



EUROPE NEEDS A MISSION AIMED AT “ACCELERATING INNOVATION & RESTORING EU COMPETITIVENESS IN CLEAN ENERGY & CLEAN MOBILITY TECHNOLOGIES”, ENABLED BY ADVANCED MATERIALS AND OTHER KEY ENABLING TECHNOLOGIES

CHALLENGES FACED BY EUROPE

- EU is losing leadership in clean energy techs leading to deindustrialization and job destruction (net loss of 100.000 jobs in 2013-2016) as well as dependence on imported technologies
- Without presence in EU of a globally exporting advanced materials industry, the job loss would have been worse (advanced materials industry created 40-50.000 jobs in that period while downstream part of clean energy value chains lost 140-150.000 jobs)
- Without EU action, EU will pass below 1.000.000 jobs in clean energy by 2020 while China and US keep growing in the field

VISION FOR EUROPE (CAPTURING MARKET OPPORTUNITIES TO RE-INDUSTRIALIZE EUROPE)

- EU can leverage a strong advanced materials industry (500,000 direct & indirect jobs - about 50% of EU jobs in clean energy) to reindustrialize EU in clean energy & clean mobility techs
- Today advanced materials represent more than 50% of cost structures of these techs and circular innovation (innovation carried out in line with circular economy principles) in advanced materials (incl. their manufacturing and their integration into the different techs) is already key to accelerate shift to clean energy & clean mobility techs and stimulate EU market growth
- In near future, global trends will impact manufacturing cost structures of clean energy & clean mobility techs (lower total cost, share of advanced materials in cost above 80% and squeezing out of labor and energy costs) and enable manufacturing of clean energy & clean mobility techs in EU to serve EU market (“made in EU for EU” vs “made in China for EU”)
- Development in EU of manufacturing of clean energy & clean mobility techs will benefit from a strong EU-based industry of advanced materials benefiting in return from a “close-to-home” customer basis and developing through global exports
- In near future competition is therefore on using the best advanced materials (effectiveness lever) & using them the best way (efficiency lever) prompting the need in FP9 to accelerate innovation in advanced materials to create impact

R&I NEEDS TO REALIZE THE VISION

- Perform R&I to reduce intrinsic cost of advanced materials (euro/kg), improve their performance (energy unit/kg), increase lifetime and stability in line with Circular Economy, ensure their competitive manufacturing, and facilitate their integration into techs
- Leveraging existing EMIRI’s Strategic Innovation Agenda (EMERIT) and aligning with / enabling the 4 ambitious strategic priorities of EU’s Integrated SET Plan ((1) Strengthening EU leadership in renewables, (2) Developing affordable and integrated energy storage solutions, (3) Enabling electro-mobility and a more integrated urban transport system, (4) Decarbonising EU building stock by 2050)

IMPACT FOR EUROPE AND ITS CITIZENS

- Accelerating transition to a resilient Energy Union (clean energy & clean mobility) with world-class innovated-in-EU techs
- Contributing to reindustrialization in EU (towards 20% GDP from manufacturing) in field of clean energy & clean mobility techs
- Business impact will be progressive, possibly leading to creation of up to 700,000 jobs (direct & indirect) by 2030+ (50% through jobs in EU-based industry of advanced materials and 50% through jobs in EU-based industry of manufacturing of clean energy & clean mobility techs) and annual re-investments by industry in EU into R&D and CAPEX could easily reach 6 - 7 billion euro

For more information, do not hesitate to contact EMIRI – fabrice.stassin@emiri.eu – www.emiri.eu