



TECHNOLOGICKÉ  
CENTRUM AV ČR

## Specifika společenské výzvy 3 – Zajištěná, čistá a účinná energie

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4. 2. 2020

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## Východiska a cíle (1)

- **The European Green Deal** – sdělení Evropské komise COM(2019) 640 final

[https://ec.europa.eu/info/files/communication-european-green-deal\\_en](https://ec.europa.eu/info/files/communication-european-green-deal_en)

- Sustainable Europe Investment Plan; European Green Deal Investment Plan - sdělení Evropské komise COM(2020) 21 final

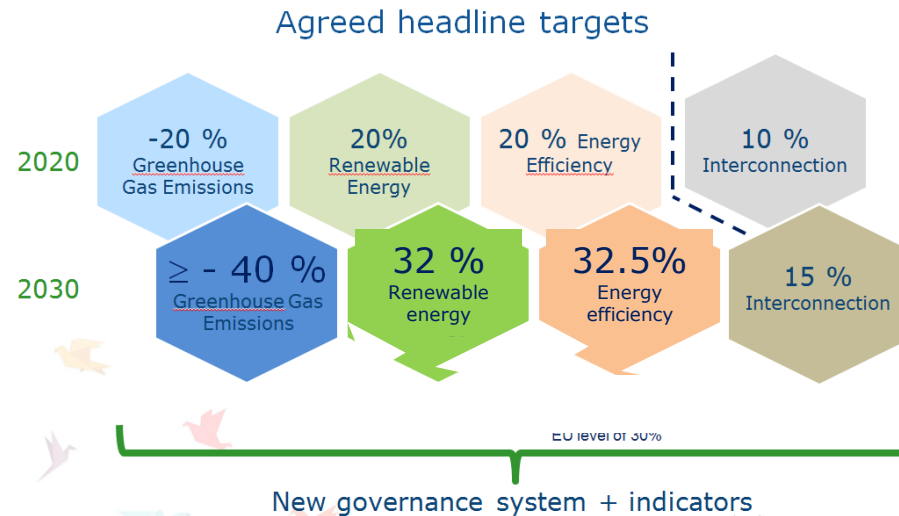
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2020:21:FIN>

Str. 7 – do konce H2020 další 1 mld. € na „Green Deal Priorities“



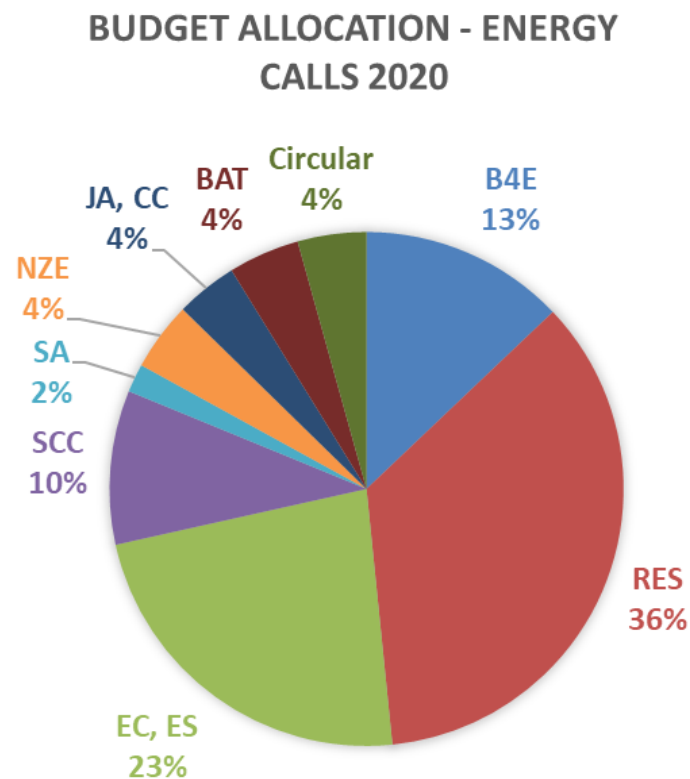
## Východiska a cíle (2) Clean Energy for all Europeans (zdroj: EK)

- "Clean Energy for all Europeans"
  - *Putting energy efficiency first*
  - *Demonstrating global leadership in renewables*
  - *Delivering a fair deal for consumers*



## WP 2018 – 2020, verze z 2. 7. 2019 část ENERGY: rozpočet pro výzvy 2020

- Buildings in energy transition;  
B4E
- Renewable energy; RES
- Energy system and consumer;  
EC, ES
- Smart Cities and Communities;  
SCC
- Smart Airports; SA
- Decarbonisation of fossil fuels;  
NZE
- Cross-cutting issues; JA, CC
- Batteries call; BAT
- Circular economy call



## Pracovní program 2018 – 2020 verze z 2. 7. 2019

Ve většině výzev předem stanovená témata – top-down přístup

- **Úvod** – politický kontext programu; odkazy na související dokumenty; cíle
  - **Výzva** – popis jednotlivých témat (topics):
    - Specific Challenge – řešený problém
    - Scope – rozsah (oblast vymezená pro řešení problému)
    - Expected Impact – čeho je třeba dosáhnout
    - Type of Action – typ projektu (RIA, IA, CSA atd. – má dopad na financování projektu)
  - **Podmínky výzvy** – otevření výzvy, uzávěrky, finance pro jednotlivá témata; doplňující podmínky!!!
  - OTHER ACTIONS – např. tendry
  - **Bude aktualizován WP – zrušení ES-12; nově bude ES-13 s uzávěrkou v září 2020**
-

## WP 2018 – 2020, verze z 2. 7. 2019 část ENERGY: Uzávěrky podle témat

### Uzávěrky

- Buildings in energy transition; **B4E** 10/9/2020
  - Renewable energy; **RES** 26/3+21/4+1/9/2020
  - Energy system and consumer; **EC, ES** 10/9/2020
  - Smart Cities and Communities; **SCC** 1/9/2020
  - Decarbonisation of fossil fuels; NZE 1/9/2020
  - Cross-cutting issues; JA, CC 26/3/2020; 1/9/2020
  - Cross-cutting activities:
    - ❖ Batteries call; BAT 21/4/2020
    - ❖ Circular industries call; CC, NZE 1/9/2020
-

## Joint Actions: JA; Global leadership in Renewables: RES

Téma	Typ akce	Uzávěrka	TRL	Dopor. přísp. EK na projekt/ celkem na téma
JA-5 Long Term EU-Africa Partnership for Research and Innovation actions in the area of renewable energy	RIA	26/3/2020 (otevření 26/9/2019)		15 mil. € / 15 mil. €
RES-10 DC – AC/DC hybrid grid for a modular, resilient and high RES share grid development	PCP			8 - 15 mil. € / 15 mil. €
RES-1 Developing the next generation of renewable energy technologies	RIA	21/4/2020 (otevření 3/12/2019)	na TRL 3 nebo 4	2 – 4 mil. € / 45 mil. €
RES-18 Advanced drilling and well completion techniques for cost reduction in geothermal energy	RIA-LS		3 - 4 na 4 -5	2 – 4 mil. €/ 8 mil. €
RES-26 Development of next generation renewable fuel technologies from CO2 and renewable energy (Power and Energy to Renewable Fuels)	RIA		3 - 4 na 4 -5	3 – 5 mil. €/ 8 mil. €
RES-31 Offshore wind basic science and balance of plant	RIA		na 4 -5	2 – 4 mil. € / 8 mil. €
RES-32 New test rig devices for accelerating ocean energy technology development	RIA			2 – 5 mil. € / 8 mil. €
RES-37 Combined clean biofuel production and phytoremediation solutions from contaminated lands worldwide	RIA		3 - 4 na 4 -5	2 – 4 mil. € / 6 mil. €

## Buildings in Energy Transition: B4E

Téma	Typ akce	Uzávěrka (otevření 5/3/2020)	TRL	Dopor. přísp. EK na projekt/ celkem na téma
B4E-2 Stimulating demand for sustainable energy skills in the building sector	CSA	10/9/2020		0,5 – 1 mil. € /4 mil. €
B4E-3 Upgrading smartness of existing buildings through innovations for legacy equipment (cPPP <b>EeB</b> )	IA	10/9/2020	6 - 8	3 – 4 mil. € / 8 mil. €
B4E-4 Next-generation of Energy Performance Assessment and Certification	CSA	10/9/2020		1 – 2 mil. € / 6 mil. €
B4E-11 Financing for energy efficiency investments – Smart Finance for Smart Buildings	CSA	10/9/2020		1 – 1,5 mil. €; 0,5-1,5 mil. € / 16 mil. €
B4E-13 Aggregation – Project Development Assistance	CSA	10/9/2020		
B4E-12 National roundtables to implement the Smart Finance for Smart Buildings initiative	CSA	10/9/2020		0,5 – 1,5 mil. € / 3 mil. €
B4E-14 Enabling next-generation of smart energy services valorising energy efficiency and flexibility at demand side	CSA	10/9/2020		1 – 2 mil. € / 6 mil. €



## Smart and clean energy for consumers: EC; Smart Cities and Communities: SCC; Cross-cutting issues: CC

Téma	Typ akce	Uzávěrka (otevření 5/3/2020)	TRL	Dopor. přísp. EK na projekt/ celkem na téma
EC-1 The role of consumers in changing the market through informed decision and collective action	CSA	10/9/2020 (otevření 5/3/2020)		1 – 2 mil. €; 1 – 2 mil. € / 12 mil. €
EC-2 Mitigating household energy poverty	CSA			
EC-5 Supporting public authorities in driving the energy transition	CSA			1 – 1,5 mil. € /9 mil. €
SCC-2 Positive Energy Districts and Neighbourhoods for urban energy transitions	ERA- NET	1/9/2020 (otevření 5/5/2020)		5 mil. €/ 5 mil. €
CC-1 Social Sciences and Humanities (SSH) aspects in clean energy transition; pro rok 2020 – Energy citizenship	RIA			1 – 3 mil. € / 10 mil. €
CC-7 European Energy and Climate Modelling Forum (2020 – 2024)	RIA			5 mil. € / 5 mil. €

## Enabling near-zero CO2 emissions from fossil fuel power plants and carbon intensive industries: NZE; Global leadership in Renewables: RES

Téma	Typ akce	Uzávěrka (otevření 5/5/2020)	TRL	Dopor. přísp. EK na projekt/ celkem na téma
NZE-6 Geological storage pilots	RIA	1/9/2020		7 – 10 mil. € / 14 mil. €
RES-3 International Cooperation with USA and/or China on alternative renewable fuels from sunlight for energy, transport and chemical storage	RIA	1/9/2020	na 3 - 4	2 – 4 mil. € / 10 mil. €
RES-20 Efficient combination of Concentrated Solar Power and desalination (with particular focus on the Gulf Cooperation Council (GCC) region)	IA	1/9/2020	na 6	6 – 10 mil. € / 10 mil. €
RES-25 International cooperation with Japan for Research and Innovation on advanced biofuels and alternative renewable fuels	RIA	1/9/2020	na 3	2 - 5 mil. €/ 5 mil. €
RES-34 Demonstration of innovative and sustainable hydropower solutions targeting unexplored small-scale hydropower potential in Central Asia	IA	1/9/2020	6 – 7 na 7 - 8	7 – 10 mil. € / 10 mil. €
RES-36 International cooperation with Canada on advanced biofuels and bioenergy	RIA	1/9/2020	3 na 5	3 - 5 mil. €/ 5 mil. €

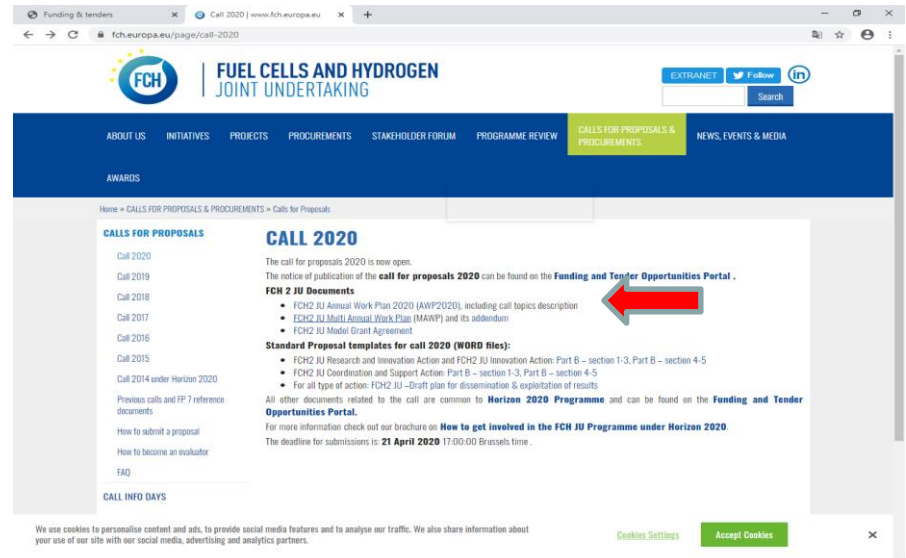
## Cross-cutting activities: Batteries

Téma	Typ akce	Uzávěrka (otevření 3/12/2019)	TRL	Dopor. přísp. EK na projekt/ celkem na téma
LC-BAT-8 Next-generation batteries for stationary energy storage	RIA	21/4/2020	3 na 5	6 – 8 mil. € / 20 mil. €
LC-BAT-9 Hybridisation of battery systems for stationary energy storage	RIA	21/4/2020	4 na 6	3 – 4 mil. € / 10 mil. €
Aktualizace pracovního programu				
Téma ES-12 (uzávěrka v lednu 2020) bylo zrušeno. Plánuje se téma <b>ES-13</b> – Energy Island – international cooperation with India		09/2020		

- FCH JU – Informační den k výzvě na 2020 proběhl 27. ledna 2020 <https://www.fch.europa.eu/page/info-day-2020>
- <https://www.fch.europa.eu/page/call-2020>
- Uzávěrka **21. 4. 2020**

Témata pod

- Energy Pillar
- Transport Pillar
- Overarching activities
- Cross-cutting activities

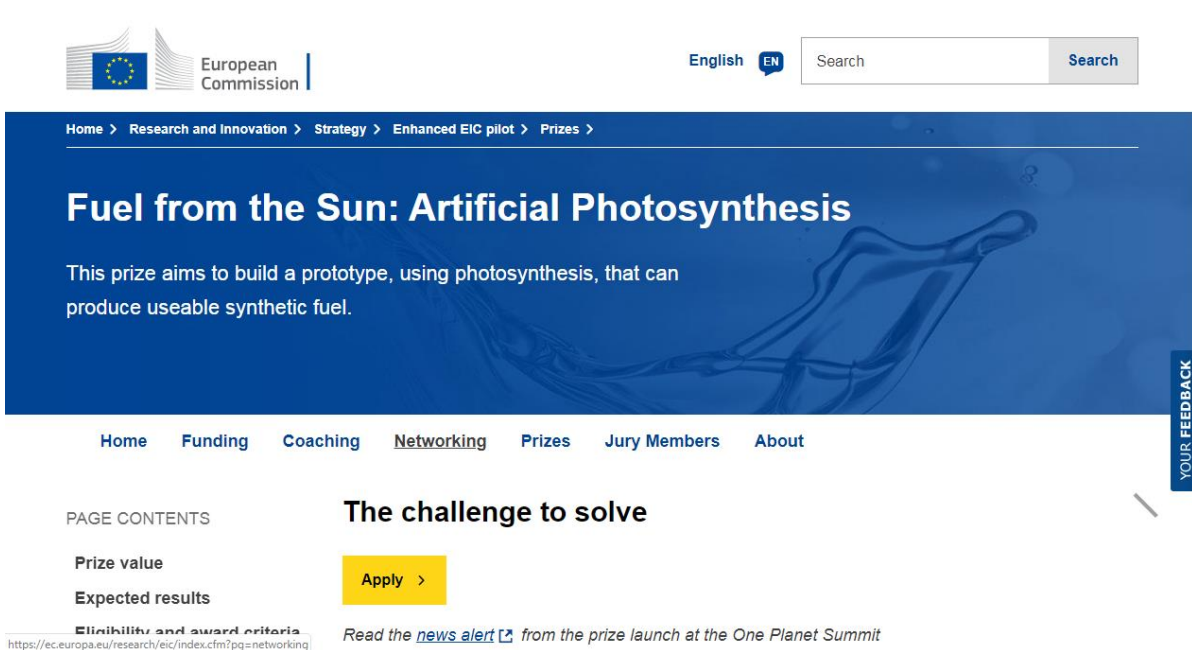


The screenshot shows the website for FCH JU (Fuel Cells and Hydrogen Joint Undertaking). The main navigation bar includes links for ABOUT US, INITIATIVES, PROJECTS, PROCUREMENTS, STAKEHOLDER FORUM, PROGRAMME REVIEW, CALLS FOR PROPOSALS & PROCUREMENTS (highlighted), and NEWS, EVENTS & MEDIA. The page content is titled 'CALL 2020' and includes a list of documents under 'FCH 2 JU Documents' and 'Standard Proposal templates for call 2020 (WORD files)'. A red arrow points to the text 'Funding and Tender Opportunities Portal' in the first paragraph of the 'CALL 2020' section.

# Prize – Artificial Photosynthesis

[https://ec.europa.eu/research/eic/index.cfm?pg=prizes\\_sunfuel](https://ec.europa.eu/research/eic/index.cfm?pg=prizes_sunfuel)

- Enhanced European Innovation Council (EIC) pilot
- Uzávěrka: 1. Q 2021



The screenshot shows the European Commission website for the 'Fuel from the Sun: Artificial Photosynthesis' prize. The page features the European Commission logo, a search bar, and a navigation menu. The main content area is titled 'Fuel from the Sun: Artificial Photosynthesis' and includes a description: 'This prize aims to build a prototype, using photosynthesis, that can produce useable synthetic fuel.' Below this, there is a 'The challenge to solve' section with an 'Apply >' button. A 'YOUR FEEDBACK' button is visible on the right side of the page.

European Commission

English EN Search Search

Home > Research and Innovation > Strategy > Enhanced EIC pilot > Prizes >

## Fuel from the Sun: Artificial Photosynthesis

This prize aims to build a prototype, using photosynthesis, that can produce useable synthetic fuel.

Home Funding Coaching Networking Prizes Jury Members About

PAGE CONTENTS

Prize value

Expected results

[Eligibility and award criteria](https://ec.europa.eu/research/eic/index.cfm?pg=networking)

**The challenge to solve**

Apply >

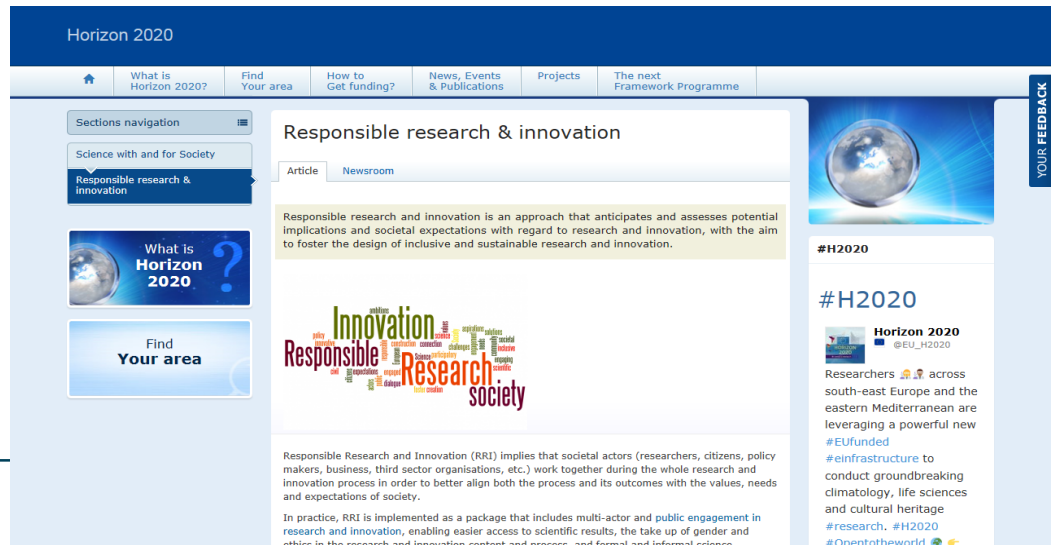
Read the [news alert](#) from the prize launch at the One Planet Summit

YOUR FEEDBACK

# Responsible Research and Innovation

<https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation>

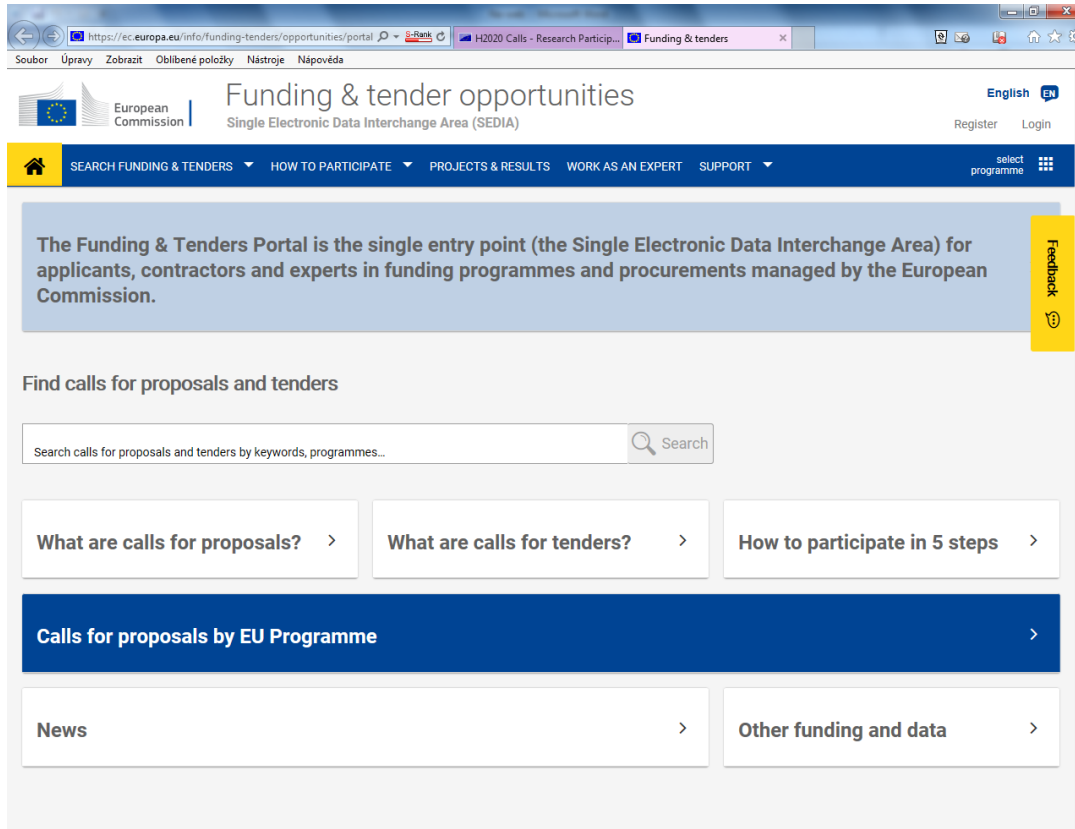
- Public Engagement
- Gender Equality
- Science Literacy and Science Education
- Open Access
- Ethics
- and the Governance thereof



The screenshot shows the Horizon 2020 website interface. At the top, there is a navigation bar with the title "Horizon 2020" and several menu items: "What is Horizon 2020?", "Find Your area", "How to Get funding?", "News, Events & Publications", "Projects", and "The next Framework Programme". Below the navigation bar, there is a "Sections navigation" dropdown menu with "Responsible research & innovation" selected. To the right of the menu, there is a "What is Horizon 2020?" section with a globe icon and a "Find Your area" button. The main content area is titled "Responsible research & innovation" and features a "Responsible research & innovation" article. The article text states: "Responsible research and innovation is an approach that anticipates and assesses potential implications and societal expectations with regard to research and innovation, with the aim to foster the design of inclusive and sustainable research and innovation." Below the text is a word cloud with "Innovation", "Responsible", "Research", and "society" as prominent words. To the right of the article, there is a "#H2020" section with a globe icon and a "YOUR FEEDBACK" button. The "#H2020" section includes a tweet from @EU\_H2020: "Researchers across south-east Europe and the eastern Mediterranean are leveraging a powerful new #EUfunded #einfrastructure to conduct groundbreaking climatology, life sciences and cultural heritage #research. #H2020 #Opentotheworld".

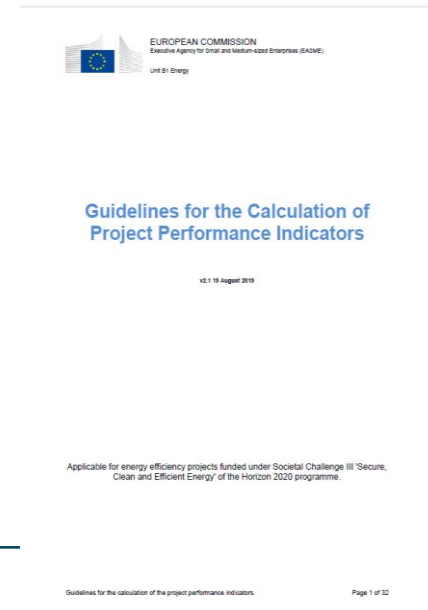
# Funding and Tender Opportunities Portal

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>



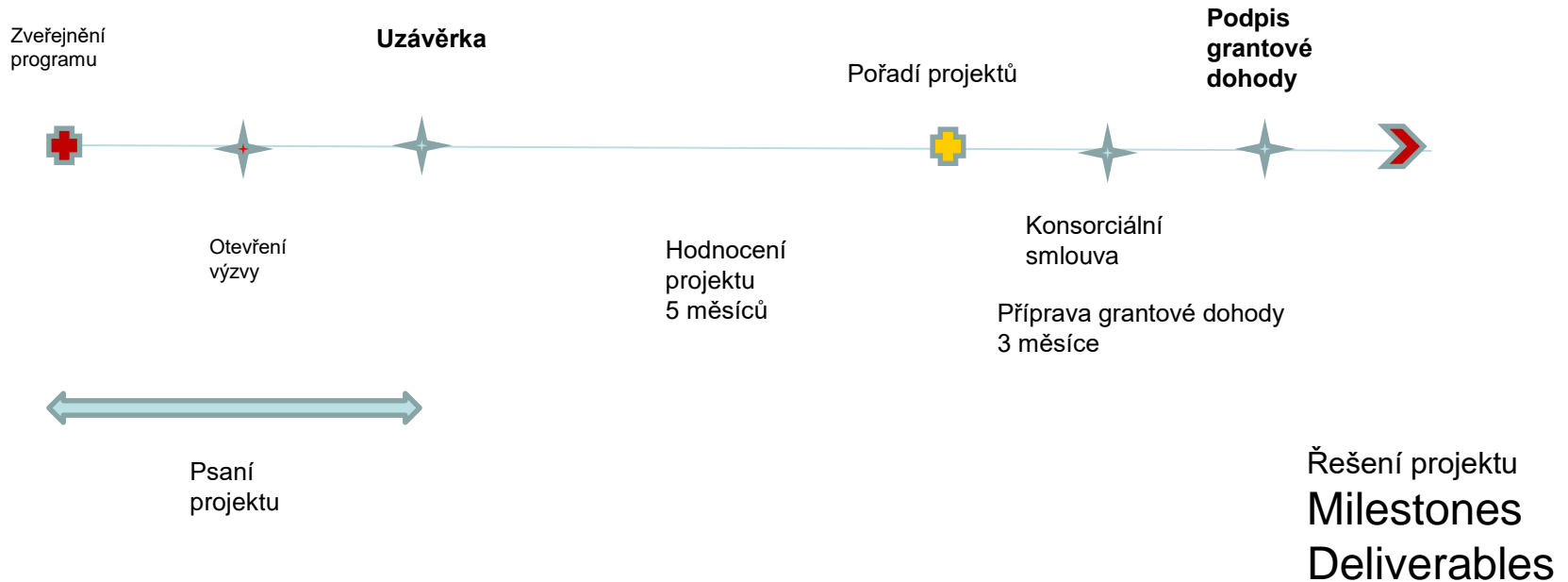
The screenshot shows the homepage of the Funding and Tender Opportunities Portal. The browser address bar displays the URL <https://ec.europa.eu/info/funding-tenders/opportunities/portal>. The page header includes the European Commission logo, the text "Funding & tender opportunities", and "Single Electronic Data Interchange Area (SEDIA)". A navigation menu contains links for "SEARCH FUNDING & TENDERS", "HOW TO PARTICIPATE", "PROJECTS & RESULTS", "WORK AS AN EXPERT", and "SUPPORT". A main banner states: "The Funding & Tenders Portal is the single entry point (the Single Electronic Data Interchange Area) for applicants, contractors and experts in funding programmes and procurements managed by the European Commission." Below this is a search bar with the placeholder text "Search calls for proposals and tenders by keywords, programmes..." and a "Search" button. A row of three buttons provides quick access to "What are calls for proposals?", "What are calls for tenders?", and "How to participate in 5 steps". A prominent blue button labeled "Calls for proposals by EU Programme" is also visible. At the bottom, there are buttons for "News" and "Other funding and data". A "Feedback" button is located on the right side of the page.

- Guidelines for the Calculation of Project Performance Indicators
- [https://ec.europa.eu/easme/sites/easme-site/files/guidelines-for-the-calculation-of-performance-indicators\\_v2.1\\_19\\_august\\_2019.pdf](https://ec.europa.eu/easme/sites/easme-site/files/guidelines-for-the-calculation-of-performance-indicators_v2.1_19_august_2019.pdf)



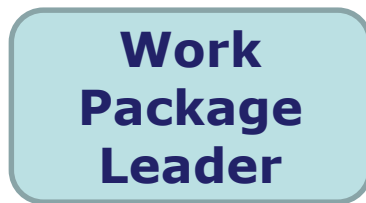


# Životní cyklus projektu

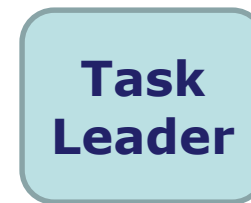


## Struktura projektu

- **Koordinátor** projektu (zkušenosti, manažerské schopnosti)
- **Pertův diagram** - struktura projektu - rozdělení činností v projektu na pracovní balíčky (WORK PACKAGES)
- Ty jsou dále rozděleny na dílčí úkoly (TASKS)
- Aktivity musí promyšleně navazovat



Odborné znalosti  
Manažerské schopnosti

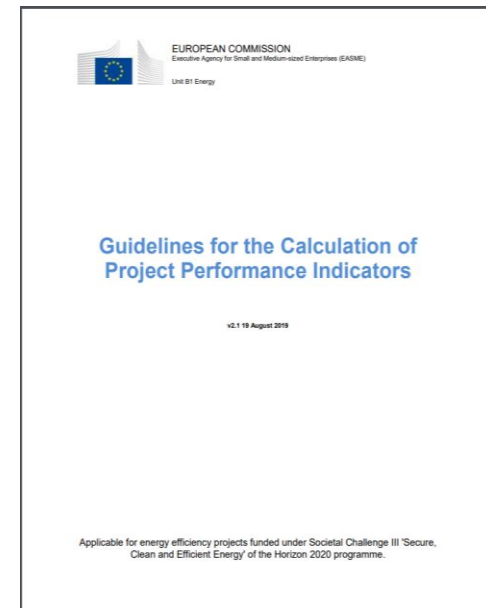


Odborné znalosti

- **Ganttův diagram** (časová posloupnost)

## Indikátory výkonnosti v projektech

- Agentura EASME zpracovala publikaci s návodem pro výpočet indikátorů výkonnosti v projektech (energetická účinnost)
- <https://ec.europa.eu/easme/sites/easme-site/files/guidelines-for-the-calculation-of-performance-indicators-v2.1-19-august-2019.pdf>



# Hodnocení projektu: Pravidla hodnocení - část H v General Annexes

## 1. Kritéria pro udělení:

- Excellence (vynikající vědecká úroveň)
- Dopad
- Implementace

Požadavky pro všechny typy projektů + doplňující požadavky pro jednotlivé typy projektů (RIA, IA, CSA, ERA-NET Cofund, PCP, PPI, ...)

## 2. Bodové hodnocení:

Minimální počet bodů pro jednotlivé kritérium a minimum pro součet

Vážení kritérií (např. 1,5 pro impakt u inovačních akcí)

## 3. Doplňující kritéria pro návrhy se stejným skóre

## Databáze expertů – možnost registrace zájemců

### **Koho Evropská komise hledá?**

- Obecně pro všechny oblasti (pravidlo rotace)
- Ženy (např. v energetice je minimální cíl 40%)
- Členské země EU13
- Experti s technickou odborností pro různá témata H2020
- Průmysloví experti mimo tradiční účastníky (bez konfliktu zájmů)

### **Registrace přes Funding and Tenders Portal:**

**<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html#expertRegistration>**

### **Využijte video:**

**<https://www.youtube.com/watch?v=xOwrvYve6H8>**

# Specializovaný nástroj Partner Search ENERGY + EURATOM

<http://www.partnersearch.c-energy2020.eu/>



The screenshot shows the homepage of the C-Energy2020 Partner Search tool. At the top left is the logo for C-Energy2020, which includes icons for a gear, a water drop, and a person. To the right of the logo are social media icons for Twitter, Facebook, and Email. Below the logo is a navigation menu with links for HOME, ABOUT, GET NEWSLETTER, INTRANET, and CONTACTS. A prominent yellow banner contains seven circular icons representing different features: Find your NCP, EU funding, Partner Search, EU networks, News & EU Policy, Calendar, and Media. Below the banner is a dark blue header for the 'partner search' section, with a breadcrumb trail 'Home Page / partner search'. The main content area is divided into two columns. The left column contains a 'Login' section with input fields for 'Username (E-Mail address)' and 'Password', and a 'LOGIN' button. Below the login section are links for 'Registration', 'Password lost?', and 'Navigation'. The right column features a heading 'HORIZON 2020 - WORK PROGRAMMES - Part 10. Secure, clean and efficient energy & Euratom' followed by a sub-heading 'Dedicated Partner Search tool'. The text describes the tool's purpose: 'This C-Energy2020 Partner Search Facility has been established by the network of H2020 Energy NCPs to help support its clients in establishing consortia. This web service is strictly focused on the open calls for proposals under the Energy area of the Societal challenge Pillar of Horizon2020 and the Euratom Calls (complementary programme for nuclear research and training)'. Below this text are three links: 'The H2020 Energy workprogramme for 2016-2017 was adopted in October 2015.', 'Download the H2020 Energy 2016-2017 workprogramme (1.67MB Pdf document).', and 'Download the Euratom 2016-2017 workprogramme (1MB Pdf document)'. At the bottom of the right column is a section titled 'Entry options.' with the text 'On this web-service we discern between' followed by a bullet point: '• **Partner Offer** - Researchers who offer their research expertise and who would like to collaborate in possible project consortia'.

- Hledání partnerů pro projekty
- Je třeba validace od NCP

# Předběžná struktura programu Horizont Evropa (zdroj: EC)



## HE: Navrhovaný rozpočet





## Mise v programu Horizont Evropa



## Zdroje informací

- **CORDIS:** <https://cordis.europa.eu/search/en>
- **TC:** <http://www.tc.cz/>  
<http://www.h2020.cz/>
- **CZELO:** [www.czelo.cz](http://www.czelo.cz)
- **Funding and Tender Opportunities Portal:**  
<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home>
- **Výzkum v EU:**  
[ec.europa.eu/research](http://ec.europa.eu/research)



**Děkuji Vám za pozornost.**