Market-oriented European Projects with public-private Funding: the KIC InnoEnergy Approach

WavEC Annual Seminar 2013

Lisboa - November 25th, 2013

Mikel Lasa
Index

I. What is KIC InnoEnergy?

II. Development of innovative products – Call for Proposals
The **Knowledge and Innovation Communities (KICs)** created by the EIT are the ones bringing together the “knowledge triangle” (business, research & higher education) in thematic partnerships.
What is KIC InnoEnergy? / A European company

CC BENELUX
Eindhoven, Leuven

CC IBERIA
Barcelona, Lisboa

CC FRANCE
Grenoble, Lyon, Marseille, Cadarache

CC SWEDEN
Stockholm, Uppsala

CC POLAND PLUS
Katowice, Kraków

CC GERMANY
Stuttgart, Karlsruhe
Innovation = Invention + Commercialization

**TRL**
Technology

**IPRL**
Freedom to operate

**MRL**
Market

**CRL**
Consumer behaviour

**SRL**
Society

INNOVATION READINESS LEVEL
What is KIC InnoEnergy? / Sustainable Energy

- **Sustainability by**
  - Reducing the cost in the energy value chain
  - Increasing the security (autonomy vis-à-vis the resource holders, intrinsic operational security)
  - Reducing CO2 and other greenhouse gas emissions

- **Focusing on 6 thematic areas**
  - Energy from Chemical Fuels
  - Clean Coal Technologies
  - Renewable Energies
  - Sustainable Nuclear and Renewable Energy Convergence
  - Smart Grid and Storage
  - Smart and Intelligent Cities and Buildings
What is KIC InnoEnergy?/ Output-oriented organization

KIC InnoEnergy delivers

1. **Talent - Future Game-Changers**, specialized in the energy field with entrepreneurial spirit

2. **Innovative products and services** - Technology with a market impact

3. **New businesses** - Start-ups with high growth potential
What is KIC InnoEnergy? / Output-oriented organization

Education

Value Proposition
- International Programs – Mobility
- Quality of our Programs (top Universities and Business Schools)
- Complementary training in business and entrepreneurship
- Industry involvement
- Scholarships available

2012 achievements
- 506 students in our MSc programs
- 28 engineers in our PhD school
- 25 professionals in our Executive Programs
What is KIC InnoEnergy? / Output-oriented organization

Innovative Products

Value Proposition

- Effective collaboration among excellent actors
- Complementary in positioning within value chain and background knowledge
- Clear IP ruling
- International consortia
- Led by industry
- Funding

2012 achievements

- 24 patents filed (1/1M€; 1/67M€ in FP7)
- 82 new technology-based products & services under development
What is KIC InnoEnergy? / Output-oriented organization

Business Creation Services

Value proposition
- Adding Value to Entrepreneurs through the KIC InnoEnergy Highway™ in four dimensions: Technology, Market, People & Finance

2012 achievements
- 50 ventures nurtured in our Highway
- 8 start-ups created
10 Revenue Streams Towards Financial Sustainability

- **Partners cash contribution**
- **Monetization of equity**
- **Partners in-kind contribution**
- **Commercialization of educational contents**
- **EIT Grant**
- **Services to external customers**
- **Other public competitive grants**
- **IP royalties**
- **Donations**
- **ROI from direct commercialization of products**
Prospective sources

- Partners own contribution
- Donation & Alumni
- Service Sales
- Education assets valorisation
- Equity monetization
- IP Royalties
- Partners in-cash
- EIT contribution

What is KIC InnoEnergy? Financial sustainability
Prospective uses
I. What is KIC InnoEnergy?

II. Development of innovative products – Call for Proposals
How to participate / What is a KIC Innovation Project?

It is the transformation of available knowledge into new, **marketable products and services** related to the sustainable energy field that create a positive impact on the market and society.
How to participate / What is a KIC Innovation Project?

Transformation of knowledge into marketable product by:

- Decreasing energy cost
- Increasing security in relation to the resources holders
- Increasing intrinsic operational safety or reliability
- Reducing green house gas emissions
How to participate / What is a KIC Innovation Project?

It features:

- **5 years** or less for **time to market**
- **3 years** maximum **project duration**
- Technology Readiness Level (TRL) > 4

[Diagram showing Technology Readiness Levels (TRL) from TRL 1 to TRL 9]
How to participate / Who can apply?

- KIC InnoEnergy **formal, associate, project, or new partners**

- If a partner wants to be awarded a grant of more than €100k/year or lead a project, it should be or become an associate or formal partner

- Project or new partners can lead a project if they join a letter of their intent to become associate (or formal) partner
How to participate / Eligibility criteria

- Goal: develop products or services to be sold on the market

- At least one company **commercializing the products or service** must be involved since the beginning

- At least **one partner from a co-colocation center** must be involved in the project

- **At least one partner from a country outside** the co-location center must have a substantial role in the project

- Number of partners: **between 3 and 7**

- Topic falls within **one of KIC InnoEnergy’s 6 thematic fields**
How to participate / Quality criteria

- Business development (6)
- Risk analysis (5)
- Operational viability (4)
- Compliance KIC requirements (4)
- Financial viability (3)
How to participate / Roadmaps

- Renewable energies
- Smart grid and electric storage
- Clean Coal and gas technologies
- Intelligent energy-efficient buildings and cities
- Sustainable nuclear and renewable energy convergence
- Bio chemical fuels
New calls 2014

- H1: Feb 01 – May 31
- H2: Jul 01 – Nov 30

http://cip2014.kic-innoenergy.com/
Examples of activities / Project portfolio

**AFOSP**
Alternative floating platform designs for offshore wind turbines using low cost materials.

**MICROLUBGEAR**
New lubrication system for WT yaw and pitch gears, resulting in reduced O&M costs and higher reliability.

**KASTRION**
Advanced *Condition Monitoring System* that maximizes production time of offshore WT farms:
- Highly reliable failure forecasting
- No human interpretation required
- No threshold setting required
- No operational experience of turbine required

**NEPTUNE**
- Floating LIDAR equipment and software to reduce costs and risks for offshore wind farm site assessment.
- Energy resource and operational condition short term forecasting tools.
Examples of activities / Project portfolio

OTS
Ancillary products for offshore energy generation plants and test stations:
- Buoy and SW for ocean environmental impact assessment
- SW tool for managing O&M in offshore plants

HIWAVE
New *wave energy converter*, resulting in lower LCOE
- Lower CAPEX & OPEX
- Higher energy density
- More compact units
- Higher survivability

SYMBIOTRACKER
*Tracking* device and *sensors* for location of underwater HVAC cables in offshore energy plants and other applications.
www.kic-innoenergy.com

KIC InnoEnergy receives funding from the European Institute of Innovation and Technology (EIT)