



Fundação para a Ciência e a Tecnologia

MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

Oportunidades de Financiamento

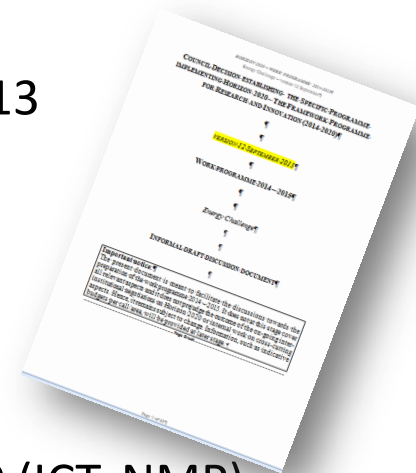
**Tópicos nos próximos concursos do Horizonte 2020 -
Energia**

Hélder Gonçalves

24 de Outubro de 2014

Horizonte 2020 - Programa de Trabalhos – Informação Geral

- **Data de lançamento dos concursos** : 11 de Dezembro de 2013
- Programa de Trabalhos **Bianual** (2014 /2015)
- Baseado numa abordagem **integrada e por desafios**
- Abordagem Transversal com outros partes do Horizonte 2020 (ICT, NMP)
- Projetos em colaboração (min. 3 entidades de 3 Estados Membros ou Países associados)
- **Avaliação das Calls** – single-stage & two stage evaluations



Horizonte 2020 – abordagem baseada em desafios

- A abordagem aos Desafios Societais deve basear-se em **consórcios multidisciplinares** que agreguem **diferentes atores numa abordagem holística e integradora**, para dar solução a um problema identificado pela Comissão Europeia
- *Só é possível submeter uma ideia que esteja enquadrada num tópico aberto a concurso*
- A cooperação entre os vários atores da cadeia de valor potencia o sucesso e o *uptake* dos resultados contribuindo desta forma para um **maior impacto científico, económico, e social**



Networking!



Programa de Trabalhos – Estrutura dos Tópicos

Referência do tópico
e ano de
financiamento

LCE 17 – 2015: Highly flexible and efficient fossil fuel power plants

Specific Challenge:

Estabelece o contexto, os problemas a resolver, a necessidade da intervenção

Specific challenge

The share of energy produced from renewable resources is growing but output of wind and solar power is highly variable, and depends of factors such as weather conditions and time of day. With this growing share of renewable power, in particular when having priority access to the grid, fossil fuel power plants will have to increasingly shift their role from providing base-load power to providing fluctuating back-up power to meet unpredictable and short-noticed demand peaks, in order to control and stabilise the grid. Plants should be able to run both at the lowest part load possible at the highest possible efficiency. Moreover, plants will be required to operate across the entire load range with high load-change velocities, and even operate in start/stop mode with full turndown and very fast re-start, all at minimal fuel consumption. This forces base-load plants to operate closer to their design limits and through significantly more thermal cycles, leading to increased rate of wear on plant components. Operational flexibility therefore presents a significant challenge for fossil fuel power (and CHP) plants.

Scope:

Delineação do problema, especificação do enfoque e das fronteiras da ação, mas sem detalhe sobre as possíveis abordagens

Scope

Focus on progressing solutions that already reached TRL 3 to TRL 4-6 (please see part 2 of the General Annexes) and offer the highest potential for full integration into an energy system with ever higher shares of renewable energies. Solutions with lowest greenhouse gas emissions per energy unit are preferred. Collaboration with power plant operators and Transmission System Operators (TSOs) is strongly encouraged.

The Commission considers that proposals requesting a contribution from the EU of between EUR 3 to 6 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected impact

Projects should lead to new and cost-effective solutions for highly flexible new and existing fossil fuel power plants (including those using dispatchable renewable fuels), capable of meeting demand peaks and renewable output reductions, at minimal fuel consumption and emissions, while mitigating the effects of cycling operation to avoid excessive service life expenditure, and not impeding the potential CO₂ capture readiness of the power plants.

Type of action

Research & Innovation Actions

The conditions related to this topic are provided at the end of this call and in the General Annexes.

Expected impact:

Descrição dos elementos-chave a alcançar no desafio em questão

Programa Especifico do **Desafio Societal Energia** no Horizonte 2020

OBJECTIVO: *Evoluir para um sistema energético seguro, sustentável e competitivo, face a recursos cada vez mais escassos, a necessidades energéticas crescentes e às alterações climáticas.*

- **Redução do consumo de energia** e da pegada de carbono mediante uma utilização inteligente e sustentável
- Aprovisionamento de **eletricidade hipocarbónica** e a baixo custo
- **Combustíveis alternativos** e fontes de energia móveis
- Uma **rede europeia** de eletricidade única e inteligente
- Novos conhecimentos e tecnologias
- Processo decisório sólido e envolvimento do público
- Aceitação pelo mercado das inovações e capacitação dos mercados e dos consumidores



Contexto Político – Estratégias e Iniciativas Europeias de apoio ao desafio Energia no Horizonte 2020



- *Climate and Energy Package*

- *Strategic Energy Technology Plan (SET-Plan) | Energy technologies and Innovation Communication*

- *Energy Roadmap*

- *European Innovation Partnership (EIP) - Smart Cities and Communities → forte influência na definição de prioridades de I&I no horizonte 2020*

*SC 3 –
Secure,
clean and
Efficiency
Energy*

Implementação

Horizonte 2020 – Programa de Trabalhos Energia 2015

ENERGY EFFICIENCY – 16 TOPICS
Call: *H2020-EE-2015 - 98,15 M€*



SMART CITIES AND COMMUNITIES – 2 TOPICS
Call: *H2020-SCC-2015 – 107,18 M€*



LOW CARBON ENERGY – 15 TOPICS
Call: *H2020-EE-2015 - 382,67 M€*

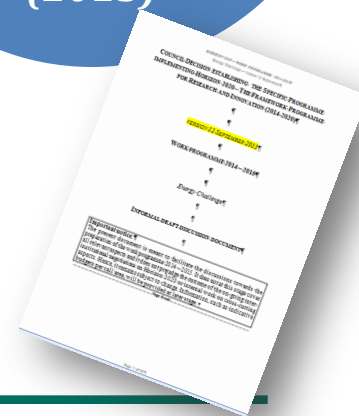


SMES & FAST TRACK INNOVATION – 2 TÓPICOS
Call: *H2020-SIE-2015 - 50,96 M€*



*Work Programme
2014-2015
– Secure, clean
and Efficiency
Energy*

*638,96 M€
(2015)*



Call Energy Efficiency | *deadline: 04/02/2015 /04/06/2015*



A – BUILDINGS AND CONSUMERS - reduzir o consumo de energia nos edifícios através de: aumentar taxa, qualidade e eficácia da renovação dos edifícios , comportamento dos consumidores (gestão consumo, smart metering) – **7 tópicos**



B - HEATING AND COOLING - Sistemas de aquecimento e arrefecimento renováveis, com soluções integradas (ao nível da conceção, tecnologia, construção e mudança comportamental) – **2 tópicos**



C – INDUSTRY AND PRODUCTS - Tecnologias de eficiência energética em termos de processos e da industria transformadora - **4 tópicos**



D – FINANCE FOR SUSTAINABLE ENERGY - Criação de instrumentos financeiros e parcerias com a banca para apoio de serviços/projetos inovadores de eficiência energética – **3 tópicos**



Energy Efficiency - Buildings & Consumers (7 tópicos)

EE 2 – 2015: Building design for new highly energy performing buildings

- *Scope: Projects should focus on development and demonstration of solutions which reduce significantly the cost of new buildings towards “nearly zero-energy”, Demonstration projects*
- *Impact: Increase the number of 'nearly zero-energy' buildings.*

PPP EEB

IA | Contr. CE: 3-5 M€/projeto | TRL 5-7

EE 5 – 2015: Increasing energy performance of existing buildings ... and creating a market for deep renovation

- *Scope: Development, testing and/or implementation of regulations, decision-making tools for renovation strategies, quality standards and enabling conditions to finance deep renovation of buildings, etc.*
- *Impact: e.g. renovation of existing buildings towards high energy performance, should result in energy savings of at least 25 GWh/year per million EUR of EU support*

CSA | Contr. CE: 1.5-2M€/projeto



Energy Efficiency - Buildings & Consumers

EE 6 – 2015: Demand response in blocks of buildings

- **Scope:** Cost effective, real time optimisation of **energy demand**, storage and supply in blocks of buildings with the help of intelligent energy management systems.
- **Impact:** Demonstrate demand response at the level of blocks of buildings, quantify energy, cost saving, etc.

IA | Contr. CE: 3-5M€/projeto | TRL 6-7

EE 7 – 2015: Enhancing the capacity of public authorities to plan and implement sustainable energy policies and measures

- **Scope:** Proposals **empowering public authorities to develop, finance and implement ambitious sustainable energy policies** and plans (for instance under the Covenant of Mayors initiative), on the basis of reliable data and analyses. Public actors should be encouraged to look at sectors with high energy saving potential such as **buildings, industry and urban mobility**.
- **Impact:** Impacts must be measured in terms of number of public officers influenced and number of new or improved policies and plans.

CSA | Contr. CE: 1,5-2M€/projeto



Energy Efficiency - Buildings & Consumers

EE 9 - 2015: Empowering stakeholders to assist public authorities in the definition and implementation of sustainable energy policies and measures

- **Scope:** Projects to target specific actors among **stakeholders** (utilities, industry, financing institutions, non-gov. org., consumer associations, interest groups, trade unions...). Large scale capacity building or engagement activities.
- **Impact:** e.g. influence hundreds of stakeholders playing a key role in the definition and successful implementation of national, regional or local policies.

CSA | Contr. CE: 1,5-2M€/projeto



Energy Efficiency - Buildings & Consumers

EE 10 – 2015: Consumer engagement for sustainable energy

- **Scope:** Reducing market barriers through changing behaviour of consumers using market segmentation and focus on "action"
- **Impact:** e.g. each million € of EU support expected to deliver annual energy savings of around 10% for at least 5,000 households (around 8 GWh/year of savings).

CSA | Contr. CE: 1-1,5M€/projeto

EE 11 – 2015: New ICT-based solutions for EE.

- **Scope:** The focus should be on the creation of IT ecosystems that would develop services and applications. Projects to target specific actors among stakeholders (utilities, industry, financing institutions, non-gov. org., consumer associations, interest groups, trade unions...). Large scale capacity building or engagement activities.
- **Impact:** e.g. influence hundreds of stakeholders playing a key role in the definition and successful implementation of national, regional or local policies.

RIA | Contr. CE: 1,5-2M€/projeto

- Research & Innovation Actions
-



Energy Efficiency - Heating & Cooling (2 tópicos)

EE 13 – 2015: Technology for district heating and cooling

- **Scope:** Develop, demonstrate and deploy a new generation of highly efficient, intelligent district cooling and heating systems with renewables. Reduce distribution losses. Develop optimisation, control, metering, planning and modelling tools. New solutions for low temperature heat recovery and recirculation.
- **Impact:** e.g. reduce the energy consumption of space and water heating by 30 to 50% compared to today's level.

RIA | Contr. CE: 1,5-2M€/projeto | TRL 4-6

EE 14 – 2015: Removing market barriers to the uptake of efficient heating and cooling solutions

- **Scope:** Innovative measures to accelerate the replacement of old, inefficient pace heaters and packaged cooling systems with products having A +++ to A+ energy labels. Inspection of heating and cooling systems.
- **Impact:** e.g. significant impacts should also be measured in terms of investment made by stakeholders in sustainable energy.

CSA | Contr. CE: 1,5-2M€/projeto



Energy Efficiency - Industry & Products (4 tópicos)

EE 15 – 2015: Ensuring effective implementation of EU product efficiency legislation

- *Scope: Building up monitoring, **verification and enforcement of the EU's related products policy.***
- *Impact: e.g. every million Euro of EU support is expected to generate at least 15 GWh/year of energy losses avoided from non-compliance.*

CSA| Contr. CE: 1,5-2M€/projeto

EE 16 - 2015: Organisational innovation to increase energy efficiency in the industry

- *Scope: Removing market barriers like lack of expertise and information on **energy management in industry.** Uptake of cross-cutting innovative technologies (**focus on motor driven systems, steam/hot water generation-75%**). Industrial systems efficiency benchmarking. Sector specific technology pathways. **Energy management in SMEs and industry.** Human and organisational change.*
- *Impact: e.g. every million Euro of EU support is expected to result in savings of at least 25 GWh per year.*

CSA| Contr. CE: 1,5-2M€/projeto



Energy Efficiency - Industry & Products

EE 17 – 2015: Driving energy innovation through large buyer groups

- *Scope: Actions where groups of buyers can set higher-than-available performance levels which **manufacturers of sustainable energy products are called to meet through product innovation.***
- *Impact: New energy-using or -producing products with at least **25% better performance than the best available products***

CSA | Contr. CE: 1,5-2M€/projeto

EE 18 - 2015: New technologies for utilization of heat recovery in large industrial systems...,

- *Scope: Research and demonstration of **technologies to recover waste heat** from industrial processes. Validation at real production conditions with demo sites, testing in industrial facilities.*
- *Impact: e.g. viable solutions and technologies allowing recovering at least 15% of process heat, etc*

RIA | Contr. CE: 3-4M€/projeto | TRL4-7



Energy Efficiency - Finance for Sustainable energy (3)

EE 19 – 2015: Improving the financeability and attractiveness of sustainable energy investments

CSA | Contr. CE: ,5-2M€/projeto

EE 20 - 2015: Project development assistance for innovative, bankable and aggregated sustainable energy investment schemes and projects

CSA | Contr. CE: 0,5-2M€/projeto

EE 21 – 2015: Development and market roll-out of innovative energy services and financial schemes for sustainable energy

CSA | Contr. CE: 1-1,5M€/projeto

Call Energy Efficiency: Deadlines



Topics*	2015
EE2, EE18	04/02/2015
EE5, EE6, EE7, EE9, EE10, EE11, EE13, EE14, EE15, EE16, EE17, EE19, EE20, EE21	04/06/2015

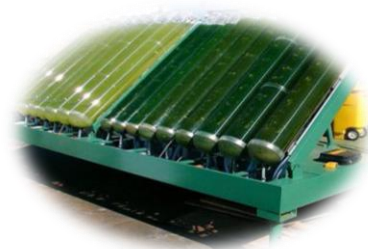
Call Competitive Low Carbon Energy | deadline: 05/05/2015)



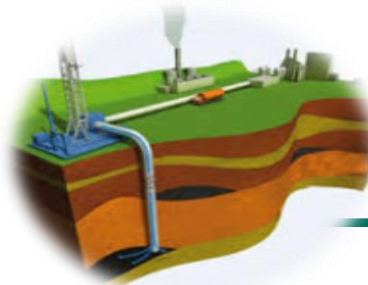
RENEWABLE ELECTRICITY AND HEATING/COOLING - redução dos custos da produção de energia renováveis, eficiência dos recursos e impacto ambiental, cadeia de oferta e processos de fabrico competitivos – **3 tópicos**



MODERNISING THE SINGLE EUROPEAN ELECTRICITY GRID & STORAGE - Rede elétrica europeia inteligente - **4 tópicos**



SUSTAINABLE BIOFUELS AND ALTERNATIVE FUELS - Desenvolvimento de biocombustíveis avançados, e combustíveis alternativos – **3 tópicos**



ENABLING THE SUSTAINABLE USE OF FOSSIL - Descarbonização do sector energético – **3 tópicos**

Low Carbon Energy - Renewable electricity and heating/cooling (3)

LCE 3 – 2015: Demonstration of renewable electricity and heating/cooling

- **Specific Challenges:** *Photovoltaics, CSP, Wind Energy, Ocean Energy, Heating and Cooling, Deep Geothermal*
- **Scope:** *Proposals should address one or more technologies-specific challenges TRL 6-7. Technical issues, synergies between technologies, socio-economic and environmental aspects (incl. public acceptance, business cases, pre-normative and legal issues, pollution and recycling).*
- **Impact:** *increase technology performance, reducing life-cycle environment impact, improving EU energy security, reducing renewable energy technologies installation time and costs, etc*

IA | Contr. CE: 5-20 M€/projeto | TRL 6-7

LCE 4 - 2015: Market uptake of existing and emerging renewable electricity, heating and cooling technologies

- **Scope:** *Ensuring sustained public acceptance, ensuring speedy and user friendly permitting procedures, energy policies, codes and legislations, regulation, facilitating the deployment of improved business models and innovative financing schemes for mobilising investments*
- **Impact:** *substantial and measurable reductions in the transaction costs for project developers*

CSA Contr. CE: 1-2 M€/projeto



Low Carbon Energy – Electricity Grids

LCE 5 – 2015: Innovation and technologies for the development of meshed off-shore grids

- **Scope:** *first phase for deployment of innovative components of interoperable meshed off-shore HVDC network technologies, services and tools architectures. It is expected that the projects will cover TRL6 or 7, bringing them to TRL 8.*
- **Impact:** *accelerating the deployment of meshed HVDC off-shore grids, ensuring plug-and-play compatibility ; facilitating the efficient connection of off-shore wind resources to on-shore load*

IA | Contr. CE: 30-40 M€/projeto | TRL 6-7

LCE 6 - 2015: Transmission grid and wholesale market

- **Scope:** *Integrating and validating solutions to grid challenges, concentrating on field demonstration of system integration, up-scaling at industrial scale and supporting R&D. Preparing first replication of the solutions, appropriate market models, business cases, user and general public acceptance, regulatory, market up-take, social, environmental and resource efficiency aspects should be included*
- **Impact:** *substantial and measurable reductions in the transaction costs for project developers*

IA /RIA | Contr. CE: 12-15 M€/projeto



Low Carbon Energy – Grids & Storage

LCE 23 – 2015: Supporting the community in deploying a common framework for measuring the energy and environmental efficiency of the ICT-sector

- **Scope:** *The action will set up a number of support services (notably a helpdesk service, online support, translation of important documents) to facilitate/enable a fast and efficient uptake by the community (particularly by smaller organisations, notably SMEs) of the above framework.*
- **Impact:** *fast and efficient uptake of such methodologies will lead, among others, to transparency in measuring the environmental effect of the ICT-sector*

CSA

LCE 9 – 2015: Large Scale Energy Storage

- **Scope:** *The activities must address the interfaces for **integrating storage in grid management**. Demonstration proposals should include market uptake measures for integrating energy storage in the electricity network and power system management.*
- **Impact:** *wider use of storage technologies in the energy system, provision of services for increased efficiencies, transmission grid reinforcements, integration*

IA | Contr. CE: 16-20 M€/projeto | TRL 6-7



Low Carbon Energy – Biofuels and alternative fuels

LCE 12 –2015: Demonstrating advanced biofuel technologies

- **Scope:** Proving that ***advanced biofuels and bioenergy carriers technologies***, are technically viable, environmentally and socially sustainable, and potentially cost-competitive at commercial scale; Developing logistic systems for a sound, safe and sustainable feedstock supply.
- **Impact:** testing advanced fuel technologies at large industrial scale to obtain data and experience require for a first-of-a-kind, commercial scale industrial demo projet

IA | Contr. CE: 5-20 M€/projeto | TRL 6-7

LCE 14 –2015: Market uptake of existing and emerging sustainable bioenergy

- **Scope:** Encouraging the ***EU farmers and foresters to produce also energy*** and energy intermediaries; Setting up or strengthening sustainable local bioenergy supply chains ; Development of methodologies for the traceability of biomass feedstocks.
- **Impact:**

CSA | Contr. CE: 1-2M€/projeto



Supporting the development of a European research area in the field of energy & Social, environmental and economic aspects of the energy system

LCE 19 – 2015: Supporting coordination of national R&D activities

- **Scope:** *The transfer of knowledge among participants and other dissemination activities, activities to foster the use of research outcomes by industry; The coordination of call for proposals of at least three Member States, for instance, through support to networking activities of public funding bodies.*
- **Impact:** *Reinforcing the European dimension of multinational projects; Increasing coordination and alignment of national research and innovation programmes.*

CSA | Contr. CE: 0,1-0,5 M€/projeto

LCE 21 – 2015: Modelling and analysing the energy system, its transformation and impacts

- **Scope:** *Comparative assessment of the impacts and the sustainability performance of all relevant energy technologies, analysing and modelling the impacts of technological development and innovation on the energy-system and its dynamics.*
- **Impact:** *Support to the scientific underpinning for the implementation of the SET-Plan by strengthening the knowledge base for decision-making*

RIA | Contr. CE: 2-4 M€/projeto

Call Low Carbon Energy: Deadlines



Topics*	2015
LCE3, LCE12, LCE19, LCE21 LCE4, LCE5, LCE6, LCE9, LCE14	05/05/2015

Call Smart Cities and Communities (call deadline: 05/05/2015)

- ✓ Acelerar a implantação de **tecnologias inovadoras**, soluções organizacionais e económicas para aumentar significativamente os **recursos e a eficiência energética**, melhorar a **sustentabilidade dos transportes urbanos** e reduzir drasticamente as emissões de gases de efeito estufa em áreas urbanas.



Foco / atividades principais:

- ✓ Investigação e desenvolvimento de soluções tecnológicas avançadas
 - ✓ Validação de novos casos de negócios e modelos de financiamento, standardização, escala e replicabilidade das soluções, a aceitação dos utilizadores e compromisso
 - ✓ Intensificação através de parceiras estabelecidas na EIP Smart Cities: *EIP Smart Cities* - <http://ec.europa.eu/eip/smartcities>
-

Call Smart Cities and Communities

SCC 1 – 2015: Smart Cities and Communities solutions integrating energy, transport, ICT sectors through **lighthouse (large scale demonstration - first of the kind)**

▪ *Scope (...) creating partnerships between industries, academics and cities, empower citizens and ensure the replicability of the solutions. Therefore each project should: (...) include **industry, city planning authorities** which should also reflect the view of the consumer organisations, research community, **local Small and Medium Size Companies (SMEs)**.*

IA | Contr. CE: 18-25M€/projeto

SCC 3 – 2015 Development of system standards for smart cities and communities solutions

▪ *Scope (...) through standardisation the solutions identified by smart cities and communities can envisage costs reductions. (...) industries cities and communities (...) in cooperation with the European Standardisation Organisations (...) and Standard Developing Organisations (SDOs).*

CSA | Contr. CE: 0,5 - 1 M€/projeto

Call Smart cities & communities: Deadlines



Topics*	2015
SCC1, SCC3	05/05/2015

Participação Portuguesa – Primeiros Resultados apurados das call de Energia (~44% do orçamento a concurso)

DS3 Energia		
Propostas Apresentadas UE		254
Propostas Apresentadas PT		40
Propostas Coordenadas PT		5
Projectos Aprovados UE		37
Projectos Aprovados PT		13
Projectos Coordenados PT		1
Número de Participações PT em <i>(proj. aprovados)</i>	Ensino Superior	1
	Empresas	7
	Centros de Investigação	8
	Outros	5
Total		21
Financiamento UE (MEuro)		234,61
Financiamento PT (MEuros)		10,11
Taxa de Sucesso UE		14,6%
Taxa de Sucesso PT		32,5%

Percentagem de financiamento para Portugal em cada tema	4,31%
---	-------

Energy Efficiency Call: H2020-EE-2014-1-PPP

- **MORE-CONNECT (NL)** – U Minho & DARKGLOBE ~ 379K€

Low Carbon Energy Call: H2020-LCE-2014

- **C- Energy 2020 (IT)** - FCT ~44K€
- **AnyPlace (PT)** – INESC Porto, EFACEC, Bosh ~ 1M€
- **DemoWind (UK)** – FCT ~492 K€
- **ERANET Smart Cities and Communities (AT)** – 500 K€
- **ERANET SmartGridsPlus (AT)** – 728 K€
- **Nobel Grid (ES)** – Unninoa ~470K€
- **RICORE (UK)** – WAVEC ~196 K€
- **SENSIBLE (DE)** – EDP Labelec, INESC PORTO, Siemens ~ 2.9M€
- **SmarterEMC2 (EL)** – INESCPORITO ~275 K€
- **UPGRID (ES)** – EDP Distribuição, INESCPORITO, Withus ~ 2.5M€
- **ProgressHeat (AT)** – INEGI ~90 K€

Smart Cities and Communities Call: H2020- SCC-2014

- **GrowSmater (SE)** – CM Porto ~88 K€

Onde nascem os tópicos de investigação?

European Technology Platforms (ETPs)

- TP Wind
- EPIA (PV)
- ESTELA (Solar CSP)
- TSO & DSOs Association (Smart Grids)
- EBTP (Biofuels)
- ZEP (CCS)
- Smart Cities (Smart Cities Stakeholders Platform)
- Construction (ECTP)

Horizon 2020 Advisory Groups

- SC3 e SC4 representation

EU Initiatives

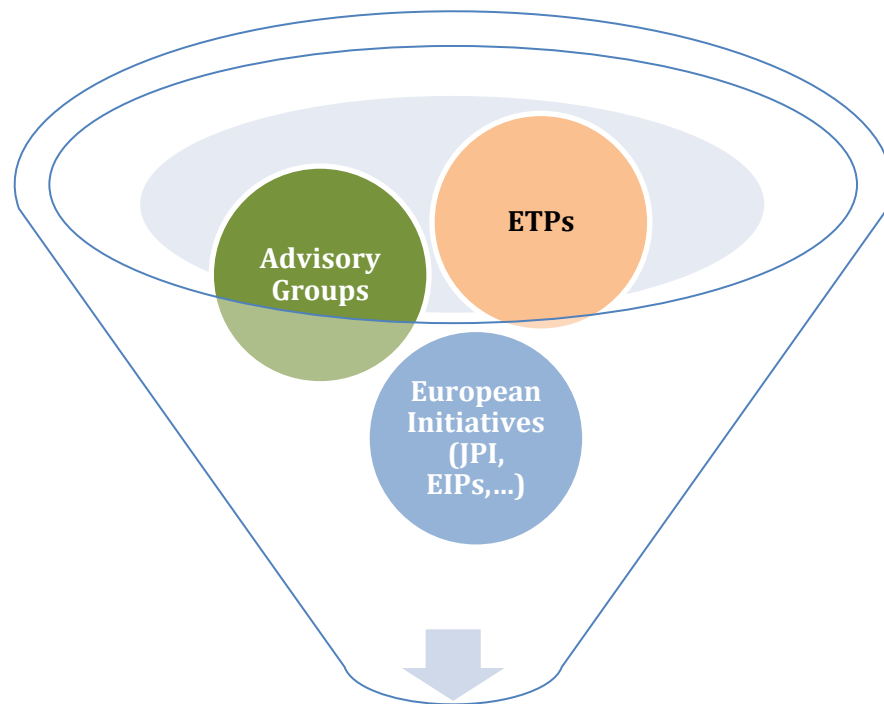
- European Innovation Partnerships (EIPs)
EIP Smart Cities and Communities
- Strategic Energy Technology Plan – SET-Plan

Policy DGs (Climate & Energy Package)

to support strategies and policies

FP financed projects

Gaps and urgent needs identified in past financed projects



Draft Work Programme

Scoping Paper – Documento estratégico de apoio ao próximo programa de trabalho 2016-2017

Orientação estratégica ->SET-Plan Integrated roadmap

- ❑ **Consumidor com um papel ativo no sistema de energia**
 - Controlo do consumo energético
 - Escolha das fontes de energia
- ❑ **Aumento da eficiência energética em todo o sistema de energia**
 - Áreas: aquecimento, arrefecimento, edifícios, indústria, PMEs
 - TIC para envolvimento do consumidor
 - Grandes data centres serão alvo de especial atenção
- ❑ **Otimização do sistema de energia**
 - Modernizar redes de energia europeias (eletricidade, gás, calor)
 - Tirar partido do potencial do armazenamento de energia
 - Aumentar flexibilidade, segurança, resiliência e relação custo-benefício
- ❑ **Alimentação elétrica segura, com boa relação custo-benefício, limpa e competitiva**
 - Descarbonização dos processos de produção de energia e dos transportes
 - Cadeia de alimentação economicamente sustentável

Scoping Paper – Documento estratégico de apoio ao próximo programa de trabalho 2016-2017

Possíveis novidades em análise...



Energy Efficiency

- Cadeia Agro-alimentar: aquecimento, arrefecimento, congelação, processo de produção ou impacto ambiental do consumo energético (DS2)



Competitive Low-Carbon Energy

- Sistemas de energia inteligentes – em colaboração com TIC (*Internet of Things*, *Cyber security* e *Big data*)



Smart Cities and Communities with Nature-based Solutions

- DS2: agricultura urbana e peri-urbana
- DS5: gestão de resíduos e água, soluções viáveis económicas, sociais e ambientais para os desafios que as cidades atuais enfrentam

Próximos Eventos

- Sessões Horizonte 2020 promovidas pelo GPPQ – consulte o nosso calendário de eventos - www.gppq.fct.pt
- Conferencia SET-Plan – Roma, 10 e 11 de Dezembro de 2014 <http://www.setplan2014.it/>

The screenshot shows the GPPQ website's event calendar for Horizon 2020. The page is titled 'Cabinete de Promoção do Programa Quadro de I&D' and features a navigation menu with options like 'Horizonte 2020', 'Eventos', 'Notícias', 'Ajuda', 'Organizadores', and 'GPPQ'. The main content area is titled 'Horizonte 2020' and includes a section for 'Sessões de Informação Calls H2020 para 2015 Setembro e Outubro'. A calendar grid is visible, showing dates from August to October. The calendar is color-coded by event type, with blue for information sessions and red for other events. A sidebar on the right lists various events, including 'Conferência SET-Plan' and 'Workshop SET-Plan'.

The screenshot shows the website for the SET 20 Plan 2014 conference. The page features a header with navigation links: 'HOME', 'ABOUT', 'CONFERENCE', 'VIDEO', 'MEDIA', 'PRACTICAL', 'CONTACT US', and 'PARTICIPANT AREA'. The main content area is titled 'SET 20 Plan 2014' and includes the subtitle 'Driving the energy transition together'. A prominent green button labeled 'REGISTER NOW' is visible. Below this, there is a section for 'WHEN' (10-11 December, Starting Time: 09:00 AM) and 'WHERE' (Rome, Italy, Auditorium Antoniano). The background of the page shows a panoramic view of Rome.

Contactos

Delegado Nacional ao tema Energia do Horizonte 2020

Hélder Gonçalves (helder.goncalves@lneg.pt) - LNEG

Pontos de Contactos Nacionais

Ana Raposo (ana.raposo@fct.pt) - FCT

Eunice Ribeiro (eunice.ribeiro@fct.pt) - FCT

Ricardo Migueis (ricardo.migueis@fct.pt) - FCT

Isabel Soares (isabel.soares@dgeg.pt) - DGEG

FCT

Fundação para a Ciência e a Tecnologia

MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

EXCELÊNCIA | CONHECIMENTO | IMPACTO

www.fct.pt