construct. The flexibilities offered by the new framework should be welcomed.

The Net-Zero Industry Act also offers a departure from the past regarding the attempted trade and local content response to the IRA and Chinese Green Deal industrial investment programmes. In particular, the preference for EU manufactured technology in national tenders and RES support schemes may, over time, have an appreciable effect. Much will depend on how it is implemented in practice by Member States - the draft Regulation leaves considerable room for manoeuvre in its concrete application.

The EU has traditionally been the global trading block setting the example in respecting WTO rules, and has long fought against local content rules, and with good reason. The Commission has in this case, characteristically, been cautious in its approach in relation to global trade law. Nonetheless, the approach represents a fair and reasonable balance on a difficult issue.

In summary, therefore, there is much to applaud regarding this balanced package of measures. The Commission tries to provide a robust framework to permit Member States to create a level playing field with the US and China, without however undermining the Internal Market, fuelling a global subsidy race, and prejudicing its reputation as a trading block that scrupulously respects the rules-based system of the WTO. Furthermore, it is important to note that the EU's fundamental approach to this issue is not only carrot, but also stick. Firstly, the EU delivers GHG emissions reductions in line with its Paris Agreement commitments by pricing carbon (ETS) and therefore requiring changes in behaviour – driving 'technology pull', coupled to industrial policy subsidies and incentives – 'technology push'. The US approach is much more 'carrot' and appears just as much - or even more - focused on industrial policy than GHG reduction and meeting Paris commitments.

In an ideal world the EU might have a common fund, like in the US or China, to strategically invest in Green Deal technologies, however, until then Member States will have to play this role. Nevertheless, with this package the Commission has established an approach that will enable the EU collectively to 'match' its major competitors in this area, assuming Member States have the spending power to rise to the challenge.

The following questions may nonetheless be raised on how this policy will develop moving forward:

- The IRA basically provides feed-in tariffs for a fixed period (typically 10 years) for a wide range of technologies, either as investment credit or opex support. EU experience with feed-in tariffs has demonstrated their downsides, notably that they may result in excessive revenues as technology costs decline rapidly. This led to retroactive changes in renewable support mechanisms in certain EU Member States, with the attendant consequences in terms of legal claims and undermining investment confidence. The expected cost of the IRA is difficult to predict with estimations ranging widely (from around \$330 Bn to \$1,000 Bn). The EU by contrast requires that subsidies are awarded by tender, ensuring that funds go where most needed. Reflecting on these differing approaches, will the US approach be economically and politically viable in the long-term?
- As mentioned above, the IRA is basically an industrial policy tool, with 'climate benefits'. It equally may be asked, will this industrial policy be successful in delivering a Paris compatible climate trajectory
- The need for greater funding in the EU through a mix of EU and Member State level support is rather clear if the EU wishes to remain at the forefront of 'Green Deal' industries. The repurposing of existing EU funds can play a role, but should the EU be more ambitious, proposing a new fund for the next EU budget inspired by the NextGeneration EU experience?
- One of the key challenges for the EU in meeting its Green Deal objectives lies in the supply chain for RES and other key technologies. This package provides some important innovations in this respect with the 40% 'home grown' objective. Will this package be sufficient to make a major shift in this respect, and what more

needs to be done? This is a really important issue, as at present there is simply insufficient supply chain and workforce in the EU to enable the EU's RES targets for 2030 that have just been agreed for the RED III Directive (42.5% of total EU energy demand, which equates to roughly 68% share for RES electricity by 2030).

- The Commission's State aid approach, requiring Member States to notify schemes/support in line with the TCTF Guidelines<sup>8</sup> remains cumbersome when compared with the IRA. This places a large administrative burden on the Commission and we have seen inevitable delays in approving aid/schemes with the Commission's huge workload in this area. It is important to balance the need to invest and compete with the US/China with maintaining the Internal Market, but is further simplification possible?
- Despite a more recent openness in the EU, the US still takes a more technology neutral approach to support. This can be seen for example regarding 'clean' hydrogen, where the EU remains more renewable hydrogen focused, whereas the US just concentrates on GHG saved. The EU is thus focusing more on 'end game' technologies, but will this mean that it misses out on dominant technologies during the transition?

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<sup>8</sup> When the thresholds of the General Block Exemption are exceeded, which is easily the case in this area.

## The Florence School of Regulation

*The Florence School of Regulation (FSR) was founded in 2004 as a partnership between the Council of the European Energy Regulators (CEER) and the European University Institute (EUI), and it works closely with the European Commission. The Florence School of Regulation, dealing with the main network industries, has developed a strong core of general regulatory topics and concepts as well as inter-sectoral discussion of regulatory practices and policies.*

Complete information on our activities can be found online at: [fsr.eui.eu](https://fsr.eui.eu)

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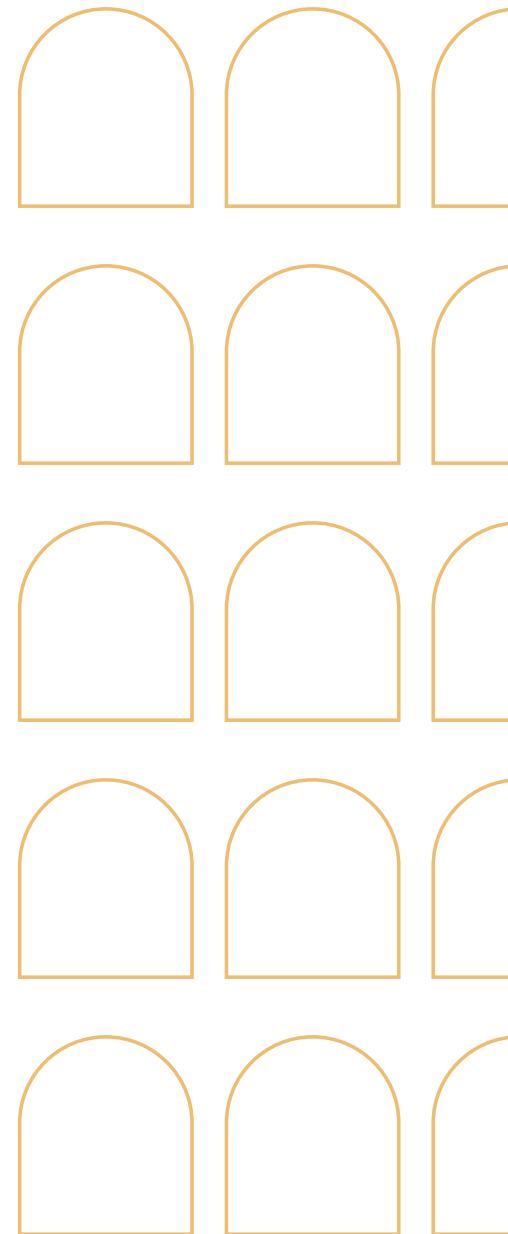
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