The Net-Zero Industry Act

EASE Analysis on Measures to Foster Cleantech Manufacturing in Europe

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Preface

The Net-Zero Industry Act (NZIA) adopted in the European Parliament Committee on Industry, Research and Energy (ITRE) in February 2024 is intended to set the foundation for the European Union's response to the global cleantech race, by delivering the regulatory environment needed to scale-up Europe's innovative cleantech industry.

The NZIA:

- Creates the concept of Net-Zero Strategic Technologies, a list of key technologies to achieve the EU's climate targets: batteries and energy storage are included
- Establishes that the manufacturing capacity in the EU of the strategic net-zero technologies should be at least 40% of the Union's annual deployment needs by 2030
- Focuses on streamlining permitting procedures, incentivising public procurement of cleantech, ensuring a skilled workforce, and fostering innovation through regulatory sandboxes.

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1.Introduction

This briefing provides an analysis of key provisions under the Net-Zero Industry Act (NZIA) Regulation and their implications for cleantech manufacturing. The file was approved by the European Parliament's plenary and the Council at the end of February 2024, marking the end of the legislative process. **The regulation remains to be signed and published in the EU Official Journal and as such is subject to change.**

2.Background – US Inflation Reduction Act

In August 2022, the United States passed the Inflation Reduction Act (IRA), a cornerstone piece of legislation that sets aside over $369 billion (€340 billion) of federal spending towards domestic clean energy production. To date, it is the largest investment towards the clean energy transition in American history and it is estimated to put the US on track to reduce American carbon emissions by 40% below 2005 levels by 2030. The bulk of the spending is dedicated towards state aid in the form of investment tax credits for cleantech, including energy storage. Standalone energy storage systems can qualify for a 30% investment tax credit which can rise to nearly 70% if additional criteria are met. The legislation also includes similar tax incentives for behind-the-meter and co-located storage systems. Part of the criteria to receive the subsidies is a 'domestic content' requirement which means the projects must source a certain percentage of materials from North America (US, Canada or Mexico) in order to qualify for the subsidies. Overall, the US IRA is widely regarded as a game-changer for the American energy storage market, and it is already attracting massive amounts of investment into the US to launch energy storage projects across the country.

3.Context and Scope of the File

The Net Zero Industry Act (NZIA) was unveiled by the European Commission on the 16th March 2023. The primary goal of the NZIA is to increase the EU's domestic manufacturing capacity of cleantech and technologies. Investment needed for Europe amounts to around EUR 92 billion over the period 2023 to 2030, with a range of between about EUR 52 to 119 billion depending on various scenarios, which would result in public funding requirements of EUR 16 to 18 billion. Considering that this assessment only takes into account six specific technologies, the real investment need is likely to be significantly higher. The NZIA focuses on **streamlining permitting procedures, supporting strategic projects through a privileged administrative status, incentivising public procurement of cleantech, ensuring a skilled workforce, and fostering innovation through regulatory sandboxes.**

The NZIA creates the concept of **Net-Zero Strategic Technologies**, a list of key technologies to achieve the EU's climate targets. Importantly, **batteries and energy storage are included in the list**. The NZIA establishes that the manufacturing capacity in the EU of the strategic net-zero technologies should be at least 40% of the Union's annual deployment needs by 2030.

4. NZIA Sections and Provisions: Impact on the Energy Storage Industry

In the table below, you can find the overview of the provisions in the NZIA:

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4.1. Chapter 1: Scope and Definitions

? : Provision description ↪ : Impact on energy storage industry ✕ : Potential challenge

? "Energy Storage" includes electricity and thermal storage as well as other forms of storage that are used to store fossil-free energy.

? "Transformative industrial technologies for decarbonisation" means the scaling up of manufacturing capacity for transformative industrial technologies that are used to significantly and permanently reduce emission rates of CO2-eq of energy-intensive industries.

? "Battery and Energy Storage Technologies" are listed under the "Net-Zero Technologies". **The full list of net-zero technologies is as follows**:

a. Solar technologies, including: solar photovoltaic, solar thermal electric and solar thermal technologies

b. onshore wind and offshore renewable technologies

c. battery and energy storage technologies

d. renewable energy technologies, not covered under the previous categories

e. heat pumps and geothermal energy technologies

f. hydrogen technologies, including electrolysers and fuel cells

g. sustainable biogas and biomethane technologies

h. carbon capture and storage technologies

i. electricity grid technologies, including electric charging technologies for transportation and technologies to digitalise the grid

j. nuclear fission energy technologies, including nuclear fuel cycle technologies

k. sustainable alternative fuels technologies

l. hydropower technologies

m. energy system-related energy efficiency technologies, including heat grid technologies

n. renewable fuels of non-biological origin technologies

o. biotech climate and energy solutions

p. transformative industrial technologies for decarbonisation not covered under the previous categories.

↪ The inclusion of energy storage technologies in the NZIA represents a **positive development** in recognising their crucial role in the energy transition

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✕ Comparing to the original Commissions' proposal from March 2023, the final list of net-zero technologies has been greatly expanded which was criticised by EASE and other stakeholders (I., II.). The expanded list of net-zero technologies risks diluting the focus of the act of clean-tech manufacturing deployment in Europe.

4.2. Chapter II: Enabling Conditions for Net-Zero Technology Manufacturing

4.2.1 Benchmark

? **At least 40% of strategic clean technologies to be manufactured domestically by 2030** to meet the deployment needs of the Union, according to the Act. For battery technologies this would mean contributing to the objectives of the European Battery Alliance and **aim at almost 90% of the Union's battery annual demand being met by the Union's battery manufacturers, translating into a Union manufacturing capacity of at least 550 GWh in 2030.**

? Additionally, the European Union aims to reach 15% of world production of the net-zero technologies by the year 2040. However, if the Union's manufacturing capacity for these technologies exceeds its deployment needs for achieving its climate and energy targets by 2040 to a significant extent, then this goal may not apply.

↪ **Provisions are ambitious and may significantly impact the energy storage sector**, aiming at strengthening the Union's manufacturing. At the same time, this objective is quite general – e.g. the calculation methodology behind the 40% target is not presented.

4.2.2 Permitting and Administrative Processes

? **Single points of contact must be set up by Member States** within 6 months of adoption, which must be a singular national authority responsible all aspects of the permit-granting process for net-zero technology manufacturing projects. These single points of contact must also advise these projects on how to reduce the administrative burden and minimise the need for redundant and duplicate permitting. Member states are required to ensure their designated one-stop shops have a sufficient number of qualified staff and sufficient financial and technological resources. Additionally, these single points of contact must accept any submissions of relevant documents in an electronic form and have an online, centralised platform to provide information on all aspects of the permit-granting process, financing services, national and EU-level funding opportunities, and support services for business for matters including corporate tax, local tax and labour law.

? **Simplified and fast-tracked permitting** for net-zero technology manufacturing projects:

12 months for the construction or expansion of net-zero technology manufacturing projects with a yearly manufacturing capacity of less than 1 GW.

18 months for the construction or expansion of net-zero technology manufacturing projects, with a yearly manufacturing capacity of 1 GW or more.

For net-zero technologies for which the GW metric is not relevant, such as grids and CCS or CCU technologies, the upper limits of the aforementioned deadlines should apply.

In cases where energy intensive industry decarbonisation projects, including when recognized as strategic projects, require the construction of several facilities or units in one site, the project promoter and the designated single point of contact may agree on splitting the project into several smaller projects for the purpose of complying with the applicable time-limits.

? These permitting deadlines start once a single point of contact duly notifies the permit applicant that they have received their valid and completed application. The notification period of an application's validity cannot be more than one-month after receipt of the application and one-stop shops must have an applicant to rectify an invalid application within two-weeks. In certain case, for example, when additional documentation or clarification is required, time limits may be extended (case-by-case basis).

? Overall, urgent priority should be given to net-zero strategic projects at the national level, following any urgency procedures outlined in national law. This prioritization should respect the rights of defense where applicable. However, it shouldn't impede authorities from expediting permits for other net-zero technology projects.

↪ **Provisions may address Excessive red tape and lagged permit-grating** by national authorities which is a consistent barrier to the deployment of energy storage in Europe. The requirement to establish one-stop shops will help streamline the administrative process and minimise the time energy storage firms waste chasing various government agencies to get projects off the ground. The deadlines (while lacking bite) do encourage Member States to be more efficient in the granting of permits which should help contribute to the scaling up Europe's storage industry.

✕ **The Act lacks any sort of penalties or consequences** if a single point of contact fails to meet the permitting deadlines laid out in the legislation. Furthermore, it has no specificities as to what exactly "sufficient" funding and staffing for single points of contact would look like which poses the risk they will not be able to accommodate these accelerations. Since there are no consequences for Member States if they fail to meet permitting deadlines, these permitting requirements will act more like non-binding guidance in their overall effect on accelerating and streamlining national administrative processes.

4.2.3 Net-Zero Strategic Projects

? Net-zero strategic projects entail: i) net-zero technology manufacturing projects, and ii) net-zero strategic projects:

Net-zero technology manufacturing projects are defined as projects that meet at least one of the following criteria:

contribute to the technological and industrial resilience of the Union's net-zero technologies by increasing the manufacturing capacity of a component or a segment of the net-zero technology supply chain

have a clear positive impact on the Union's net-zero industry supply chain or downstream sectors by providing European net-zero industries with access to the best available net-zero technology or to products produced in a first-of-a-kind manufacturing facility, and target either upskilling of workers or contribute to the competitiveness of SMEs

Particulary, one of several selection criteria for a net-zero strategic project **includes that the project adopts circular manufacturing practices, including waste heat recovery.** Additionally, a net-zero technology manufacturing project, including batteries and storage technologies, can be labelled 'strategic' if it is located in one of the 'less developed and transition regions' or in one of the Just Transition Fund Territories.

? Within 8 months of this Regulation taking effect, the Commission must create guidelines through an implementing act that will evaluate whether the new manufacturing capacity focuses on cutting-edge or the most advanced technology and if the extra manufacturing capacity is considerable.

? **Net-zero strategic projects** cover CO_2 storage project and as such will not be discussed in detail in this analysis.

? **Net-Zero Acceleration Valleys** are introduced as specific areas particularly to accelerate the implementation of net-zero technology manufacturing projects, including net-zero strategic projects or clusters thereof, and/or to test innovative net-zero technologies.

↪ As battery and energy storage technologies are defined as one of the net-zero technologies and as such are compliant with the net-zero technology manufacturing strategic projects conditions, these provisions have the potential to ensure a priority status depending on the member states.

× **The provision lacks a mechanism to enforce the rules** outlined above. Moreover, the level of implementation is extremely reliant on the Member States' capacity.

× Strategic projects are determined by a member state, based on its presence in the general structure of the energy supply, and can be considered as not strategic in another one which can lead to fragmentation and uncertainty.

4.3 Chapter III: CO2 Injection Capacity

The Section covering CO2 injection Capacity doesn't affect the energy storage manufacturing industry and therefore won't be discussed within this analysis.

4.4 Chapter IV: Access to Markets

? Provisions in this chapter apply to the shorter list of strategic technologies, including battery and energy storage.

? **Sustainability and resilience contribution in public procurement procedures** outlines requirements and conditions for public procurement procedures involving net-zero technologies. It addresses situations where a significant portion of these technologies or their components originate from third countries, and specifies measures to ensure compliance with certain criteria, such as limiting the proportion of supplies from individual countries and imposing charges for non-compliance.

? Contracting authorities must adhere **to minimum mandatory environmental sustainability requirements** that will be outlined in an upcoming implementing act. However, they may also

impose additional minimum requirements or award criteria related to environmental sustainability.

? If, at the time of initiating a public procurement procedure the Commission determines in **accordance that over 50% of a specific net-zero technology or its main components originate from a third country within the Union, or if there's a significant increase from third country suppliers reaching at least 40% over two consecutive years, contracting authorities must adhere to the specific conditions** – for more information, please refer to Article 19, paragraphs 4a and 5 of the NZIA (subject to change).

? Considering **auctions to deploy renewable energy sources**, the sustainability and resilience contribution shall be given a minimum 5% weight and a combined weight between 15% and 30% of the award criteria:

resilience (i.e., considering the proportion of the net-zero technology's product that originates from a single source of supply).

environmental sustainability (going beyond requirements set up by relevant legislation);

contribution to innovation;

Where applicable, contribution to energy system integration (followed by an implementing act 9 months after entry into force of this regulation).

Every two years, the Commission will assess the impact of these criteria on the deployment of renewable energy technologies, consulting with experts from Member States. If the assessment is positive, the Commission may propose amending the rules to increase the volume of auctions to which these criteria apply and adapt cost difference thresholds.

? **Auctions for installations with a maximum project size of 10 MW may be excluded from volume calculations**, and undersubscribed shares of auction volumes may also be excluded from these rules. Member States with low auction volumes may calculate the application of these rules over a two-year period if they have not conducted more than 2 auctions per year in the previous 2 years.

? Member States should implement measures to enhance the completion rate of projects, potentially utilizing incentives such as price indexation. Additionally, Member States may evaluate how negative bidding impacts the pace and magnitude of project deployment.

? Regarding pre-commercial procurement and public procurement of innovative solutions, Member States should aim to stimulate innovation in net-zero technology and create new manufacturing capacity within the Union.

? Member States should make all relevant scheme information accessible on a single website for free. If necessary, the Commission will offer guidance on applying criteria to evaluate the resilience and sustainability of net-zero technology products. For assessing resilience, the

Commission will issue an implementing act listing net-zero technology products and their key components.

? To mobilise national resources for that purpose, Member States are encouraged to spend, in accordance with Article 10(3) of Directive 2003/87/EC, **25% of ETS revenues that Member States collect annually from ETS auctions.**

↪ **Specifically on resilience, the security of supply for the value chain needs to be considered in public tenders.** Indeed, the focus is on diversification: the public tenders carried out under the Act will not only consider environmental factors, but how to diversify the EU's supply of clean technology.

↪ **Applying the principles of sustainability and resilience contribution must not come at a high cost** for the actor setting up the tender: any cost difference above 15% (from the normal market price for that component) may be presumed disproportionate by the contracting authority, and therefore an exception from the rules laid above can apply.

↪ **Additional financial benefits** or making scheme eligibility dependent on specific criteria while considering accessibility for citizens in energy poverty is possible. Any extra financial support granted should generally not exceed 5% of the product's cost, but for schemes targeting citizens in energy poverty, it can go up to 15%.

× **The provision lacks a mechanism to enforce the rules** outlined above. Moreover, the level of implementation is extremely reliant on the Member States' capacity and initiative. For example, percentage suggested does not equal to all auctions. Member States will be able to choose, e.g. all on wind and none on solar and similar.

4.5 Chapter V: Enhancing Skills for Quality Job Creation

? **"European Net-Zero Industry Academies" are introduced**, along with provisions to ensure equal value to certifications and on the access to regulated professions. The Academies will be supported by the Commission through seed-funding. In addition, Member States are encouraged to make use existing funds, such as ESF+.

? **The Academies will develop learning programs, training materials, content for training** and credentials on net-zero technologies, raw materials, and supporting public authorities and contracting authorities. They will also develop mechanisms to ensure the quality of the training

offered and deploy credentials to enhance the transferability of skills and promote matching with relevant jobs while addressing gender stereotypes and youth unemployment.

? **The work of European Net-Zero Industry Academies will be overviewed through the Net-Zero Europe Platform** referred to in Article 28 (see "Governance" section for more information).

↪ This has the potential for aiding the European energy storage industry in employing a skilled workforce and **avoid labour shortages** – an issue the sector is currently facing.

✕ The timeline for the launch of the Net-Zero Industry Academies remains unspecified and their use by the members states voluntarily.

4.6 Chapter VI: Innovation

? **Member States must provide priority access to regulatory sandboxes for start-ups and SMEs**. Furthermore, Member States must set dedicated communication channels for SMEs to provide guidance about accessing regulatory sandboxes, which includes taking into account the specific needs of SMEs and their potential to access additional financial support for their operations in the sandbox.

? By 9 months from the date of entry into force of this Regulation, Member States shall, when setting up net-zero regulatory sandboxes, **designate or establish one or more contact points** that shall be the sole contact point for any grouping of organisations willing to request the establishment of a net-zero regulatory sandbox mentioned before.

? This chapter also outlines the establishment of the Strategic Energy Technology (SET) Plan Steering Group, composed of EU Member States and the Commission, that will provide guidance and direction to the Strategic Energy Technology (SET) Plan.[1]

↪ **This is key as several storage technologies are at the R&D and demonstration** level but will eventually be commercially available in the coming years. Thus, the NZIA could allow such energy storage technologies to access regulatory sandboxes that could speed up their development and eventual deployment into the energy market due to lack of unnecessary regulatory burden.

[1] COM(2023) 634 final Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the revision of the Strategic Energy Technology (SET) Plan

↪ **This also ensures that smaller, innovative actors can benefit** from NZIA's provisions and that the market for developing technologies remains competitive. Furthermore, it sends a strong signal to national governments to consider the needs of SMEs in their administrative processes and that national administrations need to boost the transparency and ease of access to financial support for SMEs developing cutting-edge energy storage technology.

✕ **The criteria that Member states will need to use to grant access to regulatory sandboxes is not addressed in the Act.** Until the implementing act is formed, it is unclear just how accessible these regulatory sandboxes will be for firms developing energy storage technologies.

4.7 Chapter VII: Governance

? The Act outlines the structure and functions of a **Net- Zero Europe Platform**, consisting of representatives from Member States and the Commission, with the Commission providing the chair and executive secretariat support. The European Parliament can attend meetings as observers.

? **The Platform will carry out the tasks in relation to the Net-Zero Europe Platform as well as the Net-Zero Industry Academies.** These tasks include setting up one-stop shops for permitting, net-zero strategic projects, regulatory sandboxes and contributing to the annual State of the Energy Union Report on competitiveness of clean energy technologies.

? **Member States shall take into consideration this Regulation when preparing their national energy and climate plans and their updates**, as regards the dimension "research, innovation and competitiveness" of the Energy Union.

↪ **Details surrounding the functioning of the Net-Zero Europe Platform lack specifics**, but nonetheless a great opportunity to gain more representation for energy storage in the implementation and application of the NZIA.

✕ Even though harmonisation between legislation is encouraged, the quality of the NECPs between Member States vary significantly, especially in terms of addressing and including energy storage.

4.8 Chapter VIII: Monitoring

? **Monitoring of implementation of provisions from the Net-Zero Industry Act is split between the Commission and Member States.** Member States shall designate national authorities that will gather relevant data on:

net-zero technology obstacles, developments and market trends, including average manufacturing investment costs and production costs, and market prices for the respective net-zero technologies

net-zero technology manufacturing capacity and related activities, including data on employment and skills

the number of SMEs that are part of net-zero technology manufacturing project

the average duration of permitting procedures under this Regulation

the types and number of permits granted at national level

the amount of permit-granting processes completed, stalled or cancelled

the number of sandboxes set up within the past 12 months

the amount of CO2 stored permanently underground in accordance with Directive 2009/31/EC.

↪ The first report shall be sent to the Commission by each Member State by 15 March 2027 and every three years thereafter.

5. Secondary Legislation and Materials

In the table below, you can find the overview of the secondary legislation and materials that can be expected in the future to stem from the NZIA:

By 8 months from the date of entry into force of the NZIA, the Commission shall adopt an implementing act on the functioning awards of Strategic Net Zero Projects.
Within 9 months of the entry into force of the NZIA, the Commission shall adopt an implementing act specifying minimum requirements for social and environmental sustainability (in procurement and auctions).
(No date specified) The Commission shall adopt an implementing act detailing the list of net-zero final products and their main specific components.
Commission will provide data on share of Union supply of the above listed products/components coming from different 3rd countries.

6. Final Remarks

As previously mentioned, the NZIA focuses on much-needed streamlined procedures and on facilitating access to existing instruments, in order to avoid bottlenecks and dependencies on external actors. The Act seems to **lack the ambition of slimming down lengthy and costly application procedures to access existing funding** such as Horizon Europe, the Innovation Fund, or favourable treatment of the Strategic Net-Zero Technologies in the framework of NextGenerationEU, which includes the Recovery and Resilience Facilities.

Member States are free to opt for specific technologies according to their energy mix and needs. This expanded taxonomy dilutes the focus of the act of clean-tech manufacturing deployment in Europe. **No additional financing as well as the lack of directly managed fund** have been heavily criticised by numerous stakeholders. Considering the financial needs of the European industry for cleantech manufacturing and deployment, this point can seriously hinder the implementation of the Act and its potential.

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About EASE:

The European Association for Storage of Energy (EASE) is the leading member - supported association representing organisations active across the entire energy storage value chain. EASE supports the deployment of energy storage to further the cost-effective transition to a resilient, carbon-neutral, and secure energy system. Together, EASE members have significant expertise across all major storage technologies and applications. This allows us to generate new ideas and policy recommendations that are essential to build a regulatory framework that is supportive of storage.

For more information please visit www.ease-storage.eu

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Disclaimer:

This content was elaborated by EASE and reflects a consolidated view of its members from an energy storage point of view. Individual EASE members may adopt different positions on certain topics from their corporate standpoint.

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