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ENERGY TRANSITION IN EUROPE - NEW OPPORTUNITIES AND CHALLENGES

欧洲的能源转型-新的机遇以及挑战

CHINA ROADSHOW
17 MARCH 2025 – 21 MARCH 2025



THE EUROPEAN ENERGY TRANSITION ERA 欧洲能源转型时代

EUROPEAN REGULATION AS FRAMEWORK

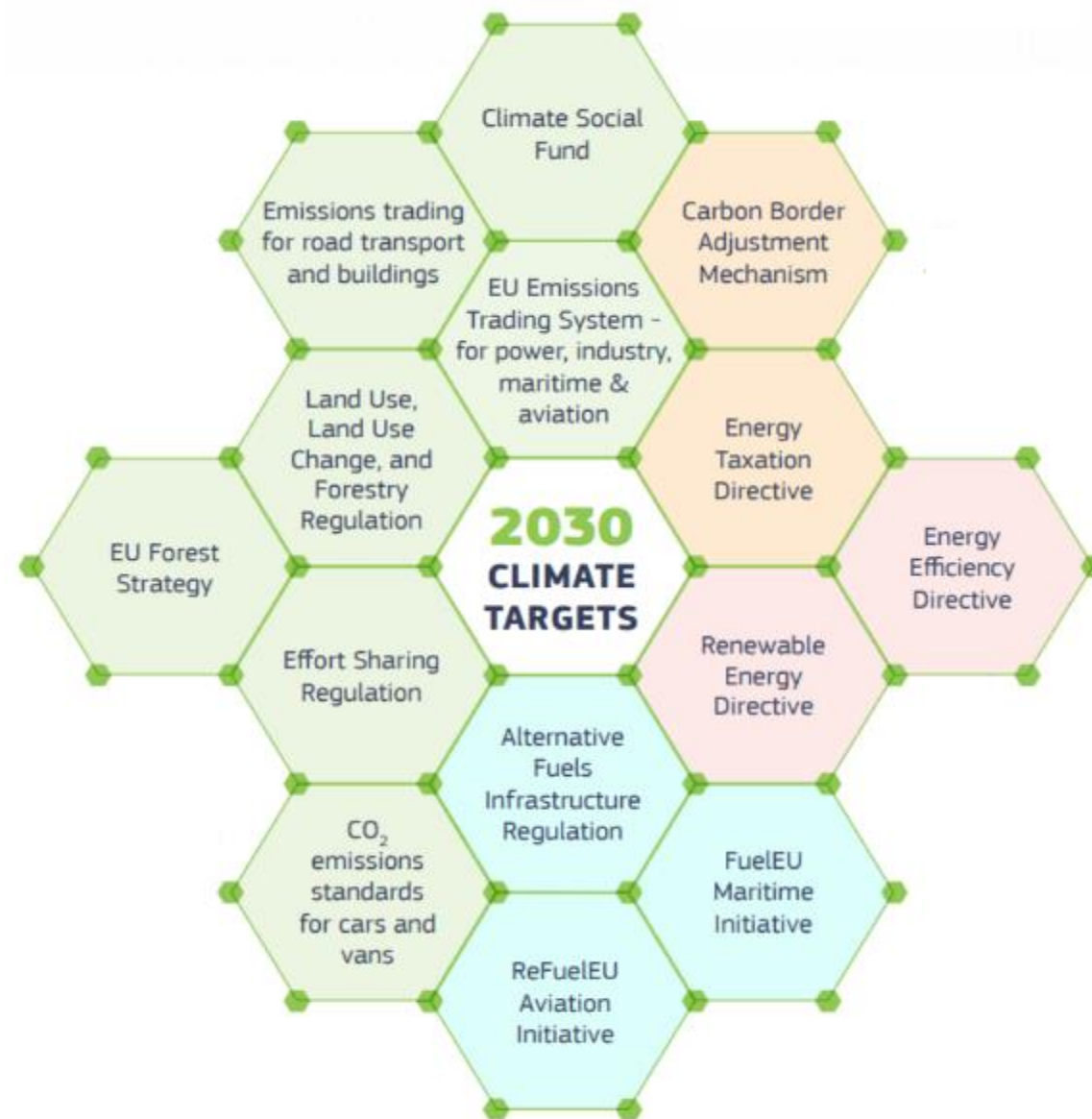
作为框架的欧洲法规



EU Green Deal is an all-encompassing **industrial policy**, with the aim to **change the EU's economic model**.
欧盟绿色政策是一项包罗万象的产业政策，旨在改变欧盟的经济模式。

“Fit for 55”: EU Climate Law requires a **55%** reduction of greenhouse gas emissions by **2030**, and net neutrality by 2050.
欧盟气候法要求到 2030 年减排 55%，到 2050 年实现净中和。

GERMANY: 80% of energy from renewable sources by 2030.
德国：到 2030 年，80% 的能源来自可再生能源。



EUROPEAN GREEN DEAL 欧洲绿色交易

Main Goals 主要目标	Pillars and Key Initiatives 支柱和关键举措	Key Legislative Acts and Reference Documents 主要立法法案和参考文件
• Climate neutrality by 2050 到 2050 年实现气候中和 • 55% reduction in CO₂ emissions by 2030 (compared to 1990 levels) 到 2030 年二氧化碳排放量减少 55% (与 1990 年水平相比) • Circular economy and environmental sustainability 循环经济与环境可持续性 • Biodiversity protection 保护生物多样性 • Energy transition based on renewable sources 基于可再生能源的能源转型 • Sustainable finance and support for regions affected by the transition 为受转型影响的地区提供可持续的资金和支持	1. Energy and Climate 能源与气候 2. Circular Economy and Industry 循环经济与工业 3. Sustainable Mobility 可持续交通 4. Sustainable Finance and Social Inclusion 可持续金融与社会包容	a) European Commission Communication COM(2019) 640 final (European Green Deal) 欧盟委员会通信 COM(2019) 640 final (欧洲绿色交易) b) Regulation (EU) 2021/1119 (European Climate Law) (欧盟) 2021/1119 条例 (欧洲气候法) c) Regulation (EU) 2020/852 (Sustainable Finance Taxonomy) (欧盟) 2020/852 条例 (可持续金融分类法) d) "Fit for 55" Legislative Package (2021) "Fit for 55"一揽子温室气体减排计划立法 (2021)

FIT FOR 55 一揽子温室气体减排计划

Main Goals 主要目标	Core Legislative Reforms 核心立法改革	Key Legislative Acts 主要立法法案
• Reduce EU greenhouse gas emission bt 55% by 2030 到 2030 年欧盟温室气体排放量减少 55 • Support the transition towards climate neutrality by 2050 支持到2050年向气候中和过渡 • Strengthen energy efficiency and accelerate the adoption of renewable energy 提高能源效率，加快采用可再生能源 • Ensure a fair and inclusive transition for all EU citizens. 确保为所有欧盟公民提供公平、包容的过渡。	1. Energy and Climate 能源与气候 2. Renewable Energy and Energy Efficiency 可再生能源和能源效率 3. Transport and Mobility 交通运输 4. Social and Financial Support 社会和财政支持	a) Directive (EU) 2023/2413 – Renewable Energy Directive (RED III) (欧盟) 2023/2413 - 可再生能源指令 (RED III) a) Directive (EU) 2023/1791 – Energy Efficiency Directive (EED) (欧盟) 2023/1791 - 能源效率指令 a) Regulation (EU) 2023/956 – Carbon Border Adjustment Mechanism (CBAM) (欧盟) 2023/956条例- 碳边境调整机制 a) Regulation (EU) 2023/955 – Social Climate Fund (SCF) (欧盟) 2023/955条例 - 社会气候基金

REPOWEREU 能源计划

Main Goals 主要目标	Key Measures and Actions 主要措施和行动	Key Legislative Acts 主要立法法案
• End reliance on Russian fossil fuels well before 2030. 在 2030 年之前结束对俄罗斯化石燃料的依赖。 • Diversify energy sources through alternative suppliers and infrastructure. 通过替代供应商和基础设施实现能源多样化。 • Accelerate the deployment of renewable energy to boost energy independence. 加快部署可再生能源，促进能源独立。 • Increase energy efficiency and promote energy savings. 提高能效，促进节能。 • Improve energy market resilience and protect consumers from price volatility. 提高能源市场的弹性，保护消费者免受价格波动的影响。	1. Energy Diversification 能源多样化 2. Accelerating Renewable Energy Deployment 加快部署可再生能源 3. Energy Efficiency and Demand Reduction 能源效率和减少需求 4. Infrastructure and Market Resilience 基础设施和市场复原力 5. Financial Support and Policy Reforms 财政支持和政策改革	a) European Commission Communication COM(2022) 108 final – REPowerEU Plan 欧盟委员会通信 COM(2022) 108 final - REPowerEU 计划 b) Regulation (EU) 2023/435 – Amendment of the Recovery and Resilience Facility for REPowerEU (欧盟) 2023/435 条例 - REPowerEU 恢复和复原机制修正案 c) Directive (EU) 2023/2413 – Accelerating Renewable Energy Deployment (欧盟) 2023/2413指令- 加速可再生能源的部署

NEXTGENERATIONEU “下一代欧盟”计划

Main Goals 主要目标	Key Components and Funding Mechanisms 主要组成部分和筹资机制	Key Legislative Acts 主要立法法案
• Support economic recovery in the wake of the pandemic. 支持大流行病后的经济复苏。 • Accelerate the green and digital transition in line with EU strategic goals. 根据欧盟的战略目标，加快绿色和数字化转型。 • Enhance EU resilience and crisis preparedness. 加强欧盟的复原力和危机准备。 • Foster social and territorial cohesion across Member States. 促进各成员国的社会 and 领土凝聚力。	1. Recovery and Resilience Facility (RRF) – €723.8 billion 恢复和复原融资基金- 7,238 亿欧元 2. Other NGEU Funds 其他“下一代欧盟”基金 3. Funds are raised through EU-issued bonds and repaid by 2058. 通过欧盟发行的债券筹集资金，并在 2058 年之前偿还 4. National Recovery and Resilience Plans (RRPs) outline reform and investment strategies. 国家恢复和复原计划概述了改革和投资战略。 5. The European Commission monitors implementation and disburses funds based on performance milestones. 欧盟委员会监督执行情况，并根据绩效里程碑拨付资金。	a) Regulation (EU) 2021/241 – Establishing the Recovery and Resilience Facility (RRF). (欧盟) 2021/241 条例 - 建立恢复和复原融资基金。 b) Council Regulation (EU) 2020/2094 – NextGenerationEU financial framework. (欧盟) 理事会 2020/2094 条例 - 下一代欧盟财政框架 c) European Commission Communication COM(2020) 456 final – NextGenerationEU Strategy. 欧盟委员会通信 COM(2020) 456 final - 下一代欧盟战略

THE ITALIAN ENERGY TRANSITION ERA

意大利能源转型时代

THE ITALIAN ENERGY TRANSITION ERA

意大利能源转型时代

Italy is at **the heart of a major energy transition**, aiming to reduce CO2 emissions, enhance energy security and to become a **key energy hub in Europe**, thanks to **意大利正处于重大能源转型的中心**，其目标是减少二氧化碳排放、加强能源安全并成为**欧洲重要的能源枢纽**。

- its **strategic location** between Europe, North Africa, and the Middle East, and **energy transition policies**;
意大利位于欧洲、北非和中东之间的**战略位置**以及能源转型政策;
- its **advanced energy infrastructure** (pipelines, LNG terminals, electricity interconnections);
先进的能源基础设施 (管道、液化天然气终端、电力互联) ;
- the **key role** in the natural gas and renewable energy market;
在天然气和可再生能源市场中的**关键作用**;
- **international collaborations** for energy security.
国际合作促进能源安全。

Challenges remain, but the opportunities offered by decarbonization can bring significant economic and environmental benefits.

挑战依然存在，但去碳化带来的机遇可以带来巨大的经济和环境效益。

ENERGY TRANSITION GOALS (PNIEC – ENERGY PLAN)

能源转型目标 (PNIEC - 能源计划)

Among the **goals** Italy intends to achieve,

意大利打算实现的目标包括：

- the reduction of greenhouse gas emissions by 43,7% compared to 2005 levels;

温室气体排放量比 2005 年减少 43.7 %；

- the increase in renewable energy production, reaching 40% from renewables in total gross energy consumption by 2030;

增加可再生能源的生产，到 2030 年，可再生能源占能源消费总量的 40%；

- the improvement of energy efficiency, reducing primary energy consumption by 39.7% compared to the projections made in 2007;

提高能源效率，与 2007 年的预测相比，将一次能源消耗量减少 39.7%；

- the decarbonization of industry and mobility.

工业和交通的去碳化。

HOW CAN ITALY REACH ITS GOALS?

意大利如何实现其目标?

- **Incentives** for the production of renewable energy sources;

鼓励生产可再生能源;

- **Incentives** and **Investments** on infrastructure assets (i.e. storage, hydrogen, nuclear);

对基础设施资产（如储存、氢气、核能）的激励和投资;

- **Simplification** of authorization procedures for the construction and operation of renewable energy plants.

简化可再生能源工厂建设和运营的审批程序。

RENEWABLE SOURCES INCENTIVES **可再生能源激励措施**

THE FER-X TRANSITIONAL DECREE **FER-X 过渡法令**

PURPOSE AND REGULATORY CONTEXT 目的和监管背景

The Decree applies to electricity generation plants powered by:
该法令适用于由以下设备驱动的发电厂：

- **photovoltaic**, 10 GW **光伏**, 10 千兆瓦
- **Wind**, 4 GW **风能**, 4 千兆瓦
- **hydroelectric**, 0.63 GW **水力发电**, 0.63 千兆瓦
- **residual gas from purification processes**, 0.02 GW **净化过程产生的残余气体**, 0.02 千兆瓦
- **total**, 14.65 GW **总计** 14.65 千兆瓦

For plants ≥ 200 kW, support is granted through **a two-way Contract for Difference (CfD)**:
对于功率 ≥ 200 千瓦的电厂，则通过双向差价合约（CfD）提供支持：

- if the market price is below the awarded price, **GSE compensates the difference**;
如果市场价格低于授予价格，GSE 将补偿差额；
- if the market price is higher, **the producer reimburses the difference**.
如果市场价格较高，则由生产商补偿差价。

The **awarded price** depends on competitive bidding, but current reference "**ceiling prices**" are:
中标价格取决于竞标，但目前的参考 "最高限价" 是：

- **photovoltaic & wind**: €95/MWh; 光伏和风能：95 欧元/兆瓦时；
- **hydroelectric**: €105/MWh; 水电：105 欧元/兆瓦时；
- **residual gas**: €100/MWh. 残余天然气：100 欧元/兆瓦时。

RENEWABLE SOURCES INCENTIVES **可再生能源激励措施**

THE FER 2 **《可再生能源法令》**

SPECIFIC TARIFFS BY TECHNOLOGY

按技术划分的具体关税

With regard to the reference tariffs set as the basis for the auction in 2024, the following is envisaged:
关于作为 2024 年拍卖基础的参考电价，设想如下：

- for **floating plants on inland waters** with a capacity of up to 1000 kW, 90 €/MWh and 75€/MWh for plants with a higher capacity;
容量不超过 1000 千瓦的内陆水域浮动电站为 90 欧元/兆瓦时，容量更大的电站为 75 欧元/兆瓦时；
- for **thermodynamic solar power** of up to 300 kW, 300 €/MWh, 240 €/MWh for those above that threshold and up to 5,000 kW, and 200 €/MWh for installations above that threshold and up to 15,000 kW;
热动力太阳能发电，功率不超过 300 千瓦，300 欧元/兆瓦时，超过这一限额且功率不超过 5,000 千瓦的，240 欧元/兆瓦时，超过这一限额且功率不超过 15,000 千瓦的，200 欧元/兆瓦时；
- for **conventional geothermal plants** with innovation, the incentive tariff will be 100 €/MWh, and for zero-emission plants, 200 €/MWh;
对于传统的创新型地热发电厂，激励电价为 100 欧元/兆瓦时，对于零排放发电厂，激励电价为 200 欧元/兆瓦时；
- an incentive tariff of €185/MWh is envisaged for **offshore wind power**;
预计海上风电的激励电价为 185 欧元/兆瓦时；
- for **biogas plants** using products and by-products listed in Table 1 of the Decree, 233 €/MWh;
使用法令表 1 所列产品和副产品的沼气厂，233 欧元/兆瓦时；
- for **biomass** using products and by-products listed in Table 2, a tariff equal to 246 €/MWh for plants up to 300 kW and equal to 185 €/MWh for plants up to 1,000 kW;
对于使用表 2 所列产品和副产品的生物质发电厂，300 千瓦以下发电厂的电价为 246 欧元/兆瓦时，1,000 千瓦以下发电厂的电价为 185 欧元/兆瓦时；
- for **installations powered by tidal, wave and other forms of marine energy**, for all powers, 180 €/MWh.
对于潮汐能、波浪能和其他形式的海洋能发电装置，所有功率的电价为 180 欧元/兆瓦时。

RENEWABLE SOURCES INCENTIVES
可再生能源激励措施

THE BIOMETHANE INCENTIVES
DECREE OF 15 SEPTEMBER 2022
2022 年 9 月 15 日生物甲烷激励法令

THE DECREE 法令

With the new Ministerial Decree for the **incentivization of biomethane production**, the Ministry of Ecological Transition ("**MITE**"), now known as "**MASE**", introduced two different forms of incentives consisting of:

生态转型部 ("MITE") (现更名为 "MASE") 根据新颁布的激励生物甲烷生产的部长令, 推出了两种不同形式的激励措施, 包括:

- a) an **incentive tariff with a duration of 15** (fifteen) **years**; 奖励电价, 期限为 15 年; → ca. 120 Euro/MWh 约 120 欧元/兆瓦时
- b) a **capital contribution**. 出资。→ maximum 40% of capex 最高为资本支出的 40%

***AUTHORIZATION PROCEEDINGS
SIMPLIFICATION***
简化审批程序

**THE RENEWABLES SOURCES
SINGLE ACT**
可再生能源单一法

THE AUTHORISATION PROCEDURE FOR THE CONSTRUCTION AND OPERATION OF PLANTS POWERED BY RENEWABLE SOURCES

可再生能源发电厂建设和运营的审批程序

On 30 December 2024, Legislative Decree No. 190 of 25 November 2024, the so-called “**TU FER**”, came into force, with the aim of **rationalising the fragmented and articulated regulatory framework** concerning the procedures for authorising the **construction and operation of plants powered by renewable sources**, as well as storage plants (and related *revamping* and *repowering* operations), characterised in recent years by a stratification of regulations. 2024 年 12 月 30 日, 2024 年 11 月 25 日颁布的第 190 号法令 (即所谓的 “TU FER”) 开始生效, 其目的是理顺近年来以法规分层为特点的有关可再生能源发电厂和蓄能发电厂 (以及相关的改造和再发电业务) 的建设和运营授权程序的零散、衔接不紧密的监管框架。

In this way, the TU FER reduces the number of **authorisation procedures** that **can be carried out** to three: 借此, TU FER 将可执行的授权程序减少到三个:

- free activity (“**Attività libera**”); 自主经营活动;
- simplified authorisation procedure – PAS (“**Procedura Abilitativa Semplificata**”); 简化授权程序 - PAS (“简化授权程序”);
- Single Authorisation (“**Autorizzazione unica**”), 单一授权;

indicating the interventions that can be carried out through each of the aforementioned procedures. 指出可通过上述每种程序进行的干预。

The government will have to adopt **the plan to identify acceleration zones for offshore installations**. 政府必须通过确定海上设施加速区的计划。

***AUTHORIZATION PROCEEDINGS
SIMPLIFICATION***
简化审批程序

THE COLD IRONING SYSTEM
COLD IRONING系统

ON THE ELECTRIFICATION OF HARBOUR DOCKS: THE COLD IRONING SYSTEM

港口码头电气化: COLD IRONING系统

In order to reduce the negative externalities caused by the use of low-quality fuels during the navigation phase and especially during the phase of stay of ships at harbours, while still allowing them to meet onboard needs, the operation of electrifying harbour docks, known as "**Cold Ironing**", fits within the broader goal of "**sustainable mobility**".

为了减少船舶在航行阶段,特别是在港口停留阶段使用劣质燃料所造成的负面外部影响,同时又能满足船上的需求,港口码头电气化(即 "**Cold Ironing**")符合"可持续交通"这一更广泛的目标。

Cold ironing consists of
"a set of structures, works, and facilities built on land necessary for supplying electricity to ships moored in port",

which is qualified as a **service of general economic interest**.

Cold ironing包括
"为停泊在港口的船舶供电而在陆地上建造的一套必要的结构、工程和设施"、
它被视为具有普遍经济意义的服务。

On November 29, 2024, ARERA adopted a measure aimed at providing a **discount on the tariff components covering general system charges ("OGS")**, applicable to the electricity withdrawal points supplying Cold Ironing infrastructures, acknowledging these benefits by paying at "full tariff" the OGS in the bill, and recovering the entitled discounts through periodic reimbursement from CSEA, based on the reports prepared by the GdI (**ex-post approach**):

2024 年 11 月 29 日, ARERA 通过了一项措施,旨在对适用于供应冷烫基础设施的取电点的一般系统费用("OGS")的关税部分提供折扣,通过在账单中以"全额关税"支付 OGS 来确认这些优惠,并根据 GdI 编制的报告(事后方法),通过 CSEA 的定期偿还来收回应得的折扣:

The amount of the discounts, for consumption from 2025 to 2029, is equal to **100% of the general system charges** owed by the GdI, unless otherwise stated; 除另有规定外,2025 年至 2029 年期间的折扣金额等于 GdI 所欠一般系统费用的 100%;

With the **National Plan for Complementary Investments (PNC)**, a total of 700 million euros were allocated, later increased by an additional 400 million euros through the revision of the **National Recovery and Resilience Plan (PNRR)**.

国家补充投资计划(PNC)共拨款 7 亿欧元,后来通过修订国家恢复和复原计划(PNRR)又增加了 4 亿欧元。

STORAGE INCENTIVES
存储奖励

**THE MACSE
AND TIME-SHIFTING PRODUCTS**
储能容量获取机制和时间转换产品

ARERA RESOLUTION AND THE PROCUREMENT OF ELECTRICITY STORAGE CAPACITY

ARERA 决议和电力存储容量的采购

ARERA Resolution 247/2023 has introduced criteria and conditions for Terna's procurement, under long-term arrangements, of electric storage capacity ("**MACSE**").

ARERA 第 247/2023 号决议引入了 Terna 根据长期安排采购电力存储容量 ("MACSE") 的标准和条件。



Time-shifting products represent the right to store energy produced at a specific time in one or more of the storage facilities that won the auctions in the previous step, to then release it into the grid at a later time.

时移产品是指将特定时间生产的能源储存在一个或多个在上一步拍卖中获胜的储存设施中，然后在稍后时间将其释放到电网中的权利。

As of now, the mechanism is not yet operational, and it is provided that the first procedure will take place within the first half of 2025.
截至目前，该机制尚未开始运行，根据规定，第一个程序将在 2025 年上半年进行。

STORAGE DEVELOPMENT **存储发展**

NATIONAL HYDROGEN STRATEGY: THE ROLE OF THE H₂ MOLECULE IN THE DECARBONISATION PROCESS **国家氢战略：氢分子在脱碳过程中的作用**

TIME HORIZONS TO 2050 到 2050 年的时间线

The scenarios to 2050 estimate **hydrogen consumption at between 6.4 and 11.9 million tonnes per year** (6.39 mln tonnes in the "base" scenario, 9.08 mln tonnes in the "intermediate" scenario and 11.93 mln tonnes in the "widespread diffusion" scenario):

到 2050 年的氢气消耗量估计在每年 640 万吨到 1190 万吨之间 ("基础" 方案为 639 万吨, "中间" 方案为 908 万吨, "广泛推广" 方案为 1193 万吨) :

the **"widespread diffusion" scenario envisages**

consumption covering 30% of transport, 18% of hard-to-abate industry and 0.7% in the civil sector in 2050;

广泛推广 "方案设想 2050 年的消费量将覆盖 30% 的交通、18% 的难以消减的工业和 0.7% 的民用部门;

the **expected investments** vary

according to the share of domestic production and *import* (a scenario with 70% domestic production and 30% import and a scenario with 80% import and 20% production);

预期投资因国内生产和进口所占比例而异 (国内生产占 70%, 进口占 30%, 进口占 80%, 生产占 20%);

in the **scenario with 70% domestic production**, EUR 8-16 billion is estimated for

15-30 GW of electrolyzers, while with 80% *import*, the cost is reduced to EUR 2-5 billion for 4-9 GW.

在国内生产占 70% 的情况下, 15-30 千兆瓦电解槽的成本估计为 80-160 亿欧元, 而在进口占 80% 的情况下, 4-9 千兆瓦电解槽的成本则降至 20-50 亿欧元。

OTHER DEVELOPMENTS **其他进展**

A DRAFT LAW FOR THE REVIVAL OF NUCLEAR POWER IN ITALY **意大利核电复兴法草案**

HOW IS THE NUCLEAR SCENARIO IN ITALY?

意大利的核方案情况如何？

On 23 January, the Ministry of the Environment and Energy Security ("**MASE**") transmitted the **nuclear draft law** to the Council of Ministers, with the aim of "*intervening in an organic form on the subject of energy production from sustainable nuclear sources and fusion*".

1 月 23 日，环境与能源安全部 ("MASE") 向部长理事会递交了核法律草案，目的是 "以有机的形式干预可持续核能源和核聚变能源生产问题"。

In this scenario, **nuclear energy** "*represents **the cleanest energy source capable of guaranteeing stable and programmable energy production, regardless of weather conditions, to complement non-programmable renewables***".

在这种情况下，核能 "是最清洁的能源，无论天气条件如何，都能保证稳定和可规划的能源生产，以补充不可规划的可再生能源"。

For this reason, the nuclear draft law makes some "**fundamental choices**", including:

因此，核法律草案做出了一些 "基本选择"，包括：

- a) a complete break with the nuclear experiences of the past; 与过去的核经验彻底分割
- b) the drawing up of an organic regulation of the entire life cycle of nuclear energy; 制定核能整个生命周期的有机规章；
- c) regular coordination and dialogue with electricity grid operators; 与电网运营商定期协调和对话；
- d) the proponents of nuclear projects provide appropriate financial and legal guarantees to cover the costs of the plants and for the risks. 核项目的提议者提供适当的财政和法律保障，以支付核电站的成本和风险；

HOW IS THE NUCLEAR SCENARIO IN ITALY?

意大利的核方案情况如何？

According to the scenarios outlined in the PNIEC, by 2050, nuclear power could cover between 11% and 22% of demand, with 8-16 GW of installed nuclear capacity. The MASE alerts, in fact, that the decarbonisation targets for 2050 "*are unlikely*" to be met with renewables alone, and, as seen, proposes **nuclear power as a solution against high energy prices and for energy independence.**

根据 PNIEC 概述的方案，到 2050 年，核电可满足 11% 至 22% 的需求，核电装机容量为 8-16 千兆瓦。事实上，MASE 警告说，仅靠可再生能源 "不太可能" 实现 2050 年的去碳化目标，并建议将核电作为应对高能源价格和实现能源独立的解决方案。



Notwithstanding this,
there is still a long way to go, but certainly nuclear power represents a **challenge** that the country is not willing to avoid.

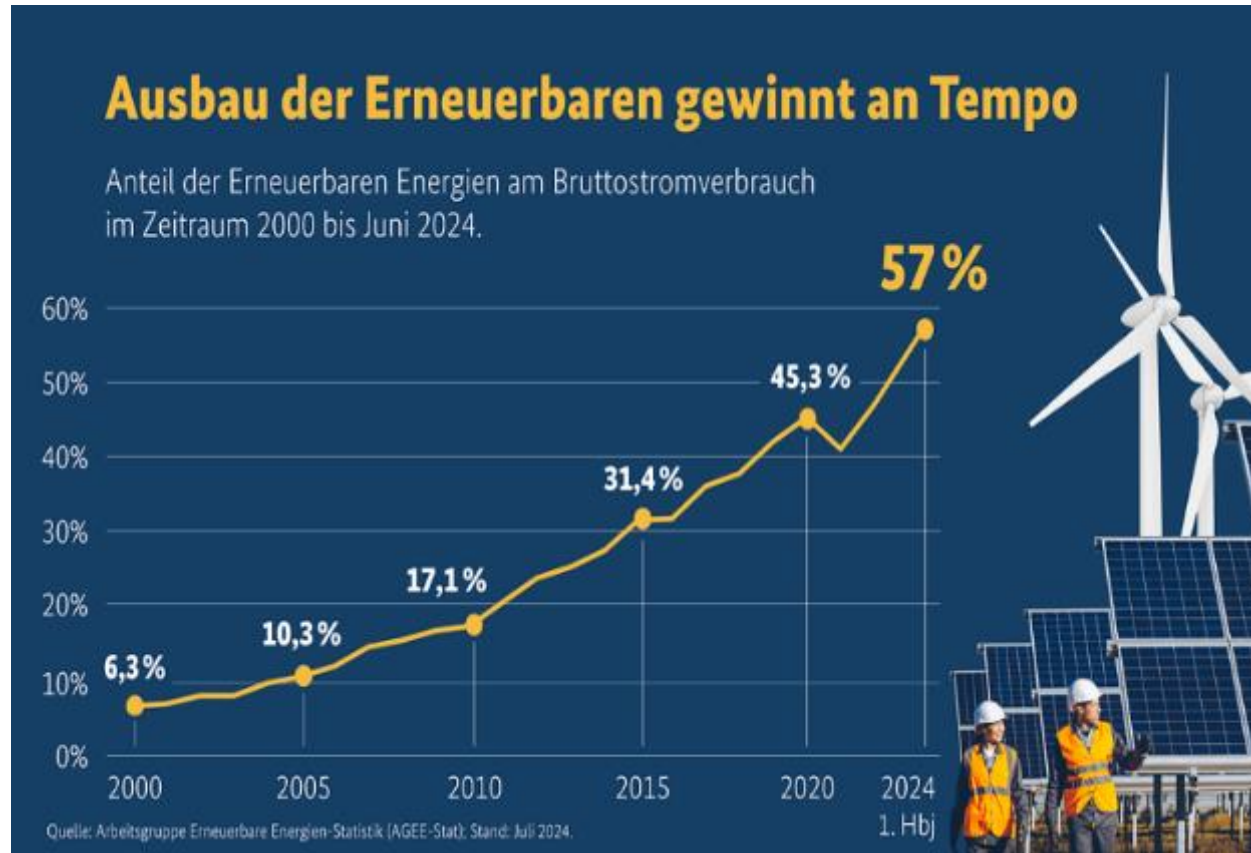
尽管如此、
虽然还有很长的路要走，但核能无疑是该国不愿回避的挑战。

ENERGY TRANSITION IN GERMANY

德国的能源转型

IMPLEMENTATION IN GERMANY 德国的实施情况

SHARE OF RENEWABLE ENERGIES IS CONSTANTLY GROWING
可再生能源的比例不断增长



GOALS IN NUMBERS: 数字化目标:

- 80% share of renewables by 2030
到 2030 年可再生能源占 80%
- 215 GW photovoltaics by 2030
到 2030 年光伏发电量达到 215 千兆瓦
- 115 GW onshore wind by 2030
到 2030 年 1.15 亿千瓦陆上风能
- 30 GW offshore wind by 2030
到 2030 年, 30 千兆瓦海上风能
- Climate neutrality by 2045
到 2045 年实现气候中和

MARKET TRENDS IN EUROPE AND GERMANY

欧洲和德国的市场趋势

**Transformation:
Decarbonization
and Climate
Neutrality**
转型：去碳化与气候
中和

Electrification
电气化

Digitalization
数字化

Flexibilization
柔性化

affects all sectors 影响所有产业

Energy
Sector
能源产业

Industrial
Sector
工业产业

Real Estate
不动产

Public
Sector
公共部门

Health
Sector
健康产业

Trans-
portation
运输

Financial
Sector
金融部门

MARKET TRENDS IN EUROPE AND GERMANY

欧洲和德国的市场趋势

SPOTLIGHT: ENERGY SECTOR
聚焦：能源产业

Renewables 可再生能源

- Offshore and Onshore
Wind
海上和陆上风能
- Photovoltaics
光伏
- Biomass energy
生物质能

Transportation and Storage 仓储和运输

- Grids: expansion and
modernization
电网：扩展和现代化
- BESS
电池储能系统
- Hydrogen
氢能

Heating 供暖

- Municipal heat planning
市政供暖规划
- Expansion of heating grids
扩大供热网
- Heat pumps
热泵
- Unavoidable waste heat
不可避免的废热
- Geothermal energy
地热能源

OPPORTUNITIES OF THE TRANSFORMATION

转型的机遇

Opportunities 机遇

- Sufficient, inexpensive supply of greenhouse gas-neutral energy from renewable sources
充足、廉价地供应温室气体中性的可再生能源
- Strengthening electricity infrastructure for decentralized loads
为分散负荷加强电力基础设施建设
- Establishing hydrogen grid / import terminals
建立氢网/进口终端
- High financing needs on all levels
各个层面都需要大量资金
- State subsidies offer planning security
国家补贴提供规划保障
- Market is booming
市场蓬勃发展



Chances to establish new partnerships 建立新合作伙伴关系的机会

- ADVANT Beiten offers specialized legal advice and support to help you enter the highly regulated energy market in Germany and Europe
昂帆百达提供专业的法律咨询和支持，帮助您进入德国和欧洲高度管制的能源市场。
- We have years of experience in the energy sector
我们在能源领域拥有多年经验
- We know the law, the market and the stakeholders
我们了解法律、市场和利益相关者

INTERDISCIPLINARY PRACTICE AT ADVANT BEITEN

昂帆百达跨学科领域的实务操作



INTERDISCIPLINARY PRACTICE AT ADVANT BEITEN

昂帆百达跨学科领域的实务操作

Sector Energy 能源产业

Regulation 法规

Our legal services at a glance 我们的法律服务概览

- **Plant approval** (planning law, immission control law, planning approval) for energy generation plants, renewable energies, cables and grids
能源发电厂、可再生能源、电缆和电网的工厂审批（规划法、排放控制法、规划审批）
- **Compliance with all regulatory requirements** for the energy sector
遵守能源行业的所有监管要求
- Environmental protection and nature conservation
环境保护和自然保护
- Public procurement law (especially for funding recipients and sector clients)
公共采购法（特别是针对资金接受者和部门客户）
- **State subsidies**, especially for renewable energies
国家补贴，尤其是对可再生能源的补贴
- Advice on the negotiation of direct marketing contracts and the development of new contractual concepts such as **PPA**
就直销合同的谈判和新合同概念（如购电协议）的开发提供建议
- Access to infrastructure 基础设施的使用
- **Regulation of grid usage** / grid usage fees 电网使用监管/电网使用费
- Concessions and concession fees 特许权和特许费
- Qualification of own infrastructures and their management (incl. coordination with state regulatory authorities)
自有基础设施的认证及其管理（包括与国家监管机构的协调）
- **National and European emissions trading** incl. CBAM (Carbon Border Adjustment Mechanism)
国家和欧洲排放交易，包括 CBAM（碳边界调整机制）

Selected matter highlights: 案例精选:

- **Chinese company:** Advice on establishing regulatory compliant rooftop PV solutions for large-scale retail clients.
某中国公司：为大型零售客户提供屋顶光伏解决方案。
- **TransnetBW GmbH:** Advising on regulatory issues in connection with the "Netzbooster", a project of central importance for grid expansion in Germany.
TransnetBW GmbH：就与 "Netzbooster"（一个对德国电网扩展至关重要的项目）相关的监管问题提供咨询。
- **APEX Energy GmbH:** Advice on procurement, subsidy, contract, and energy law in connection with the implementation of the EU IPCEI project "Green Hydrogen".
APEX Energy GmbH：就欧盟 IPCEI 项目 "绿色氢气" 的实施提供采购、补贴、合同和能源法方面的建议。
- **Globally active company in the field of battery manufacturing and distribution:** Development of legal strategy encompassing the compliant distribution of PV-system batteries including public obligations in relation to the registration and take back of battery systems in Europe and Germany.
全球电池制造和分销领域的活跃企业：制定法律战略，涵盖光伏系统电池的合规分销，包括与欧洲和德国电池系统注册和回收有关的公共义务。

INTERDISCIPLINARY PRACTICE AT ADVANT BEITEN

昂帆百达跨学科领域的实务操作

Sector Energy 能源产业

Transactions / M&A 交易和企业并购

Our legal services at a glance 我们的法律服务概览

- Planning, structuring and support for investments in energy and infrastructure projects
规划、组织和支持能源与基础设施项目投资
- Providing assistance from the initial discussions with potentially interested parties, financial investors and finance institutes
从与潜在意向方、金融投资者和金融机构的初步讨论开始提供协助
- Elaboration and negotiation of the necessary purchase and sale agreements within the framework of a share or asset deal
在股份或资产交易框架内，制定和谈判必要的买卖协议
- Preparing and carrying out (legal, tax and financial) due diligence and offer and auction procedures
准备和执行（法律、税务和财务）尽职调查以及要约和拍卖程序
- Providing transaction and process management as deal counsel
作为交易顾问提供交易和流程管理
- Preparation and support of signing and closing
准备并支持签约和交割
- Support for post-closing measures
支持交割后措施
- Advising on and managing national and EU merger control filings
就德国和欧盟合并控制申报提供建议并进行管理

Selected matter highlights: 精选案例:

- **ENGIE New Ventures SAS:** Advising on series B financing round of Ineratec (EUR 129m) for ENGIE New Ventures.
ENGIE New Ventures SAS: 就 Ineratec 的 B 轮融资 (1.29 亿欧元) 为 ENGIE New Ventures 提供顾问服务。
- **Verbund AG:** Advising on the acquisition of a 56.4 MW wind portfolio in three federal states. The seller is an infrastructure fund managed by Impax Asset Management.
德国 Verbund 股份有限公司: 就收购位于三个联邦州的 56.4 兆瓦风力发电组合提供顾问服务。卖方是 Impax Asset Management 管理的一家基础设施基金。

INTERDISCIPLINARY PRACTICE AT ADVANT BEITEN

昂帆百达跨学术领域的实务操作

Sector Energy 能源产业

Project Development 项目开发 Our legal services at a glance 我们的服务概览

- Legal support from the first project steps throughout the project realization
从项目初始阶段到项目实现的法律支持
- Photovoltaic and wind energy projects
光伏和风能项目
- Energy supply concepts for urban quarters, compliant with energy law regulations and using state subsidies
符合能源法规定并利用国家补贴的城市街区能源供应概念
- E-Mobility concepts
电动汽车概念
- Drafting and negotiating all relevant contracts (lease agreements, construction and (energy) supply contracts, project specific contracts)
起草和谈判所有相关合同（租赁协议、建筑和（能源）供应合同、项目专用合同）
- Finding suitable partners for the energy supply
寻找合适的能源供应合作伙伴

Selected matter highlights: 精选案例:

- **Large property company:** Advice on several matters for the implementation of a greener portfolio, drafting of several contracts (rooftop lease and PPA).
大型房地产公司：就实施绿色投资组合的若干事项提供建议，起草若干合同（屋顶租赁和 PPA）。
- **Energy project company:** Legal advice to the development of heat supply for several districts using 80 % renewable energies and fulfilling public obligations of property owners. Drafting of several contracts.
能源项目公司：为利用 80% 的可再生能源为多个地区开发供热项目提供法律咨询，并履行业主的公共义务。起草多份合同。
- **Property company and energy subsidiary:** Advice on a myriad of matters relating to energy operations in the assets of both companies, mainly concerning energy procurement, compliance with regards to contractual and public obligations relating to heat supply. Drafting of several key contracts enshrining a company-wide green strategy.
房地产公司和能源子公司：就两家公司资产中与能源业务有关的众多事项提供咨询，主要涉及能源采购、遵守与供热有关的合同和公共义务。起草几份包含全公司绿色战略的重要合同。

SPEAKERS

演讲人

PIERO FRANCESCO VIGANÒ



Italian Attorney at law | Partner 意大利执业律师 | 合伙人

FOCUS ON / 业务领域

- Corporate and Commercial / 公司及商业事务
- Mergers & Acquisitions / 企业并购
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ADDITIONAL INFORMATION / 补充信息

Piero Viganò gained extensive experience assisting clients in various energy production projects, M&A transactions, as well as corporate and regulatory matters related to incentive schemes. Piero provides consultancy services to leading companies engaged in energy production and energy services, as well as to various energy intensive companies. He collaborates with numerous companies involved in electricity and energy production, as well as private equity funds, industries, banks, consortia, technology development companies, and local public utilities.

Piero Viganò 在协助客户开展各种能源生产项目、并购交易以及与激励计划相关的公司和监管事务方面积累了丰富的经验。Piero为从事能源生产和能源服务的领先公司以及各种能源密集型公司提供咨询服务。他与众多从事电力和能源生产的公司以及私募股权基金、行业、银行、财团、技术开发公司和地方公用事业公司合作。

With a deep understanding of market regulations, Piero offers comprehensive legal assistance across all types of renewable energies, cogeneration, storage, self-generation, distributed generation, and energy efficiency projects.

凭借对市场法规的深刻理解，Piero为各类可再生能源、热电联产、储能、自发电、分布式发电和能效项目提供全面的法律援助。

DR CHRISTIAN VON WISTINGHAUSEN

冯蔚豪 博士



German Attorney at law | Partner
德国执业律师 | 合伙人

FOCUS ON / 业务领域

- China Desk / 中国事务部
- Corporate and Commercial / 公司及商业事务
- Mergers & Acquisitions / 企业并购
- FDI Control / 外商投资审查

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Dr Christian von Wistinghausen is Partner at ADVANT Beiten's Berlin office and member of the Corporate / M&A practice group. His area of expertise comprises mergers & acquisitions, private equity and alternative investments. He advises national and international clients on cross-border M&A transactions and joint ventures.

冯蔚豪博士是昂帆百达柏林办事处的合伙人，也是公司/并购业务组和中国业务的成员。他的专业领域包括并购、私募股权和另类投资。他为国内外客户提供跨境并购交易和合资企业方面的咨询服务。

Dr Christian von Wistinghausen studied law at the University of Berlin (Dr iur. 1998) and King's College in London, UK (LL.M. 1995). He was admitted to the German Bar in 1998. Between 2002 and 2008, he headed ADVANT Beiten's Moscow office. He has been working with ADVANT Beiten since 2000 and became Partner in 2005.

冯蔚豪博士曾在柏林大学（1998 年获得法学博士学位）和英国伦敦国王学院（1995 年获得法学硕士学位）学习法律。他于 1998 年获得德国律师资格。2002 年至 2008 年间，他担任昂帆百达莫斯科办事处主任。自 2000 年以来，他一直在昂帆百达工作，并于 2005 年成为合伙人。

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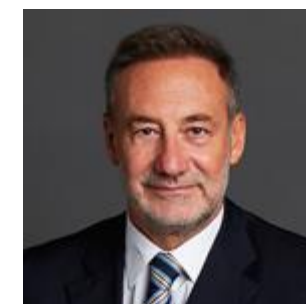
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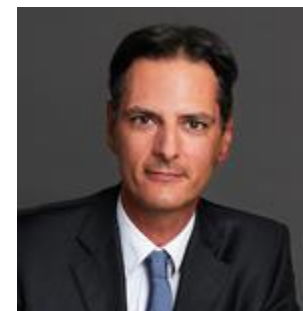
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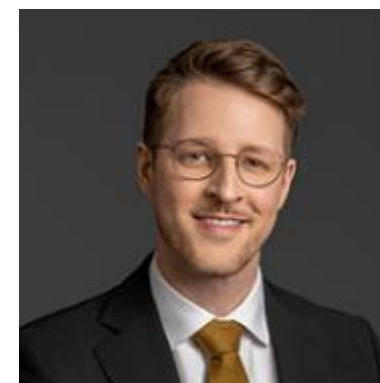
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