



Contractual Private –Public Partnership on Energy-efficiency in Buildings (EeB cPPP)



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Juncker's Agenda and these cPPPs

- 1. A New Boost for Jobs, Growth and Investment**
- 2. A Connected Digital Single Market**
- 3. A Resilient Energy Union with a Forward-Looking Climate Change Policy**
- 4. A Deeper and Fairer Internal Market with a Strengthened Industrial Base**
5. A Deeper and Fairer Economic and Monetary Union
6. A Reasonable and Balanced Free Trade Agreement with the U.S.
7. An Area of Justice and Fundamental Rights Based on Mutual Trust
8. Towards a New Policy on Migration
- 9. A Stronger Global Actor**
10. A Union of Democratic Change

Five areas are addressed by FoF, EEB, EGVI & SPIRE

Horizon 2020: Key elements

- A single programme with three pillars: **societal challenges, industrial competitiveness and excellence in science**
- More emphasis on **innovation**
- More involvement of industry via the **industrial deployment of key enabling technologies**, and through **PPPs** - institutional and contractual
- **Simplified access** for all stakeholders

Why Public-Private Partnerships in Horizon 2020?

- To solve problems together with industry
- To strengthen European industrial leadership
- To facilitate prioritisation of R&I in line with the Europe 2020 objectives and industry needs
- To leverage research and innovation elements
- To strongly commit industry to joint objectives

Two types of PPPs in Horizon 2020

- **Contractual PPPs:** budget is only committed on an annual basis through H2020 calls in WPs, prepared on the basis of an industry-developed multi-annual roadmap and a contractual arrangement which specifies an indicative 7 years EU funding, and the commitments of industry to match this and to additional investments outside the PPP calls with high leverage factors, but not legally binding.
- **Joint Technology Initiatives:** like the contractual PPPs, but with ring fenced 7 year budget, the JU launching the calls (where derogations to H2020 are possible) and with the additional commitments of industry outside the calls inserted in the legislation.



Criteria in Article 25 of Horizon 2020

Public-private partnerships shall be identified in an open and transparent way based on all of the following criteria:

- a) the **added value** of action at Union level;
- b) the **scale of impact** on industrial competitiveness, job creation, sustainable growth and socio-economic issues, including societal challenges;
- c) the **long-term commitment** from all partners based on a shared vision and clearly defined objectives;
- d) the **scale of the resources** involved and the ability to **leverage** additional investments in research and innovation;
- e) a clear **definition of roles** for each of the partners and agreed **key performance indicators** over the period chosen.

Establishment of the contractual PPPs

- Based on ETPs and taking into account policy documents the Commission **identified possible areas** for a contractual PPP
- Stakeholders were invited to **prepare a PPP proposal**
- The private sector organised **stakeholder consultations**, in an open and transparent way, covering the whole value chain
- The private sector **delivered the proposal** to the Commission
- The Commission **checked compliance** with H2020 criteria for the PPPs (art. 25) with the help of high-level **external experts**
- **Commission decision** to launch the contractual PPP
- Signing of the **Contractual arrangement**

PPPs in Horizon 2020

Joint Technology Initiatives

- **Innovative Medicines (IMI)**
- **Clean Sky**
- **Single European Sky ATM Research (SESAR)**
- **Fuel Cells and Hydrogen (FCH)**
- **Electronic Components and Systems (ECSEL - old ARTEMIS + ENIAC)**

New:

- **Bio-based Industries (BBI)**
- **Shift2Rail**

Contractual PPPs

- **Factory of the Future (FoF)**
- **Energy-efficient Buildings (EeB)**
- **Green Vehicles (EGVI)**
- **Future internet (5G)**

New:

- **Sustainable Process Industry (SPIRE)**
- **Robotics**
- **Photonics**
- **High Performance Computing**
- **Big Data**

Energy-efficient Buildings PPP

- **Construction sector**
- Biggest industrial employer (14.6 million direct jobs)
- 95% of the 3.1 million enterprises are SMEs
- Turnover has decreased significantly during the crisis
- Buildings are linked to 40 % of total energy use and 1/3 of GHG in EU
- Very low replacement rate of the existing stock



Goals of the EeB PPP

- **Technologies enabling to speed up a reduction in energy and GHG**
 - Higher renovation rate of existing stock
 - At lower cost
- **Reduction of energy use by 50% compared to 2010**
- **Reduction of CO₂ by 80% compared to 2010**
- **Improving competitiveness of EU building industry**
 - Cost-effective , user-friendly, healthy, safe building products for smart cities



ENERGY-EFFICIENT BUILDINGS
Multi-annual roadmap for the contractual PPP under Horizon 2020

Coordination meetings of the Lead Services of the nine Contractual PPPs in Horizon 2020

- **3 meetings so far:** FEB, APR, OCT 2014
- **Harmonised approach to the implementation**
 - Common vision for all cPPPs in the EC
 - Rules for procedure for the Partnership Board
 - Openness and transparency issues
 - Monitoring of the progress and the impact of the cPPPs
- **Topics of common interest**
 - Public events organised under the different cPPPs
 - Potential co-operation among the cPPPs

PPP Governance: the Partnership Boards

- PB meetings: 3 for FoF, EeB, SPIRE and 1 for GV
- Main Outcomes:
 - Common understanding of the Contractual Arrangement, especially regarding the commitments from both sides
 - Agreed common Rules for Procedure for the PB, including provisions on openness and potential conflict of interest
 - Receiving Input for the preparation of Work Programmes
 - Monitoring of the progress and assessment of the impact of the cPPP (e.g. KPIs, leverage factor, additional investments)
 - Organisation of Impact Workshops and Brokerage events

Indicative EC funding for Horizon 2020

| H2020 funding | NMP RTD | ICT CNECT | Transport RTD | Energy RTD + ENER | Environment RTD | TOTAL M€ |
|--------------------------|--------------------|----------------------|--------------------------|------------------------------|----------------------------|---------------------|
| FoF | 700 | 450 | - | - | - | 1,150 |
| EeB | 400 | - | - | 75+75 | 50 | 600 |
| EGVI | 70 | 80 | 600 | - | - | 750 |
| SPIRE | 700 | - | - | 50+50 | 100 | 900 |
| TOTAL | 1870 | 530 | 600 | 250 | 150 | 3,400 |



Horizon 2020 Rules apply to the cPPPs

Types of action

- **RIA:** Research and innovation actions
- **IA:** Innovation actions
- **CSA:** Coordination and support actions

Minimum participation conditions

- At least three legal entities each established in a different Member State or an Associated Country, for collaborative actions (and minimum one entity for CSAs)

Evaluation criteria

- Excellence – Impact – Quality and efficiency of the action (similar with FP7)
- Thresholds are depending on the call conditions

Time to Grant shortened

- Maximum 8 months (5 to evaluation results and 3 to Grant Agreement)
- Grant preparation rather than negotiation (proposals are evaluated "as is" and not "what could be")

Simplified funding rates

FP7

| Maximum reimbursement rates | Research and technological development activities (*) | Demonstration activities | Other activities |
|---------------------------------|---|--------------------------|------------------|
| Network of excellence | 50% 75% (**) | | 100% |
| Collaborative project(***) | 50% 75% (**) | 50% | 100% |
| Coordination and support action | | | 100% (**) |

Horizon 2020

One project = One rate

- For all beneficiaries and all activities in the grant.
- Defined in the Work Programme: Up to 100 % of the eligible costs; but limited to a maximum of 70 % for innovation actions (non-profit organisations to a maximum of 100%).

Single indirect cost model

- 25% flat rate for all

EC funding for 2014

| H2020 funding | NMP RTD | ICT CNECT | Transport RTD | Energy RTD + ENER | Environment RTD | TOTAL M€ |
|--------------------------|--------------------|----------------------|--------------------------|------------------------------|----------------------------|---------------------|
| FoF | 86.6 | 34 | - | - | - | 120.6 |
| EeB | 49.5 | - | - | 8 | 5 | 62.5 |
| EGVI | 16 | - | 129 | - | - | 145 |
| SPIRE | 60.3 | - | - | 12 | 44 | 116.3 |
| TOTAL | 212.4 | 34 | 129 | 20 | 49 | 444.4 |

Indicative EC funding for 2015

| H2020 funding | NMP RTD | ICT CNECT | Transport RTD | Energy RTD + ENER | Environment RTD | TOTAL M€ |
|--------------------------|--------------------|----------------------|--------------------------|------------------------------|----------------------------|---------------------|
| FoF | 75.2 | 68 | - | - | - | 143.2 |
| EeB | 62.5 | - | - | 9 | - | 71.5 |
| EGVI | - | 20 | 10 | - | - | 30 |
| SPIRE | 75.2 | - | - | 12 | - | 87.2 |
| TOTAL | 212.9 | 88 | 10 | 21 | - | 331.9 |

EeB - Call topics for 2015

- **Total EC funding: €71.5 million**
 - NMP (62.5 M€)
4 topics IA
 - Energy (9 M€)
1 topic IA
- **Common deadline: 4 February 2015**
- **Areas covered include:** design tools for refurbishment; thermal energy storage; energy performance assessment; retrofitting of residential buildings; and design for new highly energy performing buildings



Energy Efficient Buildings Call Objectives

- "Re- boost the business of Buildings"
 - Ensure best use of **innovative, reliable** and **affordable technologies**
 - Drive creation of **High Tech. Building Industry** – Improve its **Competitiveness**
- More environment-friendly and competitive manufacturing:
 - Drastic **Reduction of energy consumption** (50 %) and **CO2 emissions** (90%) for new and renovated buildings
 - Less waste generated, minimize embodied energy of main materials
- R&I to integrate & demonstrate innovative technologies in:
 - **Materials** and components for energy savings, and generation, thermal distribution and **storage**, systems, use of renewable energy sources, **efficient management** buildings systems, **tools for simulation** and **prediction**.

EeB PPP in Work Programme 2015

EeB 5 : Innovative design tools for refurbishment at building and district level

EeB 6 : Integrated solutions of thermal energy storage for building applications

EeB 7 : New tools and methodologies to reduce the gap between predicted and actual energy performances at the level of buildings and blocks of buildings

EeB 8 : Integrated approach to retrofitting of residential buildings

EE2-2015 : Building design for new highly energy performing buildings



HORIZON 2020

Thank you for your attention

More information:

HORIZON 2020:

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

Contractual Public-Private Partnerships in research and innovation:

http://ec.europa.eu/research/industrial_technologies/ppp-in-research_en.html

Factories of the Future PPP

- **Manufacturing sector**
 - 23% of European jobs (over 30 million)
 - The vast majority are in SMEs
 - Manufacturing gives 80% of EU exports
 - Complex R&D-intensive activity
 - R&D costs and risks are high
- **Technological capabilities and supply chains are dispersed across the EU**
- **Critical mass of stakeholders at EU level is needed to go beyond the capacity of individual Member States**



Goals of the FoF PPP

- **Strengthen EU industrial competitiveness and sustainability**
- **Reduce energy consumption up to 30%**
- **Reduce use of material up to 20%**
- **20% less waste generation**
- **Increase the share of manufacturing in EU GDP to 20% by 2020**



**FACTORIES OF
THE FUTURE** *Multi-annual roadmap
for the contractual PPP
under Horizon 2020*

Green Vehicles PPP

- **Automotive industry**
 - 12 million direct jobs and € 500 billion/year in turnover
 - The vehicle market is facing a lasting crisis in Europe
- **New green vehicles**
 - higher energy efficiency
 - alternative powertrains
- **Technological complexity**
- **Initial low market acceptance**
- **Low return on investment**



Goals of the Green Vehicles PPP

- **Improvement of energy transport efficiency by 50% by from 2010 to 2030 including:**
 - 80% in energy efficiency of urban vehicles
 - 40% in energy efficiency long distance freight transport
- **Deployment of alternative powertrains**
- **Less pollution and CO₂ emissions**



EGVI
European Green
Vehicles Initiative

Sustainable Process Industry PPP

- **Process industries**

- Eight EU industrial sectors: chemical, steel, cement, ceramics, minerals, non-ferrous metals, industrial water and process engineering

- 6.8 million jobs in 450,000 enterprises

- Turnover of over €1,600 billion/year

- At the core of the value chains and highly dependent on resources

- **Striving for competitiveness and sustainability**

- **High risks and long-term investments**

- **Need for co-operation along the value chains**



Goals of the SPIRE PPP

- Integration and demonstration of innovative processes and systems for increased resource efficiency
- Reduction of fossil energy intensity up to 30% by 2030
- Reduction of up to 20% in non-renewable, primary raw material intensity by 2030
- Reduction in GHG of up to 40% by 2030 compared to 1999 levels



**SUSTAINABLE
PROCESS
INDUSTRY**

*Multi-annual roadmap
for the contractual PPP
under Horizon 2020*

Prepared by **SPIRE** Sustainable Process Industry through
Resource and Energy Efficiency



FoF - Call topics for 2015

- **Total EC funding: €143.2 million**
- NMP (75.2 M€)
 - **3 topics RIA**
 - **2 topics IA**
- ICT (68 M€)
 - **1 topic RIA & CSA (32 M€)**
 - **1 topic IA & CSA (36 M€)**
- **Common deadline: 4 February 2015**
- **Areas covered include:** modelling and simulation; ICT for manufacturing SMEs; manufacturing of personalised products; flexible production; joining & assembly processes; re-use & re-manufacturing; and integrated design & management of production

EGVI - Call topics for 2015

- **Total EC funding: €30 million**
 - Transport (10 M€)
1 topic IA
 - Transport-DG CNECT (20 M€)
1 topic RIA
- **Common deadline: 15 October 2015**
- **Areas covered include:** powertrain control for heavy-duty vehicles; and electric vehicles performance and integration into the transport system and the grid



SPIRE - Call topics for 2015

- **Total EC funding: €87.2 million**
- NMP (75.2 M€) – deadline 4 February 2015
 - 2 topic RIA**
 - 2 topics IA**
- Energy (12 M€)
 - 1 topic IA (8 M€) – deadline 4 February 2015**
 - 1 topic RIA (est. 4 M€) – 2 stages: deadlines 3-9-2014/5-5-2015**
- **Areas covered include:** process intensification; energy and resource management systems; metal & minerals recovery; solids handling; heat recovery; and solar heating for industrial processes