

Economic Diversification in Energy sectors

The case of Western
Macedonia, Greece

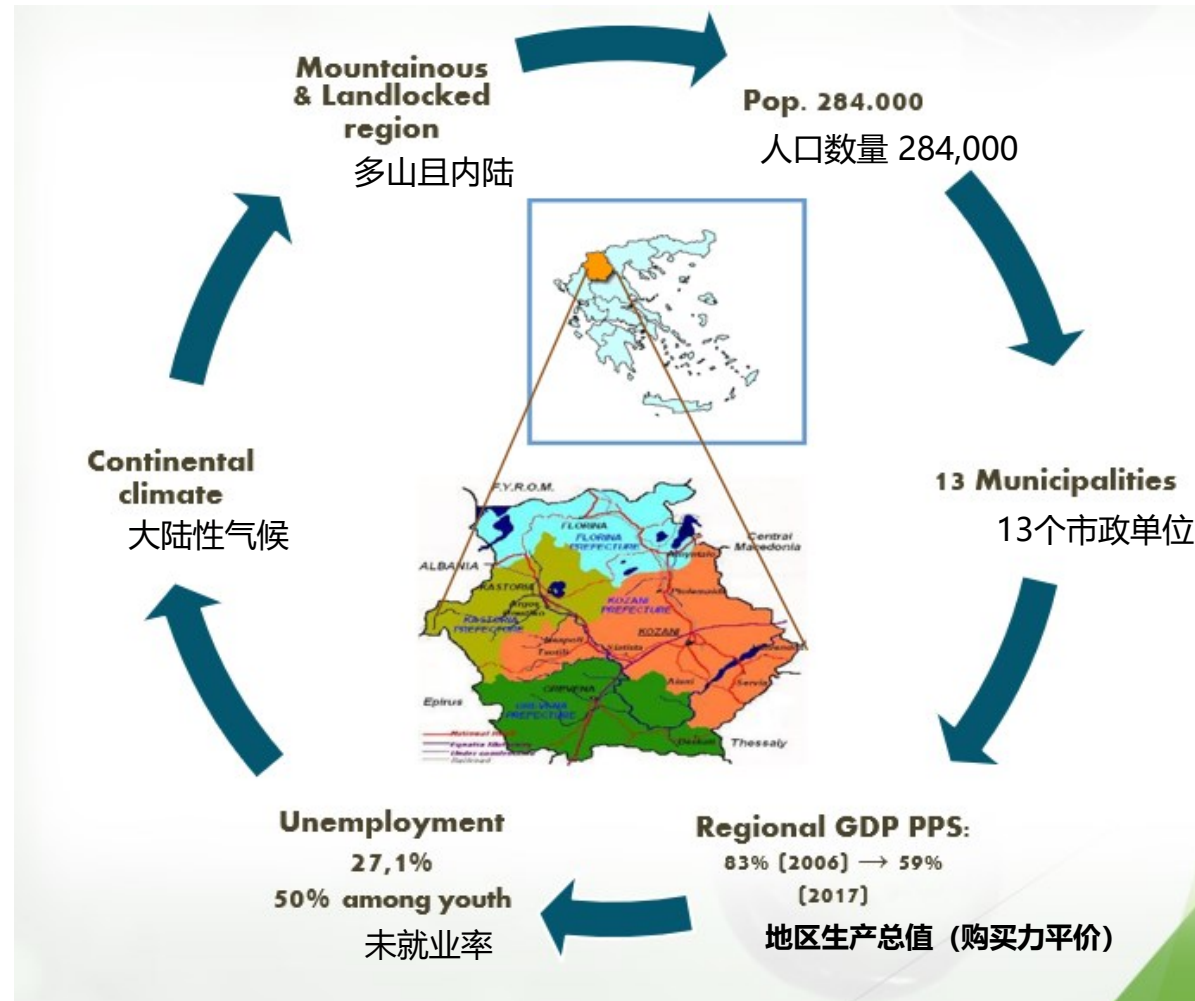
能源行业的经济多元化
希腊西马其顿地区的案例

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The Region of Western Macedonia - Greece

希腊西马其顿地区



Western Macedonia - From coal to what...? 西马其顿_从煤炭到何处..?



- ✓ New & sustainable production model for the region 本地区新兴&可持续生产模式
- ✓ Low-carbon society promoting technical innovation 低碳社会促进技术创新

Establishment of CluBE

CluBE的建立

- Initially founded in **2014** as Bioeconomy and Environment Cluster
- 最初成立于2014年，名为生物经济和环境集团
- Not-for-profit company
- 非营利公司
- Bottom-up approach
- 采取自下而上的方法
- Development of common business and R&D in Bioeconomy and Environment
- 生物经济和环境领域的共同业务和研发的发展
- Mobilize resources to bridge the gap
- 调动资源以缩小差距



Our Power = Our Members

我们的力量来源 = 我们的伙伴



Public Sector
公共部门



R&D
研究与开发

Members integrated
within the
Quintuple Helix

纳入“五重循环”的伙伴



Entrepreneurship
创业

Environment
环境

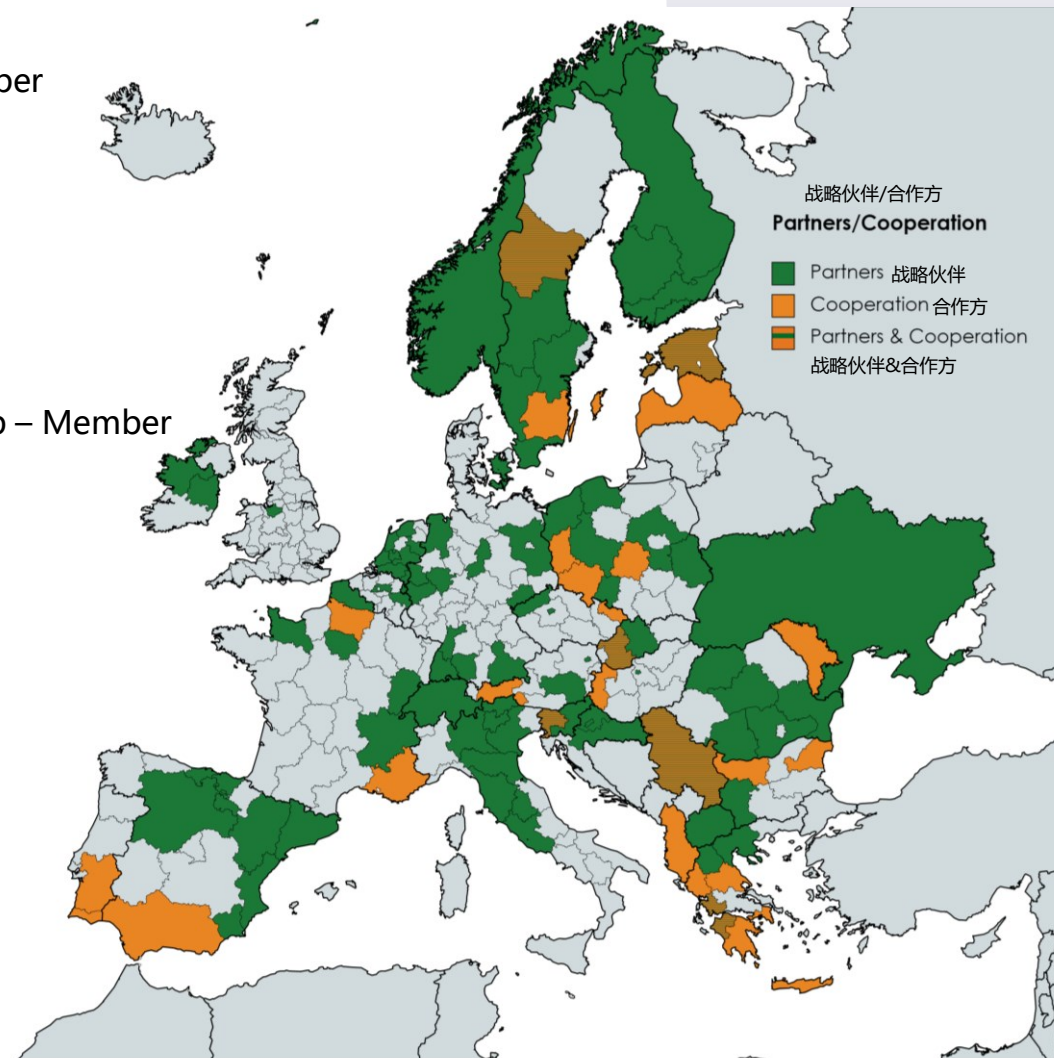


Social
社会

CluBE as a strategic partner in EU hydrogen network

欧盟氢能网络的战略合作伙伴CluBE

- Greenovate! Europe – Full member
- European Bioeconomy Stakeholders Panel – DG RTD European Commission – Member
- Biobased Industries Consortium (BIC) – Associate Member
- European Clean Hydrogen Alliance – Member
- Innovawood – Full member
- Hellabiom (Hellenic Biomass Association) – Full member
- Hydrogen Europe – Member
- Fuel Cells and Hydrogen Joint Undertaking (FCH JU) – Hydrogen Valleys Partnership – Member
- National Contact Point of EU Hydrogen Observatory
- Member of Hydrogen Valleys S3 Partnership
- European Circular Economy Stakeholder Platform – Leadership Group Member
- ENRD Mainstreaming the Bioeconomy Thematic Group – Member
- S3 Bioenergy Partnership – Member
- Greek Bioeconomy Forum – Founding member
- Local Governments for Sustainability – Member
- Hellenic-German Chamber of Commerce and Industry
- American-Hellenic Chamber of Commerce
- European Biogas Association
- AMWAJ Alliance
- World Bioeconomy Forum
- European Federation of Agencies and Regions for Energy and Environment



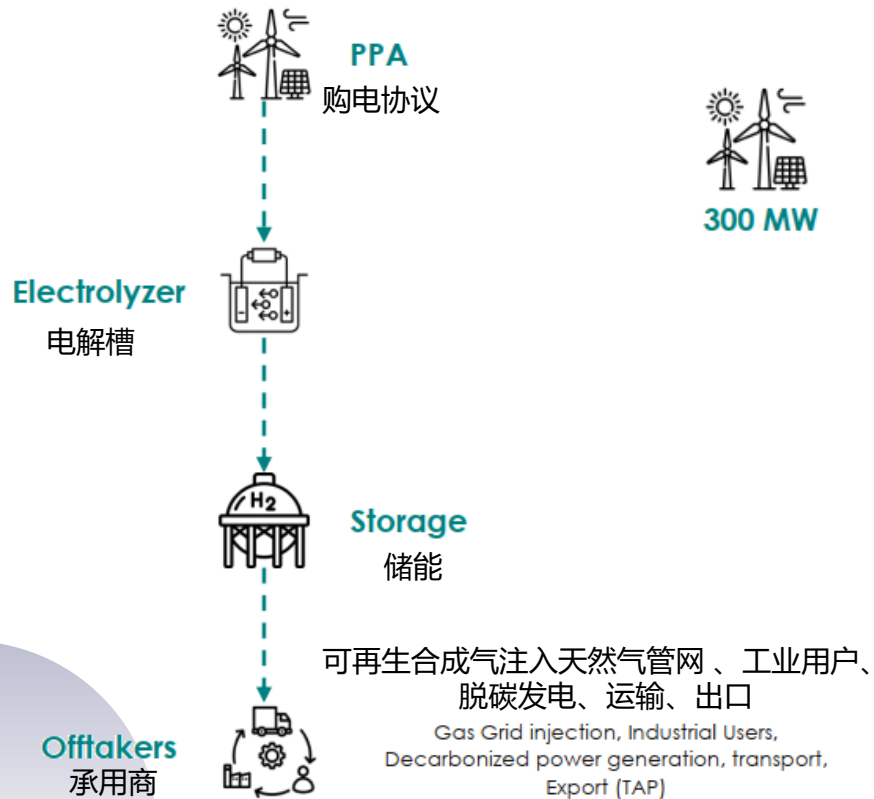
CluBE Project Portfolio

CluBE 项目组合



Amyntaio North-1 Project Amyntaio North-1 号项目

Hellenic Hydrogen



Preliminary layout area



Project layout illustrating the required 7 km pipeline to link the electrolysis plant with the DESFA NG pipeline

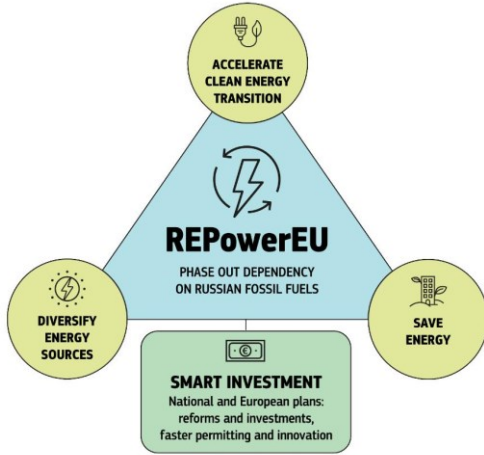
EU Innovation Fund approved projects in WM

欧盟创新基金批准的西马其顿项目

<p>LITH.OS LITH.OS CELL: establishing dedicated Lithium Operations in South Europe to serve the ESS and industrial mobility markets</p> <p>在南欧建立专门的锂业务部门, 服务于 ESS和工业机动性市场</p>	<p>IF23Call – Manufacturing IF23Call-制造</p>	<p>Energy storage 储能</p>	<p>Manufacturing of components for ES ES 组件的制造</p>	<p>Greece 希腊</p>	<p>SUNLIGHT GROUP SYSTMATA APOTHIKEFSIS ENERGEIAS VIOMICHANIKI KAI EMPORIKI ANONYMI ETAIRIA</p>	<p>Battery cell 电池</p>
<p>Rhyno ADVENT RHyno - Renewable Hydrogen Innovative Technologies project</p> <p>在南欧建立专门的锂业务部门, 服务于 ESS和工业机动性市场</p>	<p>IF23Call – Manufacturing IF23Call-制造</p>	<p>Energy- intensive industries 能源密集型产业</p>	<p>Manufacturing of components for EII EII 组件的制造</p>	<p>Greece 希腊</p>	<p>ADVANCED ENERGY TECHNOLOGIES AE EREUNAS & ANAPTYXIS YLIKON & PROIONTONANANEOSIMON PIGON ENERGEIAS & SYNAFON SYMVOULEFTIKON Y PIRESION</p>	<p>High Temp Polymer El Membrane fuel cells component systems, an exchange membrane electrolyse systems.</p>



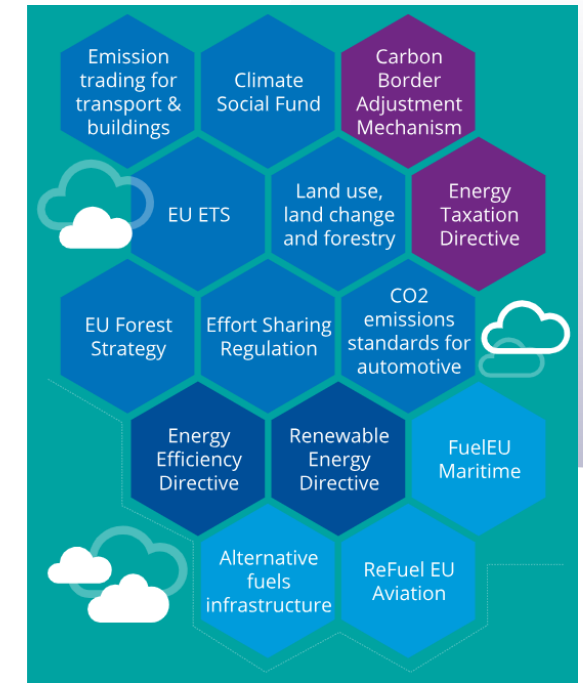
EU Policies 欧盟政策



- **Objectives of the REPowerEU Plan:** reducing Europe's dependence on Russian fossil fuels and accelerating the energy transition.
- REPowerEU计划的目标：降低欧洲对俄罗斯化石燃料的依赖，加速能源转型。
- **Hydrogen provisions:** REPowerEU recognizes hydrogen as an important fuel to reduce energy dependency. Ambitious targets for renewable hydrogen are set: 10 million tonnes (Mt) to be imported and another 10 Mt produced within the EU by 2030, totalling 20 Mt of overall consumption.
- 氢供应：REPowerEU认为氢是降低能源依赖的重要燃料。该计划设定了雄心勃勃的可再生氢目标：到2030年，欧盟进口1000万吨，另外生产1000万吨，总消费量为2000万吨。



- ✓ **Net Zero Industry Act:** Aims to scale up EU manufacturing of net-zero technologies, targeting 40% domestic production by 2030 and 15% of global production by 2040. Hydrogen technologies, such as electrolyzers and fuel cells, are included and benefit from faster permitting and administrative support. 净零工业法案：旨在扩大欧盟净零技术的生产规模，目标是到2030年达到40%的国内生产率，到2040年达到15%的全球生产率。电解槽和燃料电池等氢技术也包括在内，并受益于更快的许可和行政支持。
- ✓ **Critical Raw Materials Act:** Focuses on ensuring a resilient and diversified EU critical raw materials supply chain with benchmarks for extraction, processing, and recycling. Includes raw materials vital for hydrogen technologies, like nickel and platinum, to boost supply chain reliability and sustainability. 《关键原材料法案》：旨在确保欧盟关键原材料供应链的弹性与多样性，并制定提取、加工和回收利用的基准。包括对氢技术至关重要的原材料，如镍和铂，以提高供应链的可靠性和可持续性。



- “Fit for 55” aims to reduce GHG emissions by at least 55 percent by 2030, focusing on green transition to achieve climate neutrality
- “Fit for 55” 计划旨在到2030年将温室气体排放量减少至少55%，重点关注绿色转型，以实现气候中和
- Guaranteeing environmental integrity and addressing solidarity
- 保证环境完整性并促进团结
- The European Union Emissions Trading System (EU ETS) will be tightened and strengthened to ensure effort sharing with relevant targets
- 欧盟排放交易体系 (EU ETS) 将得到加强，以确保与相关目标责任的有效分担
- Additional policies to help ensure the implementation of carbon prices
- 制定额外政策，确保碳定价的实施
- All revenues from carbon pricing aim to positively influence final consumers
- 碳定价的所有收入旨在对最终消费者产生积极影响

EU Policies 欧盟政策

FIGURE 7.3

Overview of EU and national funding mechanisms 欧盟和国家资助机制总揽

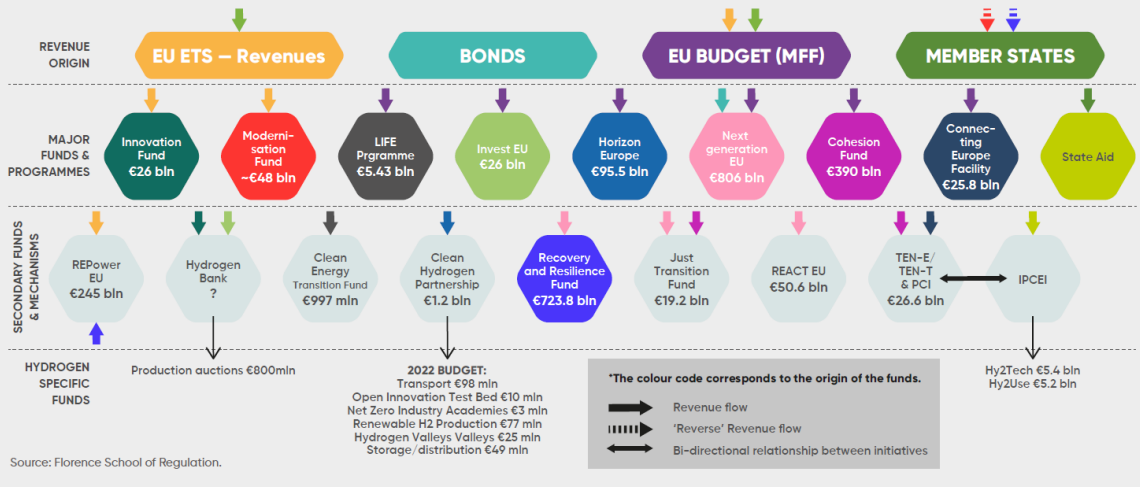
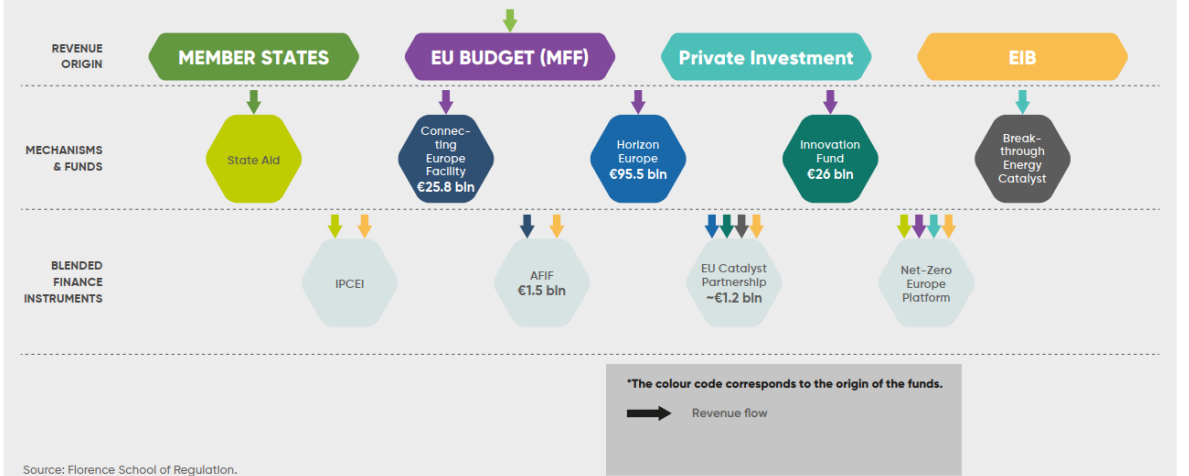


FIGURE 7.4

Overview of blended financing mechanisms 混合融资机制概述

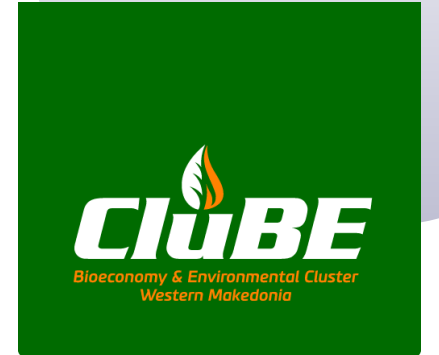


Key takeaway message

主要启示

Expanding network
扩大网络

Go global to act local
放眼全球，立足本土



CluBE main roles in projects

CluBE 在项目中的主要作用

Local / regional research case coordinator

地方/区域研究案例协调员

Mobilization of local ecosystem

动员当地生态系统

Stakeholder identification and engagement

利益相关者的确定和参与

Communication and dissemination at local, national and Eu level

在地方、国家和欧洲层面的交流与传播

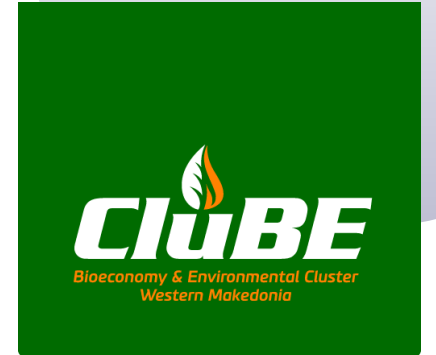
Replication at regional, national and international level, with a special focus on

Southeast Europe

在地区、国家和国际层面推广，重点是东南欧

Attracting investments: 25,5M€ and counting...!

吸引投资：2,550万欧元，而且还在不断增加.....!



Thank you!
谢谢！

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