



D1.6 Open Call RFPs



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Big Energy Data Value Creation within SYNERgetic enERGY-as-a-service Applications through trusted multi party data sharing over an AI big data analytics marketplace

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Abbreviations and Acronyms

Acronym	Description
CA	Consortium Agreement
DoA	Description of Action (annex I of the Grant Agreement)
EC	European Commission
GA	Grant Agreement
PC	Project Coordinator
PMB	Project Management Board
PO	Project Officer
QM	Quality Management
RFP	Request For Proposals
TC	Technical Coordinator
TL	Task Leader
ToC	Table of Contents
WP	Work Package
WPL	Work Package Leader



Executive summary

The SYNERGY project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 872734. Part of this funding includes financial support to Third parties, via cascade funding which is available through this Open Call organised by the consortium. Hence, this deliverable provides the Request for Proposals for this Open Call entitled: “Innovative Big Data-Enabled Energy Services”.

The Open Call is primarily focused on selecting new experiments/ services to be tested and validated during the demo activities of the project under real-life conditions and with the use of real data coming from the demo partners, thus extending the scope of the project and enlarging the service portfolio that will be finally delivered by the project technology partners to the demonstration partners/ energy market actors and stakeholders. Proposed services shall be developed in coordination with the SYNERGY platform, extending and accelerating the applicability of the services.

This document specifies in detail the terms and conditions for participation, monitoring tools and reporting mechanisms as part of the Request for Proposals that will be published in the frame of SYNERGY Project.



1 Introduction

1.1 Purpose of the document

This deliverable presents in detail the terms and conditions of the Request For Proposals (RFP) of the Open Call: “Innovative Big Data-Enabled Energy Services”.

To enhance the impact of the project in technical, socio-economic and exploitation terms, one of the adopted measures within the SYNERGY project is the preparation of this RFP to build a community and an ecosystem around the SYNERGY Big Data Platform and Analytics Marketplace.

In this context, this document is reporting the final results of the activities related to preparation, organization of the open call including the rules for its execution, terms and conditions for participation, monitoring tools and reporting mechanisms.

1.2 Scope of the document

The SYNERGY experimentation ecosystem will be materialised by the implementation of an Open Call “Innovative Big Data-Enabled Energy Services” described in this deliverable. In this context up to 8 new services, from companies of all Europe, are expected to be selected and funded with up to €47.500€ each. The selected beneficiaries (sub-grantees) may have access to the data experimentation playground of the project, in order to develop on top of the SYNERGY big data platform and analytics marketplace, innovative and added value energy services that will complement those that will be offered as part of the SYNERGY implementation. The Open Calls will be primarily focused on selecting new experiments and services to be tested and validated during the demo activities of the project under real-life conditions and with the use of real data coming from the demo partners.

This open call is focused on small-scale projects, following a rapid prototyping and validation process within the duration of the project and in parallel with the execution of the validation of SYNERGY in the project’s large-scale demonstrators.



1.3 Structure of the document

This document is structured as follows: Section 2 describes the main information of the SYNERGY Big Data Platform and Analytics Marketplace, together with some indications of potentials energy services that could match with the purpose of the SYNERGY activities and the needs of the demonstrators involved.

Section 3 explains the eligibility criteria and the procedure for the application submission. Section 4 includes the information about the evaluation process, how it will be executed and the mechanism regulating the scoring and ranking. Section 5 reports further information related to the SYNERGY project regarding the sub-granting, the reporting & monitoring and IPR.



2 Open Call summary

The SYNERGY Open Call will distribute €380k among up to 8 projects to enlarge the outreach of the core big data platform and analytics offering to be delivered by the SYNERGY consortium and engage relevant organizations in the development of innovative and added value energy services that will complement those that will be offered as part of the SYNERGY implementation. The addressed topics are described in the following sections. The maximum funding per project is up to €47,500 with a duration for each project of 8 months.

The Open Call is primarily focused on selecting new experiments/ services to be tested and validated during the demo activities of the project under real-life conditions and with the use of real data coming from the demo partners, thus extending the scope of the project and enlarging the service portfolio that will be finally delivered by the project technology partners to the demonstration partners/ energy market actors and stakeholders. Proposed services shall be developed in coordination with the SYNERGY platform, extending and accelerating the applicability of the services.

2.1 Background information

The main objective of the open call is to enlarge the outreach of the core big data platform and analytics offering to be delivered by the SYNERGY consortium and engage relevant organizations in the development of innovative and added value energy services that will complement those that will be offered as part of the SYNERGY implementation. Such services are categorized as follows and may indicatively include:

- Innovative tools (complementary to the SYNERGY ones) for optimized electricity grid monitoring and operation. This may potentially include services for:
 - Real-time imbalance prediction and identification with the use of advanced AI techniques
 - Correlation of Energy Market Outcomes and Weather Conditions to the operation of Transmission Grids and relevant events, over rich dashboards
 - oComputation and Assessment of dynamic network line rating based for improving distribution network capacity



- Innovative tools (complementary to the SYNERGY ones) for advanced asset management of network assets
 - Condition-based analysis for the identification of major repairs needs of primary network assets and cost benefit analysis for their optimized maintenance/replacement.
 - Life-cycle analysis, cost estimation and definition of Remaining Asset Value, considering Operation and Maintenance costs.
- Innovative tools and services (complementary to the SYNERGY ones) for utility portfolio management, risk hedging and energy trading.
 - Advanced analysis of consumer portfolio and load profiles for the release of novel electricity pricing products (considering dynamic tariffs)
 - Retailer portfolio analysis towards anomaly detection in load profiles and optimized performance forecasting
 - Customer churn rate and attribution analysis, stepping also on market offerings (and evolution of them) of competitive retailers.
- Innovative tools and services (complementary to the SYNERGY ones) for local flexibility trading, flexibility sharing (peer-to-peer) and local energy communities
 - Optimization of prosumer energy transactions through advanced short-term price forecasting and optimal guidance for offering their produced energy/ flexibility across different markets.
 - Data-driven peer-to-peer energy trading, over open and transparent local marketplaces.
 - Virtual Local Energy Communities creation stepping on data-driven approaches and short-, mid-, long-term forecasts, and involving assessment of the viability of the energy community under different market involvement scenarios
- Innovative tools and services (complementary to the SYNERGY ones) for plus energy communities and buildings through coordinated management of demand, generation and storage assets.

- Advanced applications for maximizing flexibility and optimizing real-time control, while guiding relevant required investments in a data-driven manner.
- Innovative tools and services (complementary to the SYNERGY ones) for increasing the smartness of buildings and their market readiness.
 - Methods and tools for the Automated calculation of Smart Readiness of Buildings based on real data flows from the building side
- Innovative tools and services (complementary to the SYNERGY ones) for urban planning and smart cities.
 - Tools for the sizing and cost-benefit analysis of required investments in RES, storage and other technologies for the de-carbonization of urban environments.

The aforementioned list of suggested applications and tools is indicative and does not exclude proposal for tools, services and applications that can further enrich the SYNERGY offering, under the condition that they do not overlap with existing solutions offered by the SYNERGY consortium.

Further information about the SYNERGY Platform and the applications already developed can be found in [1] and in the “Open Call – Project Information” document.

2.2 SYNERGY Platform and demo sites needs

The European electricity sector is undergoing a major fundamental change with the increasing digitalisation and roll-out of smart meters. This advent of the electricity sector modernization comes together with the fact that the power system is becoming more thoroughly monitored and controlled from “end to end” and through the whole value chain of stakeholders involved in the electricity system operation. This is a huge shift away from traditional monitoring and control approaches that have been applied exclusively over the transmission and distribution networks, since the smart electricity grid era is pushing sensing, control and data collection at the edge of electricity networks, which needs to be further re-defined due to the wide penetration of Distributed Energy Resources (DERs), such as renewable energy sources (RES), smart home devices and appliances (IoT-enabled), distributed storage, smart meters and electric vehicles (EVs).

In response to the need for “end-to-end” coordination between the electricity sector stakeholders – not only in business terms but also in exchanging information between them – SYNERGY introduces a novel framework and references big data architecture that leverages data, primary or secondarily



related to the electricity domain, coming from diverse sources (data APIs, historical data, statistics, sensor / IoT data, weather data, energy market data, and various other open data sources) to help the electricity value chain stakeholders to simultaneously enhance their data reach, improve their internal intelligence on electricity-related optimization functions while getting involved in novel sharing/trading models of data sources and intelligence, in order to gain better insights and shift individual decision-making at a collective intelligence level.

End-to-end optimization of power grids, across the whole value chain and actors involved, clearly relies on the deep and comprehensive understanding of real-life complexities imposed during actual operation, as well as, on the smooth end-to-end interoperable communication and data sharing between all actors and sub-systems involved. Both these parameters span four interrelated areas: physical systems (energy systems, energy equipment and energy networks), human systems (communities, building occupants and their behaviours), energy markets (transaction requirements, flexibility boundaries and access of small prosumers) and the general surrounding environment (weather fluctuations and impact on the other systems). Inadequacy of current technical offerings, business practices, market structures and regulatory frameworks to effectively address the complexity introduced in the end-to-end smart grid management optimization, focusing on interactions between stakeholders and data sharing requirements, and smoothly integrate all these interrelated domains is the root cause for the slow pace of advanced intelligence introduction in the energy/ electricity sector and the small penetration of advanced and innovative energy services that can deliver significant value for all involved stakeholders, either out of the data they produce, or the intelligence they can obtain by analysing data assets generated by other value chain stakeholders.

In this context, SYNERGY will establish a highly effective, innovative and scalable reference architecture and implementation for a Big Energy Data Platform and AI Analytics Marketplace, accompanied by big data-enabled domain specific applications for the totality of electricity value chain stakeholders (altogether comprising the SYNERGY Big Data-driven Energy-as-a-Service (EaaS) Framework).

The reference architecture of the SYNERGY platform has been conceptually divided in 3 main layers as depicted in Figure 1:

- The SYNERGY Cloud Infrastructure that consists of: (a) the Core Big Data Management Platform, essentially including the Energy Big Data Platform and the AI Analytics Marketplace which are instrumental for all functionalities that SYNERGY supports at all layers, and (b) the Secure Experimentation Playgrounds (SEP) which are realized in the form of dedicated virtual machines that are spawned per organisation to ensure that each electricity data value chain



stakeholder is able to execute big data analytics in isolated and secure environments in the SYNERGY cloud infrastructure.

- The On-Premise Environments (OPE) which are executed in the energy stakeholders’ premises for increased security and trust and can be distinguished in the server environment and the edge environments that are installed in gateways. The On-Premise Environments are not self-standing, but always communicate with the SYNERGY Cloud Infrastructure to deliver their intended functionality.
- The SYNERGY Energy Apps Portfolio that embraces the set of applications addressed to the needs of: (a) DSOs (Distribution System Operators), TSOs (Transmission System Operators) and RES (Renewable Energy Sources) Operators in respect to grid-level analytics for optimized network and asset management services, (b) Electricity Retailers and Aggregators for portfolio-level analytics towards Energy-as-a-Service (EaaS) solutions, (c) Facility Managers and ESCOs (Energy Service Companies) towards building / district-level analytics from the perspective of optimized energy performance management.

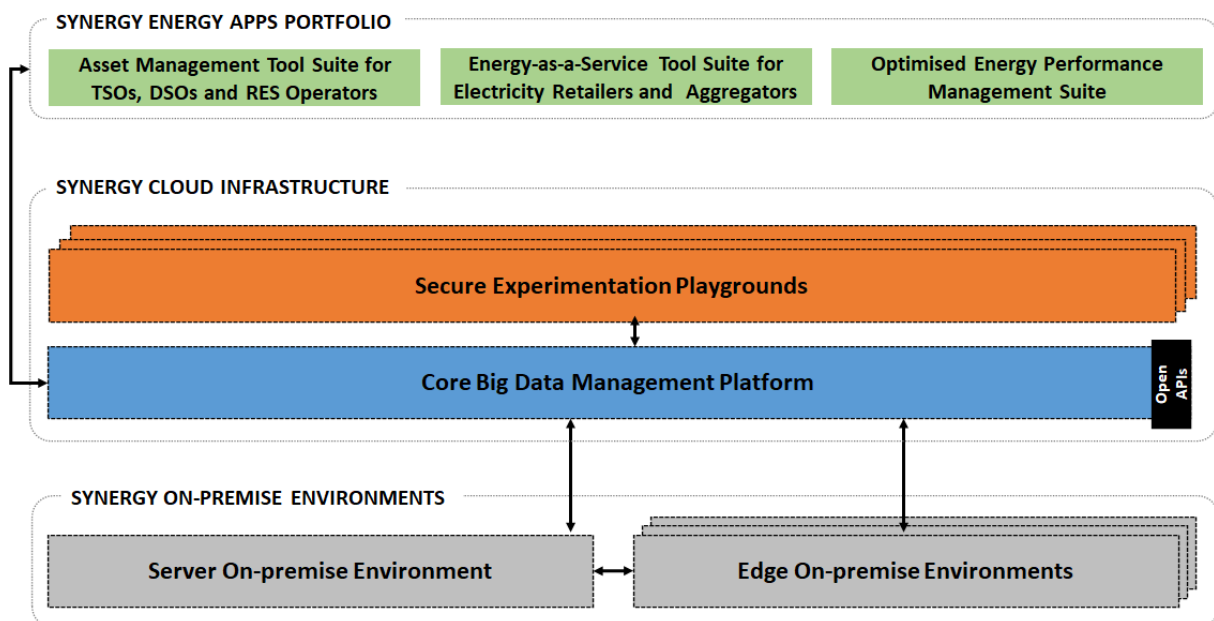


Figure 1: SYNERGY 3-Layered High-level Architecture

More information about the SYNERGY Reference architecture and its bundles can be found in [1] and in the “Open Call – Project Information” document.

The SYNERGY framework will be validated in 5 large-scale demonstrators and 21 demo cases, in Greece, Spain, Austria, Finland and Croatia involving diverse actors and data sources, heterogeneous

energy systems/ assets, areas characterized by varied energy densities (from cities to small communities), voltage levels (HV, MV, LV) and network conditions (including local energy systems with weak grid connection and geographic islands) and spanning heterogeneous climatic, demographic and cultural characteristics.

A list of the data assets available and the demo cases for each demo sites is in the Annex C.

2.3 Timetable

Table 1 reports the main dates and information of the open call:

Table 1 Main info of the open call

Activity	Due Date / Duration
Call Open for Proposals	31 January 2022
Deadline for Proposals submission	06 April 2022
Evaluation of Proposals	May/June 2022
Online Interview and Consensus	May/June 2022
Proposals Selection	June 2022
Information to applicants	June 2022
Signature of sub-grantee agreement	June 2022
Start of the activities	01 July 2022
Duration of the activities	8 months
Expected Funding	up to € 47500
Total Funding	up to € 380000
Number of projects expected to be funded	Up to 8



3 Eligibility criteria and submission process

This section describes the requirements that each proposal must comply with, to be considered for evaluation, and presents an overview of the submission process.

3.1 Eligibility Criteria

The SYNERGY Open Call: Innovative Big Data-Enabled Energy Services Financial Support to Third Parties (FSTP) within SYNERGY Project will be performed through the implementation of an open call, which will aim to attract and fund single entities (of any formal type) to the development of innovative solutions in the energy sector on top of the Big Data Platform and Analytics Marketplace introduced in SYNERGY

Any legal entity (excluding any persons or organisations who are partners in the SYNERGY consortium or who are formally linked in any way to partners of the consortium), which is based in EU Member States and in associated countries as indicated in the European Commission documents [2] may participate to the SYNERGY Open call.

As a general principle i) the existence of a legal entity in an eligible country, (ii) the uniqueness of the proposal, (iii) the alignment with SYNERGY call for proposals and challenges, along with the usage of the SYNERGY platform and marketplace tools

The following activities will be eligible for funding:

- personnel costs
- software licences
- travel expenses
- equipment costs
- Indirect Costs (25%).

Incoming submissions will be first checked for formal criteria like the completeness of the submitted documents and the eligibility of the proposers

Applications must:



- Be submitted before the deadline as in Section 3.3;
- Be submitted using the online application form (template in Annex B);
- Be edited by filling all the sections the SYNERGY Proposal template without modification to its structure.
- Include all mandatory information and declarations indicated in the template proposal (Annex B);
- Coherent and pertinent with the objectives of the SYNERGY Projects and the needs of its Demonstrators (see section 2);
- Unique for each applicant (if an applicant should submit more than one proposal, they will be rejected);
- use the SYNERGY platform and marketplace tools
- Written in English.

Failure to comply with all these requirements will lead to the rejection of the application.

Late proposals – including force majeure circumstances – or proposals submitted in any other way than through the online submission tool, will not be evaluated. More information about SYNERGY applications can be found in “Open Call – Application Guide” document available in the project website.

3.1.1 Exclusion Criteria

Applicants will be disqualified from proposals procedure and banned from the cascade grant award if they are in any of the exclusion situations referred to in article 136(1) of the EU Financial Regulation about bankruptcy, insolvency, winding-up procedures and any other case or motivation included in the EU Financial Regulation [3].

Applicants must clearly declare they are not in one of the above-mentioned situations by ticking all the relevant boxes of the online Application form.



3.1.2 Conflict of interests

To avoid conflicts of interest, applications will not be accepted from persons or organisations who are partners in the SYNERGY consortium or who are formally linked in any way to partners of the consortium.

Applicants shall declare they do not have any potential conflict of interest with the selection process and during the implementation of the project. All cases of potential conflict of interest will be assessed case by case.

3.2 Additional Requirements

Each applicant must confirm:

- It is not under liquidation or is not an enterprise under difficulty according to the Commission Regulation No 651/2014, art. 2.18.
- Its project is based on the original works and going forward any foreseen developments are free from third party rights, or they are clearly stated.
- It is not excluded from the possibility of obtaining EU funding under the provisions of both national and EU law, or by a decision of both national or EU authority.

3.3 Submission Process

Submission deadline: All submissions must be made by:

17:00 Brussels local time, April 6th, 2022.

Electronic submission: Proposal submission is exclusively in electronic form using the proposal submission tool accessible via the SYNERGY open call website: <https://www.f6s.com/synergy-open-call>

In the event of the target number of projects not being achieved, SYNERGY may take the option to re-open the call at a later date, or, if this is not possible, to reimburse the remaining budget back to the EC.

Proposal template, in Annex B, provides the structure of the document for the proposal.



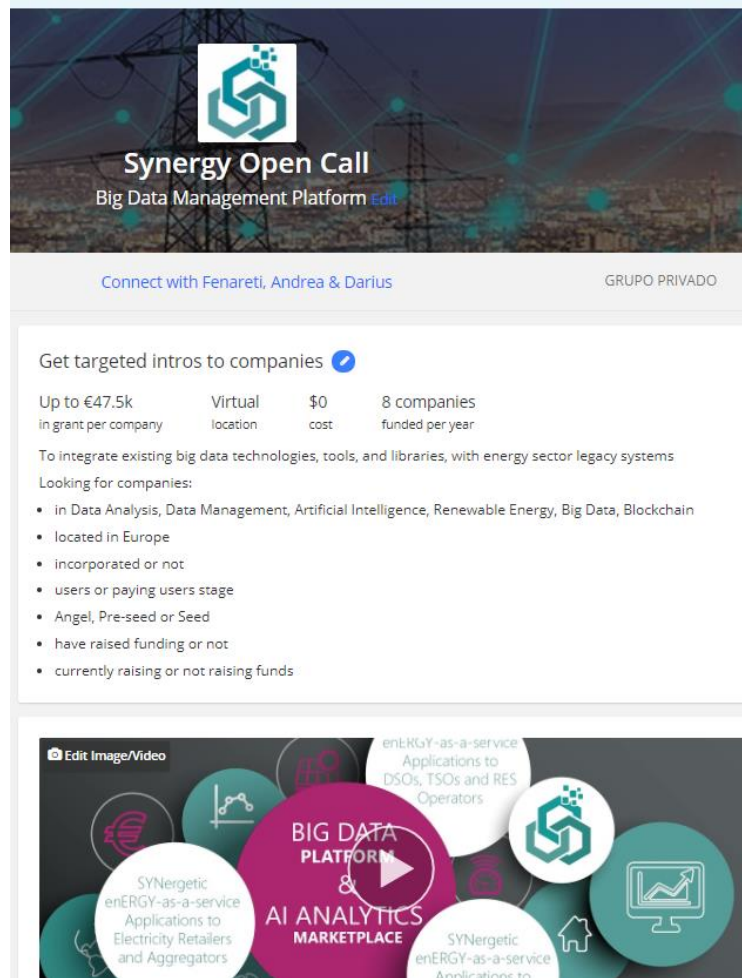


Figure 2 – Screenshot of the SYNERGY Open Call page

For more information about the SYNERGY Open Call, please check the Frequently Asked Questions (FAQs) section to be included in the SYNERGY project website and dedicated webpage

For further information on the Open Call, in case of any doubt regarding the eligibility rules, the information that is to be provided in the Application Form, or if you encountered technical issues or problems with the submission of the Application Form, please contact SYNERGY Helpdesk email: opencall@synergy.eu.

Dedicated information webinars will be organised and recordings will be available on dedicated open call web page.

4 Evaluation

The list of evaluators (potential and final) will be agreed with EC and a report of the evaluation process and outcomes will also be shared with the EC. All evaluators will receive the evaluation guidelines, templates, and will be duly informed about the timing for an agile process and conflict of interest issues.

4.1 Evaluation Procedure

The evaluation procedure is organized in the following steps:

- Eligibility Check;
- Remote Evaluation;
- Interviews;
- Final Selection;

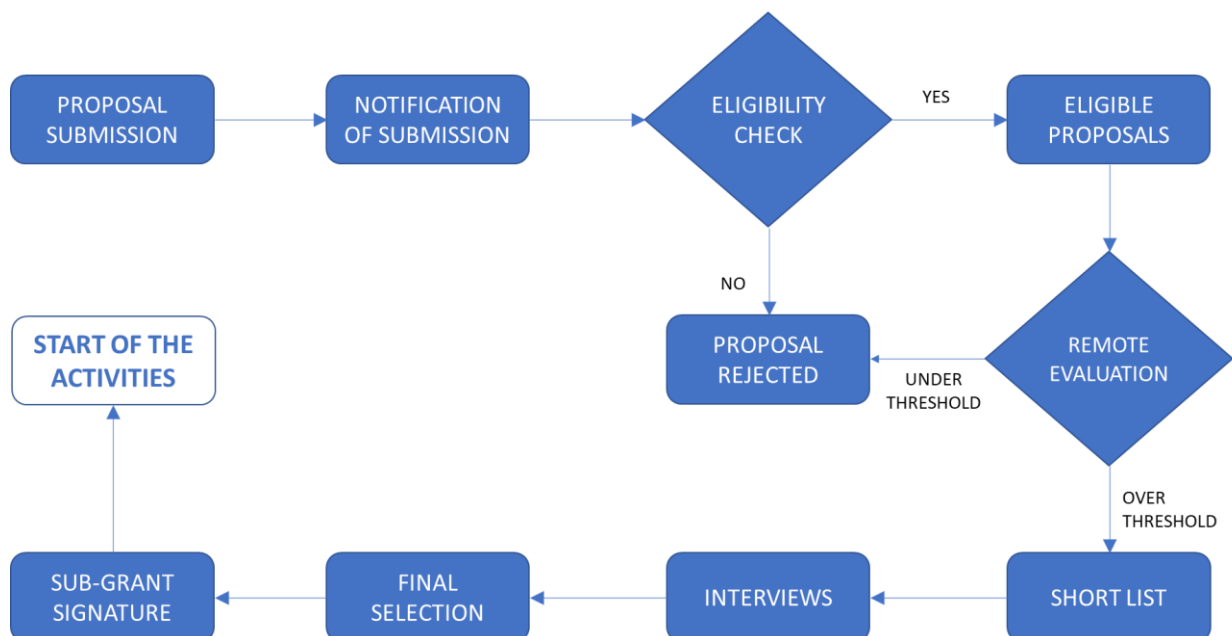


Figure 3 – Evaluation procedure

4.1.1 Eligibility Check

Once the deadline for submission is closed, all the submitted proposals will be automatically filtered to discard non-eligible ones. Eligibility criteria are described in Section 3 and will check: (i) the existence of a legal entity in an eligible country, (ii) the uniqueness of the proposal, (iii) the alignment with SYNERGY call for proposals and challenges, along with the usage of the SYNERGY platform and marketplace tools.

4.1.2 Remote Evaluation

All the eligible proposals will be submitted to the remote evaluation. The evaluation will follow the criteria described in Section 4.2.

Each proposal will be evaluated ideally by two external and one from consortium partners, though, the final decision will be made upon the closure of the open call based on the number of proposals submitted and the availability of resources for hiring external evaluator.

The names and brief CVs of the experts are communicated and agreed with the Project Officer in advance. The evaluators sign a declaration of confidentiality and a non-conflict declaration concerning the contents and beneficiaries of the proposals they read, all these as part of the contract for expert services. The form which they use in the evaluation additionally carries a declaration of freedom from conflict of interest that will again be signed during evaluation.

An external evaluation board with experience in energy applied technologies and energy and big data/market development will review each eligible proposal, scoring them based on criteria described in Section 4.3.

4.1.3 Interview

The top projects out of the remote evaluation phase will be subject to online-interview. The interview aims to deeply understand project concept, team skills & competence, capacity and willingness to exploit the results. The interviews will be carried out by the evaluation board involved in the remote evaluation and will focus on the following criteria:

- **Concept & Technology:** confirmation of proposed targets and technology fit;
- **Business:** the viability of the proposed business model;
- **Exploitation:** reliability to reach milestones; readiness to present to investors & corporates



If during interview applicants do not commit to what had been presented in application form, they will be declassified.

4.1.4 Final Selection

At the end of the evaluation process all proposals will be ranked based on their remote evaluation scores and interview.

4.2 Evaluation Criteria

Eligible proposals will be evaluated according to the following criteria:

- **Alignment:** Projects must align with one or more of the supported activity categories defined above, but without replicating the functionalities of the SYNERGY Energy Apps (described in Section 2.1). The projects' outcomes must be also integrated with the SYNERGY Big Data Platform & AI Marketplace (described in Section 2.2), indicatively in order to: (a) legitimately acquire the relevant stakeholder's data; (b) utilize the stakeholder's data and run an analysis (from scratch or leveraging the SYNERGY pre-trained analytics); (c) retrieve the results of the analysis performed in the SYNERGY Platform.
- **Soundness of service concept, innovation:** Projects must demonstrate a clear set of objectives aligned with the definition of the SYNERGY open call and with the general objectives of the project. The projects must explain in detail their expected interactions with the SYNERGY Platform.
- **Impact including industrial relevance and business strategy:** Applicants must define a clear set of deliverables aligned with the objectives of the open call. Proposals must demonstrate impact on the SYNERGY ecosystem and its contribution to meeting the overall project objectives
- **Effective and justified deployment of resources:** Proposals must also include a clear budget, detailing the overall project cost, the amount of funding requested and how it will be spent. This budget must represent good value for money in the opinion of the evaluation panel selected to evaluate the open call applications.



- **Implementation of the Workplan:** Applicants must provide credible evidence that the project delivery team have the necessary skills, infrastructure and management experience to be able to deliver the project in the timescales and budget specified.

The Soundness is evaluated according to the following criteria:

- Clarity and pertinence of the objectives;
- Excellence, innovation and quality of the objectives.

The Impact is evaluated according to the following criteria:

- Strengthening the competitiveness and growth of companies by developing innovations meeting the needs of European and global markets; and, where relevant, by delivering such innovations to the markets;
- Effectiveness of the proposed measures to exploit and disseminate the project results (including management of IPR), to communicate the project, and to manage research data where relevant.

The Implementation will be evaluated according to the following criteria:

- Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources, justification of resources;
- Appropriateness of the skills and experience of the project delivery team.

4.3 Scoring

Each criterion will carry a score ranging from 0 to 5. So, the scoring scale remains the same as usual for H2020 (and also the fact that half marks can be given):

- 0: The proposal fails to address the criterion under examination or cannot be judged due to missing or incomplete information;
- 1 (Poor): The criterion is addressed in an inadequate manner, or there are serious inherent weaknesses;
- 2 (Fair): While the proposal broadly addresses the criterion, there are significant weaknesses;



- 3 (Good): The proposal addresses the criterion well, although improvements would be necessary;
- 4 (Very good): The proposal addresses the criterion very well, although certain improvements are still possible;
- 5 (Excellent): The proposal successfully addresses all relevant aspects of the criterion in question. Any shortcomings are minor.

There will be a threshold score of 4 for the Impact criterion, while the remaining criteria will have a threshold of 3. Thus, the market impact will have a slightly higher relevance than the Innovation Soundness and Technical Excellence of the service. While the use of resources and the Implementation will have a lesser impact in the final mark.

Equally scored proposals will be prioritised according to the scores they have been awarded for the criterion impact. If these scores are also equal, priority will be based on scores for soundness. If these scores are also equal, priority will be based on scores for the criterion implementation of the workplan with a final reference to the use of resources.

4.4 Evaluation Results

The list of accepted proposals will be published as well as the information about the non-eligible proposals. All applicants will be informed about the evaluation results.

All the legal issues will be accurately covered by the planned contracts with the sub-granted beneficiaries. A written Sub-grantee agreement will be signed with successful applicants. It will foresee, among other things the special clauses derived from H2020 in cascading granting, the payment schedule and conditions (milestones), general legal text issues of rights and obligations by the SYNERGY consortium and each sub-grantee, including IPR and audit procedures.

The sub-grantee agreement will also have a set of annexes like: technical description of the project to be done (form submitted), bank account information form, guidelines of the call, status information and any other document required by SYNERGY to assure the correct execution of the sub-granted projects.



A legal entity that does not provide the requested data and documents in due time will not be included in the SYNERGY Acceleration Programme.



5 Relation with SYNERGY Project

5.1 Sub-granting

The SYNERGY project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 872734. Part of this funding includes financial support to Third parties, via cascade funding which is available through this Open Call organised by the consortium. Hence, the selected Third parties are indirect beneficiaries of European Commission funding and as such must comply with the rules presented in the sub-grant agreement template available in the project portal and application webpage.

The final support to each third party will be determined once the sub-grantees provide the project with the requested justification in the resources used; i.e. Personnel costs (nominal), travel expenses, equipment, etc. All payments to beneficiaries will be handled by the SYNERGY beneficiary EEE and will follow a Sprint (milestone) payment scheme, i.e. third parties will receive a number of lump sums (as presented before for each sprint), each paid upon the achievement of a predefined milestone. The third parties will be funded in the same conditions with a participant in a H2020 Innovation Action (up to 70% of the eligible costs for For-profit entities, 100% for non-profit entities).

Checking the consistency between these costs and the expected work of the project will be part of the evaluation process.

The amount of financial support will be calculated on the basis of estimated costs (budget breakdown provided by the proposers), the type of the beneficiary and the funding rate applying in each case. Each project will include an implementation plan including milestones and deliverables, and a cost estimate justifying the costs and resources in relation to the implementation plan.

Checking the consistency between these costs and the expected work of the experiment will be part of the evaluation.

Evaluators will be invited to assess if there are any over-estimated costs and consult the consortium if a budget re-configuration or reduction needs to be performed.



5.2 Reporting and Monitoring

In a written report submitted before the conclusion of the evaluation, SYNERGY will provide the Project Officer with a brief report on the evaluation and selection process, comprising:

- A report of the call and its evaluation (including e.g. dates of call, publications used, dates of evaluation etc.), and the outcome indicating the selected proposer(s);
- A listing of proposals received, identifying the proposing organisations involved (name and address)
- The names and affiliations and a brief CV of the experts involved in the evaluation, with contact details (telephone number, email address);
- A copy of the signed individual and consensus forms used in the evaluation;
- If the proposer selected was not the highest scoring one, the report must record the objective reasons why the highest scoring one was passed over.

If a proposal involves ethical issues, it should be described how the ethical issues will be treated during the experiment.

5.3 Funding Scheme

Each project will be implemented in the form of 3 sprints, focusing on the following type of activities:

- Sprint 1: Concept screening and technical design, including associated KPIs for evaluation
- Sprint 2: Service prototyping and integration with SYNERGY big data platform and analytics marketplace, including associated KPIs for evaluation
- Sprint 3: Deployment and demonstration of the service in a selected SYNERGY demonstrator, validation of its results and service refinement based on demonstration findings, including associated KPIs for evaluation.

Payments are associated with the evaluation of the respective sprint results and divided by 30% + 40% + 30% (lumpsum base, based on deliverables and outcomes).



At the end of each sprint an evaluation meeting with SYNERGY assigned person (depending on the technology expertise required to evaluate results) will be held, in order to monitor the progresses achieved during and the quality of the work done. In Table 2 the deadlines for the three sprints are reported with an example of funding for each sprint.

Table 2: Duration of the sprints and associated funding

Project Type	Duration	Funding	Example, €47,5k
Sprint 1	2-months	30%	€14,250
Sprint 2	3-months	40%	€19,000
Sprint 3	3-months	30%	€14,250
Total Budget			€47,500

5.4 Intellectual Property Right

The ownership of all IPR created by the beneficiaries, via the SYNERGY funding, will remain with them, respecting the IPR of the data (belonging to the respective stakeholders), the pre-trained analytics and the SYNERGY Platform (belonging to the SYNERGY Consortium). Results are owned by the Party that generates them. The Sub-Grant Agreement will introduce provisions concerning joint ownership of the results of the sub-granted projects.



6 Conclusions

This deliverable presents the Request For Proposal of the Open Call “Innovative Big Data-Enabled Energy Services” to be issued by the SYNERGY Project, with the objective of adding at least 8 additional application experiments to the project.

SYNERGY intends to launch this open call in January 2021, and to start the application experiments between Q2 and Q3 of the same year.

The contents of this deliverable will be publicly made available in the SYNERGY website through different documents, targeting specific audiences. SYNERGY has also elaborated some accompanying documents to complement the information of this deliverable:

- Open Call Announcement: short document with the objectives, scope and timeline of the open call (annex A).
- Proposal template: the document that proposers need to fill in to apply for the open call (annex B).
- Guide for Applicants: a document with the indications and guidelines for applicants intending to submit a proposal, detailing the eligibility criteria, submission process and evaluation procedure.
- Project Information: a document with the technical information of SYNERGY project, that may help applicants for the preparation of the proposal.
- Guide for Evaluators: the handbook for all evaluators involved in the open call, detailing evaluation criteria and procedure.
- Frequently Asked Questions: detailed information about the open call in a format of questions and answers, which will be made available on the website.



7 References

- [1] <https://www.synergyh2020.eu/project-materials/>
- [2] https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/3cpart/h2020-hi-list-ac_en.pdf
- [3] <https://op.europa.eu/en/publication-detail/-/publication/25153ebc-2b06-11ec-bd8e-01aa75ed71a1>



ANNEXES

I. ANNEX A: Open Call Announcement

The EU-funded SYNERGY (<https://www.synergyh2020.eu/>) project aims to develop a Big Energy Data Platform and AI Analytics Marketplace. It will offer a novel reference Big Data space where the information from various energy-related sources such as IoT statistics, sensors and energy markets. It will also forge and enrich the AI. The new highly effective system will be demonstrated in five European countries.

The SYNERGY consortium plans to devote a budget of €380k for cascade funding across a total of 8 projects that make use of the SYNERGY Big Data Platform and Analytics Marketplace and are deployed in the SYNERGY demonstration sites, that will be selected through an Open Call.

The Open Call is primarily focused on selecting new experiments/ services to be tested and validated during the demo activities of the project under real-life conditions and with the use of real data coming from the demo partners, thus extending the scope of the project and enlarging the service portfolio that will be finally delivered by the project technology partners to the demonstration partners/ energy market actors and stakeholders. Proposed services shall be developed in coordination with the SYNERGY platform, extending and accelerating the applicability of the services.

The Open Call launches on the 31st of January 2021 at 10.00 (CET, Brussels Time) and will have a deadline for the 20th of April 2022 at 17:00 (CET, Brussels Time). Applications must be submitted online at: <https://www.f6s.com/synergy-open-call/apply>

The open call for the Innovative Big Data-Enabled Energy Services will fund the execution of projects by any legal entity which is based in EU member states and in associated countries, by applying the funding rates and financial management mechanisms for Innovation Actions as applied in the Horizon 2020 programme.

The deadline for the submission of applications for this call is on the 20th of April 2022, at 17:00 (CET, Brussels Time). Late submissions will not be accepted; the system will not accept submission after the published deadline date and hour.

Proposals must be submitted online through open call Platform F6S: <https://www.f6s.com/synergy-open-call/apply> before the deadline.



II. ANNEX B: Proposal Template

BASIC INFORMATION

1 **Project acronym ***

2 **Project name ***

3 **Key words ***

List up to 5 keywords describing your project

4 **Domain/Section ***

State the domain/section of your proposal

ADMINISTRATIVE DATA

5 **Type of organisation ***

Please specify how you are applying to the funding

- Small and med-size enterprises (SME)
- Large company
- Research and Technology Organization (RTOs)
- University
- Non-profit organization (NGO, Foundation)

6 **Organization/Entity**

State the leading organization for your proposal

7 **Organization website URL ***

(https://... or http://...)



8 VAT number: *

9 Incorporation year: *

10 Country of residence/work: *

11 Name of the contact person *

State the name of the contact person for your proposal

12 Email address *

Email address of the contact person

13 Phone number (including country code) *

Phone number of the contact person

PROJECT DESCRIPTION

14 Proposal (Max file size 30MB.) *

Please upload your proposal description according to the available template (INSERT ADDRESS!!!)

[Elige un Documento](#)

STATISTICS

15 How did you hear about SYNERGY and this Open Call (Select one or more) *

- | | | |
|---------------------------------------|--|---|
| <input type="checkbox"/> Social media | <input type="checkbox"/> News/Media | <input type="checkbox"/> E-mail |
| <input type="checkbox"/> Event | <input type="checkbox"/> Project website | <input type="checkbox"/> European Commission portal |
| <input type="checkbox"/> F6S portal | <input type="checkbox"/> Other | |

16 Have you already received H2020 funding or financial support to third parties? *

- Yes
 No



DECLARATION OF HONOUR

- 17 I have read and understood the information about the project, as provided in the Guide for Applicants (GfA) *
- Yes
- 18 I confirm that we have reviewed, accept and comply with the SYNERGY Open Call Terms & Conditions as defined in the Guide for Applicant *
- Yes
- 19 I have been given the opportunity to ask questions about the project and my participation *
- Yes
- 20 I voluntarily agree to participate in the SYNERGY project *
- Yes
- 21 I understand I can withdraw at any time without giving reasons and that I will not be penalised for withdrawing nor will I be questioned on why I have withdrawn *
- Yes
- 22 I acknowledge that the evaluators and the European Commission and its bodies and agencies may have access to the data collected under the open call *
- Yes
- 23 I confirm the information submitted within this application is true. I am authorised to apply in the name of my entity/group of natural persons. The entity I represent meets the eligibility conditions described in the GfA *
- Yes
- 24 There is no conflict of interest between the company I represent and any of the consortium partners *
- Yes
- 25 I confirm the organisation(s) or individual(s) applying do not have convictions for fraudulent behaviour, other financial irregularities, unethical or illegal business practices *
- Yes
- 26 I confirm the participating organisation(s) do(es) not have been declared bankrupt or have initiated bankruptcy procedures. *
- Yes
- 27 I confirm that all the members involved in the proposal (natural persons/legal entities) are only submitting one proposal under this open call *
- Yes
- 28 I confirm the applicant(s) is not under liquidation or is not an enterprise under difficulty accordingly to the European Commission Regulation No 651/2014, art. 2.18 *
- Yes



29 I confirm the project is based on original works and going forward any foreseen developments are free from third party rights, or they are clearly stated *

Yes

30 I confirm the applicant(s) is not excluded from the possibility of obtaining EU funding under the provisions of both national and EU law, or by a decision of both national or EU authority *

Yes

31 I confirm the applicant(s) has not received funding for a similar project and that the applicant(s) has enough Operational Capacity to carry out the work. *

Yes



III. ANNEX C: Demo sites information

List of data assets available in each demo site:

Demo	Data Assets
Greece	Transmission and Distribution Network Topology Data
	IoT Smart Device and Sub-metering Data
	DER (Battery) Status Data
	Network-wide Generation Metering Data
	Smart Metering Data (demand)
	Retailer Customer Data
	Local Generation/ Storage Metering Data
	Network Asset Data (Transmission/ Distribution)
	Energy Market Data
	Weather Data
Finland	Building Systems and Smart IoT Device data
	Building Systems and IoT Sub-metering data
	Smart Metering Data at building level (demand/ generation)
	Weather Data
Austria	Network Asset Data (Distribution)
	Smart Metering Data (demand/ generation/ battery/ EV)
	IoT Smart Device and Sub-metering Data
	Energy Market Data
Spain	Weather Data
	Network Asset Data (Distribution)
	Network Topology Data (Distribution)
	Smart Metering Data (demand)
	Smart Metering Data (Generation/ PV Parks)
Croatia	Smart Metering Data (Generation/ Demand/ EV)
	IoT Smart Device/ Home Data

List of Demo Cases for each Demo Site:

Demonstrator #1 - Greece

Demo Case 1: Innovative Flexibility-based Network Management

Demo Case 2: Common Operational Scheduling of power grids (D&T) for TSOs and DSOs

Demo Case 3: Enhanced Network Asset Management and Planning

Demo Case 4: Retailer portfolio analytics and elasticity (price-based flexibility) estimation for the provision of services to network operators



Demo Case 5: Flexibility segmentation, classification and clustering towards VPP configuration for demand response

Demo Case 6: Local Flexibility Sharing for Self-Consumption Optimization at Local Community Level

Demonstrator #2 - Spain

Demo Case 7: Enhanced PV Plant Asset Management

Demo Case 8: Advanced RES Forecasting for improved market positioning and optimized flexibility activation for the provision of services to network operators

Demo Case 9: Optimising Power Purchase Agreement between RES Operators and Electricity Retailers, towards Greening Electricity Supply and reducing associated tariffs and costs

Demo Case 10: Transformation of the Retailer business model from Commodity to EaaS providers for the implementation of energy efficiency campaigns

Demo Case 11: Enhanced Distribution Network Asset Management and Reinforcement

Demo Case 12: Innovative Flexibility-based Distribution Network Management

Demonstrator #3 - Austria

Demo Case 13: Innovative Flexibility-based Distribution Network Management

Demo Case 14: Local Energy System Optimization and Enhancement of Security of Supply through Islanding

Demo Case 15: Flexibility segmentation, classification and clustering towards VPP configuration for flexibility activation and explicit demand response

Demo Case 16: Local Flexibility Market for network services and self-consumption through blockchain-enabled smart contract establishment and handling

Demonstrator #4 – Finland

Demo Case 17: Optimized Urban Energy Performance Monitoring and Optimization

Demo Case 18: Advanced Urban Planning for long-term sustainability targets realization

Demo Case 19: Evidence-based renovation support for optimized and accurate energy-efficient design of buildings

Demo Case 20: Holistic Real-time Facility Energy Management Optimization



Demonstrator #5 – Croatia

Demo Case 21: Self-Consumption Optimization for Energy Poverty Alleviation and Sustainable Local Energy Communities

