Interreg Sudoe TR@NSENER

European Regional Development Fund

Energy Clusters in Sudoe Region

Report

Contents

The Tr@nsener project, co-financed by the Interreg Sudoe Programme, aims to increase the innovative potential of regions in the electricity technology sector by maximizing the existing potential. In order to achieve these objectives, several levers are put in place. The first of these is to stimulate innovation in existing ecosystems by fostering clusters.

To this end, it seemed essential to establish a roadmap which would highlight the characteristics and common points of these clusters in order to identify objects for cross-cutting study and work.

This report will establish different groups of clusters susceptible of collaborating according to their area of competence; thanks to this, a second grouping system will be established, showing that some clusters could adopt complementary working methodologies.
Prior to this work, 16 clusters were contacted, and the 9 that responded are classified below and placed on a map in **appendix 1.**

CLUSTER	REGION	NUMBER OF MEMBERSHIP
AINER	Asturias, Spain	48
CEEC	Catalonia, Spain	127
DERBI	Occitania, France	170
ENERGYIN	Lisboa, Portugal	20
FAEN	Asturias, Spain	47
CLENAR	Aragon, Spain	Not informed
CYLSOLAR	Castilla and Leon, Spain	51
ENERCLUSTER	Navarra, Spain	27
S2E2	Nouvelle-Aquitaine, Loire, Centre, France	183

I. TRANSVERSALS OBJECTIVES

A few months ago, each cluster completed a document containing a European classification, detailing its competences **(Annex 2).** This directory work has highlighted cross-cutting objectives in several clusters, which could allow them to cooperate.

- Energy efficiency: Ainer, Ceec, Derbi, EnergyIn, S2E2, Clenar, Cylsolar
- Smart Grids and Digital energy: Ceec, Derbi, EnergyIn, S2E2
- Electric mobility: Ainer, Ceec, Faen, Clenar
- Energy production: all

Cette classification sur les objectifs transversaux des différents clusters nous sert de préalable pour affiner les suivantes, basées sur l'innovation et la taille des groupes.

II. COMPLEMENTARY CLUSTERS

A) More or less focused on innovation

With high proportions of universities and R&D centres in their composition, as well as the stated objectives of collaborative project design, four clusters stand out clearly. These are Derbi, Enercluster, EnergyIn and S2E2. With a focus on energy efficiency and digital energy, these four clusters could create an innovation pool, bringing together all these research centers to generate common ideas about the future of renewable energies (or renewable energies of the future!). Both in the field of energy efficiency, Derbi and EnergyIn seem to be the closest and therefore the most able to develop joint projects.

Encouraging collaborative projects involving universities and companies, Ceec, Ainer and Faen are also positioning themselves on innovation. Ainer et Ceec partagent plus précisément deux domaines communs – la mobilité électrique et la production d'énergie – et pourraient travailler ensemble.

Finally, with nearly 90% of their members, Clenar and Cylsolar appear to be more entrepreneurial. Both present on topics of energy efficiency and production of energy, they could also collaborate.

However, things can be seen from another perspective. Indeed, we could combine more innovative clusters with others, oriented towards commercial objectives in order to create value chains, and to allow them to work hand in hand on a product, from design to production and marketing. Moreover, this data can be cross-referenced with the cross-cutting domains mentioned above.

Therefore, there are three areas where it would be worthwhile to establish work between the different clusters. First, on energy production, this brings together all the clusters (with differences depending on the mode of production. Seven clusters focus on innovation (S2E2, Derbi, Ceec, Ainer, Faen, Enercluster and EnergyIn) and two others (Clenar and Cylsolar) on more commercial objectives. On its website, in the category of «projects», Cylsolar mentions the development of a label for solar photovoltaic installations. In this field, the Spanish cluster can work with several schools or laboratories, members of the Derbi cluster. Indeed, a few member institutions carry out research and propose "solar" sector. This would be an opportunity for these schools (from the Derbi cluster) to submit innovative ideas to companies (from the Cylsolar cluster) that could produce and market them; and these companies to have access to innovation channels to develop new products. The system would then be a win-win. The other two areas are electric mobility,

where Ceec, Ainer, Faen are positioned for innovation and Clenar for entrepreneurship; energy efficiency with S2E2, Derbi, Ceec, Ainer, EnergyIn for innovation, Then Clenar and Cylsolar.

B) Variable sizes

These clusters are also of different sizes (from 20 to 180 members) as can be seen, among other things, on the matrix in appendix 3. Here we will focus on highlighting the international links that can be made between these clusters. In this framework, the largest groups are Ceec, Derbi and S2E2. In Catalonia, Occitanie and Nouvelle-Aquitaine, Pays de la Loire and Centre, these clusters have between 127 and 183 members. They combine common themes of work and a marked orientation for the international (for Derbi at least), allowing the emergence of a cross-border grouping that would develop solutions in the fields of energy efficiency (including Ceec and Derbi), energy production (where all three are listed) or digital energy (comprising S2E2 and Ceec). By forming a large Franco-Spanish consortium, these three players would be able to take projects to a European and even global level.

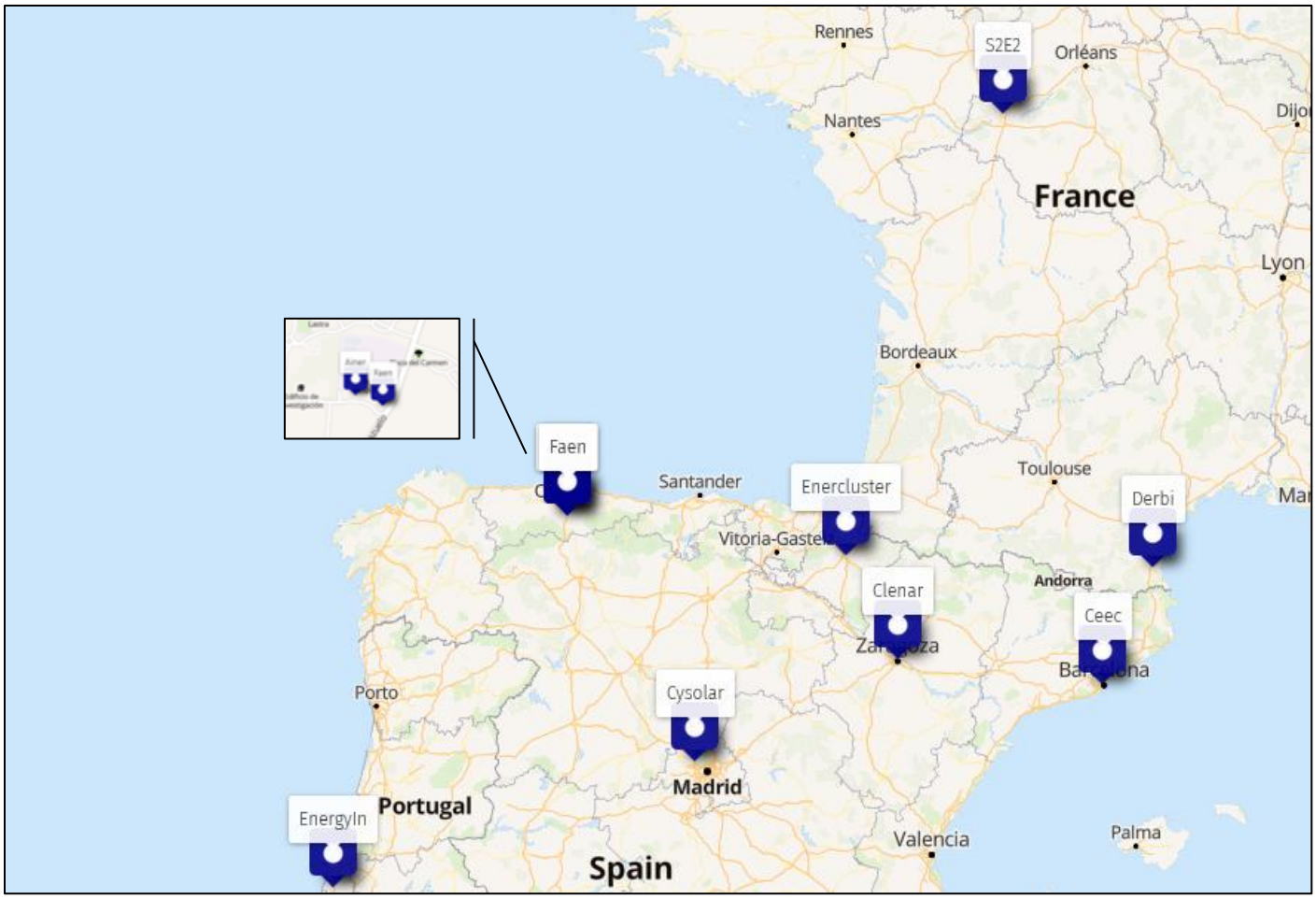
They could also work with EnergyIn, the Portuguese cluster with which they share three working themes: energy efficiency, energy production and digital energy. Smaller in size (about 20 members) but well established since it was created 10 years ago, the cluster could nevertheless join this consortium to give a stronger foundation to projects that would be based on three countries: France, Spain and Portugal.

In this synthesis report we have attempted to establish three classification systems, based on skill areas, innovation and cluster size. This has enabled us, throughout this document, to identify avenues of work common to several

groups represented in the form of a matrix annexed to this document.

Finally, with a view to cross-border cooperation and in order to enable the clusters to exchange at best before possible joint projects, a partnership agreement was signed between Derbi (French) and Ceec (Spanish) and two others are to come between the Derbi and EnergyIn (Portuguese) on the one hand and on the other between Derbi and Enercluster (Spanish).

Appendix 1: mapping of the various Franco-Spanish clusters

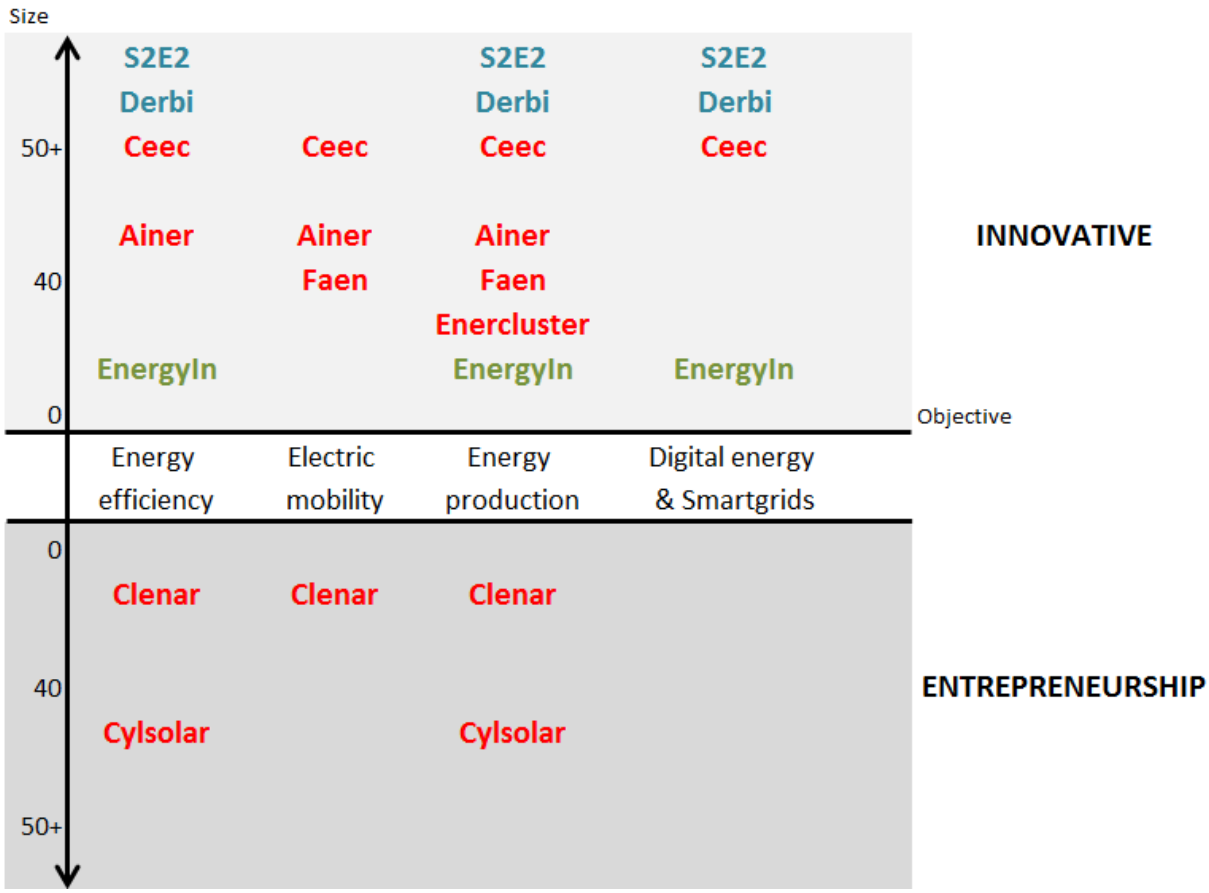


Appendix 2: A grid containing the European classification completed by the clusters.

TRANSENER **Clusters analysis grid**	
Cluster definition	**They are defined as groups of firms, related economic actors, and institutions that are located near each other and have reached a sufficient scale to develop specialized expertise, services, resources, suppliers and skills.**

Criterias		Indicators
1. STRUCTURE OF THE CLUSTER	1.1	Legal form of the cluster organization
	1.2	Age of the cluster organization
	1.3	Number of employees
	1.4	Number of cluster participants
	1.5	Composition of the cluster committed participants (details on research labs, technological centers and main companies)
	1.6	Geographical area of the cluster
2. STRATEGY OF THE CLUSTER	2.1	Thematic priorities of the cluster
3. FUNDING OF THE CLUSTER MANAGEMENT	3.1	Type of funding sources (% private/public funding)
4. SERVICES PROVIDED BY THE CLUSTER	4.1	Type of services provided by the cluster (Collaborative technology development, technology transfer, Development of entrepreneurship, Matchmaking, Information ...)
	4.2	Cluster's means of communication and animation within its network
5. COLLABORATION EXPECTATION	5.1	Which are the strategic thematic you would like to work on through a SUDOE collaboration (if different than your answer at question "2.1 Thematic priorities of the cluster") ?
	5.2	Which skills would your members need to knock down technological barriers ?
	5.3	Do you have any current specific project for which you would need / want European collaboration ?

Appendix 3: Cluster summary matrix by skills, size and innovation capacity



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